

Work-related mental health problems: a narrative review

Ahmed E. Shouman¹, Hala S. Abou-Elwafa^{2, *}, Abdel-Hady El-Gilany³

¹ Industrial Medicine and Occupational Health, Public Health & Community Medicine Department, Faculty of Medicine, Ain Shams University, Cairo, Egypt.

² Industrial Medicine and Occupational Health, Public Health & Community Medicine Department, Faculty of Medicine, Mansoura University, Mansoura, Egypt.

³ Public Health and Preventive Medicine, Public Health and Community Medicine Department, Faculty of Medicine, Mansoura University, Mansoura, Egypt.

***. Corresponding author:** Hala S. Abou-Elwafa. Industrial Medicine and Occupational Health, Public Health and Community Medicine Department, Faculty of Medicine, Mansoura University, Mansoura, Egypt. Phone: (0100) 6167177. Email: halasamir@mans.edu.eg.

Cite this article: Shouman, A.E., Abou-Elwafa, H.S., El-Gilany, A.H. Work-related mental health problems: a narrative review. Int J Epidemiol Health Sci 2023;4: e58. Doi: 10.51757/IJEHS.4.2023.705795.

Abstract

Background: Mental health concerns in workers are the focus of the most research worldwide due to their negative effects on organizational productivity. Workers' mental diseases are linked to a variety of workplace concerns. Some mentally ill individuals are prone to displaying rage and aggressiveness at work, which can lead to physical assault. Employees who are mentally sick lose motivation and morale, and they become a stigma not only for the firm but also for themselves. The goal of this narrative review was to highlight the extent, risk factors, prevention, and control of mental health disorders at work, which is a substantial social issue that has a detrimental influence on occupational welfare and productivity.

Methods: A literature search was undertaken using the search phrases "mental", "health", "work-related", and "psychological" in various combinations on PubMed and Google.

Results: People who are subjected to high job expectations, little job management, a high effort-reward imbalance, or a lack of organizational fairness are more prone to develop mental health issues. Recognizing and promoting mental health is essential for creating a safe and healthy workplace. Managers and employees both play essential responsibilities in building a healthy work environment, one that does not cause or aggravate mental health difficulties and where employees with mental illnesses are effectively supported.

Conclusion: The development and implementation of a workplace mental health strategy and program would benefit employee health, corporate productivity, and the overall well-being of the community. The workplace is an excellent setting for educating and raising people's understanding of mental health issues.

Keywords: Mental health; Prevention; Control; Psychological; Risk factors; Work-related

Introduction

According to the World Health Organization (WHO), mental health is a condition of well-being in which everyone achieves his or her own potential, can deal with daily challenges, works creatively and fruitfully, and contributes to their community.

Ailments that impact emotion, thought, and behavior (or a mix of these) are referred to as mental disorders. They are associated with anxiety and/or trouble participating in family, job, or social activities (2). Work-related mental disorders, according to WHO, are "multifactorial diseases that may frequently be work-related but also occur in the general population." They can be induced in part by hazardous working conditions, increased, accelerated, or exacerbated by workplace exposures, or impede job abilities" (3).

Employment may improve wellbeing by providing a regular supply of action, schedule time, social connection, a sense of teamwork, and social identity (4). The workplace, on the other hand, may be a source of psychological stress that has a negative impact on workers' mental health (5, 6).

Because people spend most of their time at work, the workplace "is one of the key environments that affect their mental wellbeing and health" (7). Having a job can be a double-edged sword because it can improve an individual's wellbeing by providing them with a sense of self-esteem and a reliable source of income, but it can also lead to stress because of the increasing demands of modern work life, negatively impacting both their physical and mental health (8). An unfavorable work environment can lead to physical and mental health problems, drug or alcohol addiction, absenteeism, and poorer productivity (9).

The purpose of this narrative review was to highlight the scope, risk factors, and prevention and control of workplace mental health difficulties, which are a substantial social issue that have a negative impact on productivity and job satisfaction.

Methods

This is a narrative literature review based on searching for papers on PubMed and Google with keywords like "mental", "health", "work-related", and "psychological" in various combinations. Keywords such as mental AND health AND work; psychological AND work AND health; mental AND work OR occupation; mental OR psychological AND work; (mental OR psychological) AND risk; (mental OR psychological) AND work; mental AND work AND prevention were used. All relevant indexed literature was included until June 1, 2022.

Scope of the problem

The expenses of mental illness are primarily attributed to lower productivity at work. Mental disorders, for example, are estimated to cost the UK £30 billion in lost output per year (10), the US \$51 billion (11), Canada \$6.3 billion (12), and Australia \$5.9 billion (13). Workforce absenteeism and presenteeism account for many lost productivity losses (14).

Work-related mental health problems

Mood, anxiety, and substance use disorders (particularly alcohol-related difficulties) are the three types of "common mental disorders" (CMDs) that affect many working adults (15).

Most mental health problems in working populations are caused by common psychiatric diseases, such as depression, anxiety, and other stress-related conditions, which are normally treatable and, in some situations, may even be preventable (16, 17).

Magnitude of the problem

According to national health insurance data, mental problems account for 20% of sickness absences in France (on average 111 days) (18).

In the United Kingdom, the overall number of cases of work-related stress, depression, or anxiety was 822,000 in 2020/21, with a prevalence rate of 2,480 per 100,000 workers, which was not significantly different from the previous year. Prior to the COVID-19 pandemic, the rate of self-reported work-related stress, sadness, or anxiety had been increasing. The rate in 2020/21 was higher than the rate before the coronavirus in 2018/19. The incidence rate was 1,360 per 100,000 employees, with 451,000 new cases reported (19).

According to European estimates, one in every five (OECD, 2012) to two in every five (20) workers may be suffering with a mental health issue at any given time, with a lifetime risk of at least two in every five (21). In addition, depression and anxiety were the two most common mental diseases among working persons (22).

Using aggregated data from surveys from various income nations, it is estimated that the annual prevalence of CMDs in the general working population was 17.6%, with a lifetime prevalence of 29.2% (15).

Occupations at Risk

Some occupations are more likely to be subjected to traumatic situations and high levels of occupational

stress. According to Benjet and colleagues (23) and Liu and colleagues (24), 84% of people working in high-risk professions (such as police officers, firefighters, and emergency responders) report having experienced a traumatic event in their lifetime, compared to approximately 70% of the general population (25).

Importantly, people in these occupations regularly face traumatic work-related occurrences, which increases their risk of developing mental illness (26). Medical professionals (27), police officers (28), and firefighters have all been identified as three high-risk occupations (29). As a result, multiple studies have discovered that medical employees, particularly those in critical care medicine, have high rates of burnout and despair (30). According to research conducted in North America and Europe, numerous occupations have been related to a high frequency of mental issues; people working in the sales, service, secretarial, teaching, and welfare professions may be more vulnerable (31).

According to different research, psychological stressors for doctors, nurses, and other healthcare personnel include role conflict, emotional labour, concern about medical errors and litigation, verbal or physical abuse by patients and caregivers, or bullying by coworkers (32, 33, 34). Additionally, healthcare practitioners are more likely to work extra, nights, or shifts. As a result, individuals frequently have sleep problems (35, 36). Workplace demands can lead to burnout, as well as depression, anxiety, sleep problems, and other mental illnesses (37, 38).

Risk factors for mental health problems at work:

There are various risk factors for mental illness that may exist in the workplace including:

A. Psychosocial risk factors

The three key categories that Harvey and colleagues (39) offered as a model incorporating workplace risk factors are unbalanced job design, occupational unpredictability, and a lack of respect and worth at work. In systematic reviews and meta-analyses on stress-related mental disorders (40) and sickness absence due to mental disorder (41), effort-reward imbalance, low organizational justice, high job and psychological demands, low job control, and low reward were identified as significant work-related psychosocial risk factors. According to Sohn and colleagues (42), greater workload, high emotional labour, and a lack of social support are all associated with an increased risk of depressive symptoms.

Factors predisposing to mental health problems include:

- Inadequate health and safety standards;
- Poor management and communication techniques;
- Restricted employee engagement in decision-making or low degrees of control over their own employment;
- Low employee support;
- Tight work schedules;
- Unclear organizational goals.

Risks linked with the nature of the profession may also include an imbalance between a person's abilities and the obligations entrusted to them, as well as an excessive workload. First responders and humanitarian workers, for example, may be at a higher personal danger because of their employment, which may impact their mental health and create symptoms of mental disorders or alcohol or drug abuse. A lack of social support or team cohesion increases risk (1).

B. Chemical risk factors

The link between neurotoxic exposure and psychiatric disorders is not known. Although there have been reports of links between neurotoxicant exposure and psychiatric symptoms, a large investigation found no increased frequency of depression among employees in industries anticipated to have higher chemical exposures, such as construction laborers and metal workers (43). Because exposure is also connected with cognitive deficits and a variety of somatic symptoms, it is probable that recognizing these impairments will result in reactive depression. Alternatively, psychiatric responses could be a result of CNS malfunction in the frontal, temporal, and limbic regions as a result of exposure. Some studies of workers persistently exposed to organic solvent mixes, for example, show an elevated incidence of mood and anxiety disorders. Acute high-level exposure to solvents and certain metals has been associated with brief reactive psychosis (44).

C. Physical risk factors

The relationship between physical risk exposure and mental illness has not been adequately described. Despite a dearth of adequate research on the effects of occupational noise exposure on mental health (45), studies on environmental noise exposure found an association with depression or anxiety.

In a previous study (46) discovered that whole-body vibration, noise, and high temperature had adjusted odds ratios of 1.43 (95% CI: 1.15-1.78), 1.22 (95% CI: 1.01-1.53), and 1.29 (95% CI: 1.06-1.57) for all mental health disorders (depression, anxiety, and insomnia), respectively.

A case-control study found that truck drivers exposed to whole-body vibration performed better on neurobehavioral measures of weariness, depression, and anxiety (47). A study of metalworkers who reported white fingers, tingling, or other carpal tunnel syndrome symptoms after being subjected to vibration discovered a negative correlation between exposure to hand-arm vibration and quality of life (QOL) (48).

Studies on how temperature variations effect mental health have gotten little attention. Although there was no statistically significant link between high temperature exposure and mental health, the 5th European Working Conditions Survey (EWCS) found a link between temperature change and poor mental health (49).

Meanwhile, data-driven research suggests that exposure to high temperatures exacerbates mental health concerns (50, 51). Low temperature exposure showed both positive and negative effects on mental health (52). Because efficient temperature regulation would be unavailable, low temperature exposure at work could have a negative influence on mental health.

The health implications of physical risk factors such as noise-induced hearing loss (NIHL), hand-arm vibration syndrome (HAVS), hypothermia, and hyperthermia may have an impact on mental health. Tinnitus and noise-induced hearing loss reduce quality of life and have been associated to sadness and anxiety (45). HAVS is associated with poor QOL as well as other psychological impacts such as frustration, reliance, and withdrawal from social activities (53, 54).

Workers who are exposed to physical risks are more likely to suffer poor working conditions that contribute to work-related stress and mental health disorders than those who are not exposed to these aspects (46, 47).

D. Other risk factors

Personal sociodemographic traits such as divorce or widowhood, a poor educational level, older age, female gender (55, 56, 57), specific genetic factors (58), and a history of chronic organic or psychiatric diseases (59) are also risk factors for CMDs. Environmental factors (such as social and material deprivation) were highlighted, and a link was shown

between poor socioeconomic status and higher incidence of depression (55, 56).

Impact of mental health issues on work

The link between an employee's mental health and their overall health is becoming more recognized, as is the likelihood that workplace stress and poor mental health might influence a variety of physical disorders such as cardiovascular disease, diabetes, and hypertension. Employee burnout caused by poor mental health can have a substantial impact on both their personal and professional lives (60).

Occupational safety and mental health difficulties are on the rise all around the world. In most industrialized countries, they now outnumber musculoskeletal disorders as the leading cause of long-term job impairment and absence from work (61, 62).

More than one billion individuals are afflicted by mental and drug use disorders, resulting in a significant sickness burden. Mental health difficulties cost 142,5 million disability-adjusted life years (DALYs) in 2016, accounting for 6.8% of all DALYs lost (63).

Mental health issues have a direct influence on employers and enterprises due to higher absenteeism, a negative impact on productivity and revenues, and higher costs associated with dealing with them. They also have a negative impact on employee morale (64). Job stress is a substantial factor to poor occupational health, lower productivity, and human error. This translates to an increase in accidents caused by human error, increased illness absence, high worker turnover, and poor workplace performance. It may also cause heart disease, back pain, headaches, gastrointestinal problems, or other minor maladies, as well as psychological side effects such as anxiety and sadness, loss of attention, and poor decision-making (65).

Prevention and control of mental health problems at work

1. Screening for mental illness at workplace:

Campaigns that screen for mental symptoms, strive to reduce stigma, and raise awareness must be closely managed since they may lead to the prescription of many patients with generally minor symptoms (66). Pre-employment and ongoing assessments of mental health and substance use could be utilized to identify and alleviate psychological distress.

2. Psychiatric Fitness-for-Duty Examinations:

It can be challenging for people with mental health disorders to find work in the open labour market or to return to work after receiving treatment and maintain employment. They are often surrounded by stigma of the mental illness and the recovery process is often misunderstood (7).

Situations requiring the utilization of a psychiatric fitness-for-duty exam, according to LaDou and Harrison (67), include: preemployment psychological screening, a disruptive employee, requests for mental-based leaves, failed attempts to return to work following psychiatric care, and threat assessment. In addition, an employee who has been returned to regular work after a severe incident or psychiatric hospitalization may be a candidate for a fitness examination by a mental health practitioner. A clinical interview and standardized psychometric tests are used in such examinations to screen out persons who are highly aggressive, psychotic, impulsive, or prone to passivity in potentially important situations. Employees that cause disturbance in a work group on a regular basis may be suffering from a mental condition. To avoid complicating these sensitive circumstances, boundaries and limits of secrecy must be recognized. There are times when a treating doctor allows an employee to return to full duty early after taking a leave of absence for treatment of a mental disease. Concerns about safety in employees treated for depression and anxiety may warrant a psychiatric screening prior to re-entry into the workforce.

After a psychotic break, a bus driver may or may not be safe to resume responsibilities for conveying passengers on public transportation. After anxiety treatment, a machine operator may need to be weaned off benzodiazepines before returning to full duty. Before being allowed to use their firearm, police officers engaged in shootings are frequently psychiatrically evaluated.

The mental fitness-for-duty assessment must address the employee's functionality, with the examiner familiar with the essential and non-essential job responsibilities as described in a published job description. Relevant information should be supplied as soon as possible. Delays in performing the exam and producing a report might disrupt not only the selected person, but also the entire group waiting for direction.

Following treatment for a mental health condition like depression, the following actions can be taken by an employer to assist an employee's return to work:

- I. Before making a final decision to return to work, inform the attending physician or an

authorized mental health specialist of the specific employment tasks.

- II. Encourage an early return to work in consultation with the patient's doctor or another mental health specialist. The longer an individual is off from work for medical treatment, the more concerned they will be about losing their job. Furthermore, the longer a person is away from their work, the more mentally disconnected they become.
- III. Consider a phased return to work. Allowing part-time employment for a few weeks may help reduce stress, provide the worker time for additional medical counselling, and allow them to quickly return to their usual routine. Flexible schedules, temporary job changes that lessen job-related stress, or other flexible arrangements may be useful (7).

Employers can take the following actions, according to the Center for Disease Prevention and Control (68):

- Make materials available to all employees for self-evaluation of their mental health.
- Following free or cheap clinical depression assessments given by licensed mental health specialists, provide focused feedback and referrals as needed.
- Provide health insurance with low or no out-of-pocket costs for therapy and antidepressant medication.
- Provide free or low-cost lifestyle coaching, counseling, or self-management programs.
- Provide informational materials, including as booklets, flyers, and films, to all employees about the warning signs and symptoms of mental illness, as well as the treatment choices available.
- Hold seminars or workshops on depression and stress-management strategies like as breathing exercises, meditation, and mindfulness to assist employees in reducing anxiety and tension and improving motivation and attention.
- Create and maintain designated, tranquil locations for recreational activities.
- Teach managers how to recognize signs of stress and sadness in team members and convince them to seek help from licensed mental health specialists.
- Allow employees to have a say in decisions that affect their degree of job stress.

3. Creating a healthy workplace

According to WHO (69), a healthy workplace is one in which both workers and managers actively promote and safeguard all employees' health, safety, and well-being. According to a 2014 academic report, treatments should have three components:

- Protect mental health by reducing job-related risk factors.
- Promote mental wellbeing through enhancing employee strengths and the positive aspects of work.
 - Address mental health issues regardless of the fundamental reason.

Based on this, a World Economic Forum handbook suggests activities that organizations may take to create a healthy workplace, such as:

- Understanding of the work environment and how it can be adapted to assist varied employees' mental health.
- Learning from the motivators of organizational leaders and workers who have taken the initiative.
- Avoiding duplication of effort by staying up to date on what other companies are doing.
- Recognizing the potential and needs of unique workers in order to effectively develop workplace mental health policies.
- Knowledge of resources for persons in need of assistance and support.

Mental health interventions should be part of a comprehensive health and wellness approach that includes prevention, early detection, support, and rehabilitation. If occupational health services or specialists are available, they may assist organizations in implementing these therapies; however, if not, there are a variety of changes that can be made to protect and improve mental health. The key to success is involving stakeholders and personnel at all levels when developing and evaluating protection, promotion, and support actions.

Example of legislation: Egypt

The Ministry of Insurance and Social Affairs implemented Social and Health Insurance Law 79/1975, as amended by Law No. 25 (1977). Its primary purpose was to provide benefits for old age, illness, unemployment, work-related accidents, and social care (70).

In this law, injuries resulting from work-related stress or exhaustion are considered workplace injuries if they meet the conditions and rules specified by the executive regulations of this law in consultation with the chairman of the board of directors of the authority concerned with health insurance. The laws are always

being updated to ensure the protection, advancement, and well-being of Egyptian workers in all occupations.

On May 30, 2013, the Egyptian government agreed to include 17 new occupational disorders, including post-traumatic stress disorder (PTSD), in Egypt's social health insurance law 79 passed in 1975. After the decision was ratified by the Board of Directors of the National Authority for Social Insurance (Social Insurance Minister's Decree No. 54 for 2013), this came in response to demands made by a group of experts from various disciplines, as well as the ministers of Manpower and Migration, and Health and Population.

The Egyptian Government authorized an amendment to the Law on the Rights of Persons with Disabilities established by Law No. 10 of 2018, as a new article No. (50 bis), on December 18th, 2021.

Bullying a person with a disability would result in increased sanctions under this rule. Individuals who violate this law face a minimum punishment of one year in prison and/or a fine ranging from 50,000 to 100,000 Egyptian pounds.

It also identified two aggravating factors: (1) two or more people bullying a disabled victim; and (2) the perpetrator being a family member in charge of the victim's upbringing or in a position of power over them, such as a teacher or an employer. If aggravating circumstances exist, the penalties are enhanced to a minimum of two years in prison and/or a fine ranging from 100,000 to 200,000 Egyptian pounds.

Mental Health problems in the workplace during the COVID-19 pandemic

The 2019 coronavirus pandemic harmed people's physical health as well as their psychological resources and resiliency. The world economy has abruptly slowed, and global stock indices have plummeted (71). Many people committed suicide (72), and millions were laid off (73).

During the epidemic, employees faced several pressures that affected various parts of their jobs (74). Because the sickness is communicable, the prospect of transmission at work and the necessity to take safeguards produced a number of mental concerns. A lack of personal protective equipment (PPE), physical strain while wearing it, fear of contracting an infection that could harm family members, the tension between following safety procedures and the desire to offer support, long workdays, the pressure to multitask, and the stigma associated with working in dangerous environments, for example, can all have a serious negative impact on employees' mental health. Employees may experience a variety of

behavioral (such as performance consequences), somatic (such as headaches and gastrointestinal issues), and psychological (such as mood swings, diminished motivation, sad thoughts, and isolation) responses as a result (75).

Despite being a threat to all jobs, the pandemic is more likely to target high-risk persons (e.g., healthcare workers). During severe health emergencies, the healthcare business faces substantial strain, which has a negative influence on their capacity to accomplish their tasks (76). A pandemic increases the number of patients dramatically, putting additional strain on personnel and depleting healthcare resources. Furthermore, because of their exposure to patients, doctors have a higher level of self-risk, which adds to their stress (77). Furthermore, the study demonstrated a significant spread of pandemic-related stigma (78). Those who are infected and those who work in healthcare are the groups most frequently subjected to prejudice and stigma, which increases the risk of psychopathology (e.g., depressive symptoms, stress-related disorders, and sleep problems). Additionally, persons who have been isolated may have difficulty returning to work. Workplace stigma and prejudice may also result in lost productivity and income (79).

Another critical aspect is the individual's inability to obtain work and resume working, which has disastrous consequences (80). Healthcare professionals, on the other hand, are the group of professionals who suffer the most from stigma (81). Burnout, psychological anguish, emotional exhaustion, anxiety, and depressive symptoms are all exacerbated as a result (82).

Migrants' mental health was similarly harmed by social marginalization (83). Due to severe socio-environmental situations such as loss of social standing and discrimination, internal migrant workers have significant levels of anxiety, psychosis, and post-traumatic disorders (84).

The COVID-19 pandemic produced sleep difficulties and suicidal thoughts in healthcare workers, according to evidence (85). As a result of the pandemic, younger people, medical staff, and all healthcare and emergency workers appear to have experienced higher levels of psychological distress, insomnia, alcohol and drug abuse, symptoms of post-traumatic stress disorder (PTSD), depression, and higher perceived stress. To curb the spread of the coronavirus, governments around the world announced stringent national-level regulations. The findings revealed that obligatory lockdown, quarantine, social isolation, and returning to work were all significantly related to the psychological toll on workers (86).

Lockdown: Lockdown successfully confined the coronavirus, but at the expense of unpleasant psychological consequences (87). According to various studies, there were both positive and negative consequences. According to Abbas et al. (88), employee stress was lowered during Pakistan's shutdown. However, studies from poorer countries, such as India, found psychological effects that were more negative than positive. Employees in Pakistan and India experience psychological stress, social isolation, and a sense of loneliness because of abrupt changes in their work and personal routines (89). Employees' mental health problems are mostly caused by concerns about job insecurity caused by lockdowns, financial loss caused by lockdowns (90), and excessive exposure to incorrect material while using social media to maintain social bonds (89).

Resuming to Work: Because the virus was successfully contained, more people physically showed up for work in various countries. Since the state-wide lockdown ended on February 10, 2020, a fraction of the Chinese workforce has returned to work after getting government approval (90). By June 2020, many states in the United States have allowed restaurants to reopen and employees to return to work (91). Similarly, numerous financial institutions in Bangladesh have been granted limited operating hours (92). Constraint relaxation was more frequently associated with negative psychological outcomes. Employees reported emotional and psychological symptoms such as discomfort (98), depression, anxiety, stress, concern, insomnia, and somatization (90,91). Researchers discovered that the most common concern among employees was contracting the coronavirus, particularly those who could not avoid face-to-face interactions at work (such as bank personnel, restaurant employees, and instructors) (93). However, workplace standards, such as those controlling the use of indoor masks and workplace hygiene, had to have an effect on employees' mental health (90).

Social distancing: Another national response to the pandemic was to socially distance oneself from others. According to scholars, social distance has provided net social benefits of \$5.16 trillion to decrease coronavirus transmission in the U.S (94).

Quarantine measures: During the epidemic, governments all around the world-imposed quarantine restrictions on certain categories of people. People who tested positive for COVID-19, for example, were hospitalized (95); foreign tourists were required to stay in specific hotels for 14 days after entering a country (96).

Table 1. Summary of some of the key review studies

Study	Year	Findings
Harvey, S.B. ³⁹	2017	Work-related factors linked to depression and/or anxiety included: imbalanced job design, occupational uncertainty and lack of value and respect in the workplace. A moderate level evidence showed that high job demands, low job control, high effort-reward imbalance, low relational justice, low procedural justice, role stress, bullying and low social support in the workplace are associated with a greater risk of developing common mental health problems.
van der Molen, H.F. ⁴⁰	2020	Moderate evidence was found that work-related psychosocial risk factors are associated with a higher risk of stress-related mental disorders.
Duchaine, C.S. ⁴¹	2020	Workers exposed to psychosocial stressors at work were associated with a higher risk of sickness absence due to a mental disorder.
Sohn, M. ⁴²	2016	The likelihood of depressive symptomatology was high among respondents who had dangerous jobs and flexible work hours compared to those who had standard jobs and fixed daytime work hours. Respondents with high job demands, low job control, and low social support were more likely to have depressive symptoms.
Themann, C.L. ⁴⁵	2019	Repeated overexposure to noise at or above 85 dBA is also associated with cardiovascular disease, depression, balance problems, and lower income.
Joh, K.O. ⁴⁶	2011	Exposure to high temperature, mist, fumes, dust, chemicals, and radiation were associated with an increased risk of work-related mental health problems.
Abbate, C. ⁴⁷	2004	Occupational exposure to whole-body vibration is associated with alterations of mood status.
Russo, M. ⁴⁹	2019	Low temperatures and contact with infectious materials were positively associated with mental health outcomes. Tiring or painful positions, repetitive hand/arm movements, working with VDUs, repetitive tasks <10 min and working in evenings were positively associated with mental health. Various psychosocial risk factors related to both the content of the job (e.g., frequent disruptive interruptions, working in free time, poor work-life balance) as well as the job context (e.g., bad employment prospects, low decisional autonomy, bad social relations, workplace violence) were positively associated with mental health.
House, R. ⁵³	2014	Both the physical and the mental quality of life (QOL) in workers with hand-arm vibration syndrome were below Canadian population normal values.
Majeed, M. ⁸⁹	2020	Problematic social media use during the current pandemic is linked to fear of COVID-19 and depression among employees. Trait mindfulness was found to be an important buffer, reducing the negative indirect association between them.
Tan, W. ⁹⁰	2020	Returning to work did not cause a high level of psychiatric symptoms in the workforce. The low prevalence of psychiatric symptoms could be due to confidence instilled by psychoneuroimmunity prevention measures before the resumption of work.
Song, L. ⁹¹	2020	The prevalence of anxiety, depression, insomnia and somatization among people who resumed work after the Spring Festival holiday during the COVID-19 pandemic was 12.7%, 13.5%, 20.7% and 6.6%, respectively. The major risk factor for mental health was worrying about unemployment, and the main protective factors were psychological strengths (i.e., resilience and optimism). Regarding work attitudes, the percentage of people who felt more satisfied with their job was larger (43.8%), while the percentage of people who thought about quitting their job more frequently was smaller (15.7%). However, work engagement was lower than usual. The major risk factor for work attitudes was also worrying about unemployment, and the main protective factors were resilience and optimism. The nature of the organization, job status, age, position, and income changes were also related to these work attitudes.

Remote working: In comparison to regular telework, remote working during a pandemic was necessary in nature, and corporations and organizations had never required people to work full-time from home at the same time across a worldwide range (97).

Employees' perceptions of the advantages and disadvantages of telework were linked to their mental health issues. Reduced commuting times, flexible work arrangements, and a lower risk of COVID-19 infection were among the accepted benefits. Technical challenges, a blurred barrier between work and home life, distractions, and social isolation were among the drawbacks. Due to the problems of teleworking adaptation, some employees, such as teachers and university staff, were more prone than the general workforce to develop negative than favorable sentiments (98). Furthermore, strict managerial control (97), diminishing work engagement (99), and an employee's psychological problems while working remotely can exacerbate them. Employees in industrialized countries (Italy, Finland, Germany, the United States, Canada, Norway, the United Kingdom, and Australia) reported comparable positive and negative psychological effects. Employees in disadvantaged countries, such as Israel, Egypt, Indonesia, and Chile, experienced more negative psychological consequences from remote work (86).

Conclusion and Recommendation

Work-related mental problems are common and, on the rise, especially since the COVID-19 pandemic, which has contributed to an increase in their prevalence. The scope of the problem in the labor force is underestimated, necessitating additional research and the creation of an up-to-date national database for common mental diseases. Many persons with mental health problems go untreated or are undertreated, resulting in lost productivity, sickness absence, presenteeism, substance misuse, or violence. Proactive measures to early identification and treatment, such as periodic mental health screening, can yield better results, reduce long-term disability, and save years of suffering. Attention should be made to both mental and physical health in both pre-employment and periodic worker examinations, as well as improving employee and employer awareness of mental well-being. More work-related mental problems should be covered by social and health insurance.

Conflict of interest statement

The authors state that they have no conflicts of interest.

Funding

This study received no funding.

References

1. WHO, World Health Organization. Mental health in the workplace. 2023. Available from: <https://www.who.int/news-room/fact-sheets/detail/mental-health-at-work>.
2. APA, American Psychiatric Association. What is Mental Illness? 2023. Available from: <https://www.psychiatry.org/patients-families/what-is-mental-illness#:~:text=Mental%20Illness...refers%20collectively,social%2C%20work%20or%20family%20activities>.
3. WHO, World Health Organization. Identification and control of work-related diseases. Who technical report series 714. 1985. Available from: https://apps.who.int/iris/bitstream/handle/10665/40176/WHO_TRS_714.pdf?sequence=1&isAllowed=y.
4. Warr, P. Work, Unemployment and Mental Health. Oxford (UK): Oxford University Press; 1987.
5. Bonde, J.P. Psychosocial factors at work and risk of depression: a systematic review of the epidemiological evidence. *Occup Environ Med* 2008; 65(7):438-445.
6. Battams, S., Roche, A.M., Fischer, J.A., Lee, N.K., Cameron, J., Kostadinov, V. Workplace risk factors for anxiety and depression in male-dominated industries: a systematic review. *Health Psychol Behav Med* 2014;2(1):983-1008.
7. WHO, World Health Organization. Mental health and work: Impact, issues, and good practices. 2000. Available from: https://apps.who.int/iris/bitstream/handle/10665/42346/WHO_MSD_MPS_00.2.pdf?sequence=12&isAllowed=y.
8. ILO, International Labour Organization. World Employment Social Outlook. 2016. Available from: https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_443480.pdf.
9. WHO, World Health Organization. Mental health: strengthening our response. 2022. Available from: <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>.
10. Centre for Mental Health. The Economic and Social Costs of Mental Health Problems in 2009/10. 2010. Available from: <https://www.centreformentalhealth.org.uk/publication/economic-and-social-costs-mental-health-problems-200910>.

11. Greenberg, P.E., Kessler, R.C., Birnbaum, H.G., Leong, S.A., Lowe, S.W., Berglund, P.A., et al. The economic burden of depression in the United States: how did it change between 1990 and 2000? *J Clin Psychiatr* 2003;64(12):1465-1475.
12. Lim, K.L., Jacobs, P., Ohinmaa, A., Schopflocher, D., Dewa, C.S. A new population-based measure of the economic burden of mental illness in Canada. *Chron Dis Can* 2008;28(3):92-98.
13. Hilton, M.F., Scuffham, P.A., Vecchio, N., Whiteford, H.A. Using the interaction of mental health symptoms and treatment status to estimate lost employee productivity. *Aust N Z J Psychiat* 2010;44(2):151-161.
14. de Graaf, R., Tuithof, M., van Dorsselaer, S., ten Have, M. Comparing the effects on work performance of mental and physical disorders. *Soc Psychiatr Epidemiol Psychiatr* 2012;47(11):1873-1883.
15. Steel, Z., Marnane, C., Iranpour, C., Chey, T., Jackson, J., Patel, V. et al. The global prevalence of common mental disorders: a systematic review and meta-analysis 1980-2013. *Int J Epidemiol* 2014;43(2):476-493.
16. Mykletun, A., Harvey, S.B. Prevention of mental disorders: a new era for workplace mental health. *Occup Environ Med* 2012;69(12):868-869.
17. Knudsen, A.K., Harvey, S.B., Mykletun, A., Øverland, S. Common mental disorders and long-term sickness absence in a general working population. The Hordaland Health Study. *Acta Psychiatr Scand* 2013;127(4):287-297.
18. Rivière, M., Leroyer, A., Ferreira Carreira, L., Blanchon, T., Planke, L., Melchior, M., et al. Which work-related characteristics are most strongly associated with common mental disorders? A cross-sectional study. *BMJ Open*. 2018;8(8):e020770.
19. HSE, Health and Safety Executive. Work-related stress, anxiety or depression statistics in Great Britain. 2021. Available from: <https://press.hse.gov.uk/2022/11/23/hse-publishes-annual-work-related-ill-health-and-injury-statistics-for-2021-22>.
20. Wittchen, H.U., Jacobi, F., Rehm, J., Gustavson, A., Svensson, M., Jonsson, B., et al. The size and burden of mental disorders and other disorders of the brain in Europe 2010. *Eur Neuro Psycho Pharmacol* 2011;21(9):655-679.
21. OECD, Organization for Economic Co-operation, and Development. Sick on the Job? Myths and realities about mental health and work. Paris: OECD Publishing. 2012. Available from: <https://www.oecd.org/els/mental-health-and-work-9789264124523-en.htm>.
22. Sanderson, K., Andrews, G. Common mental disorders in the workforce: recent findings from descriptive and social epidemiology. *Can J Psychiatr* 2006;51(2):63-75.
23. Benjet, C., Bromet, E., Karam, E.G., Kessler, R.C., McLaughlin, K.A., Ruscio, A.M., et al. The epidemiology of traumatic event exposure worldwide: results from the World Mental Health Survey Consortium. *Psychol Med* 2016;46(2):327-343.
24. Liu, H., Petukhova, M.V., Sampson, N.A., Aguilar-Gaxiola, S., Alonso, J., Andrade, L.H., et al. Association of DSM-IV Posttraumatic Stress Disorder with Traumatic Experience Type and History in the World Health Organization World Mental Health Surveys. *JAMA Psychiatr* 2017;74(3):270-281.
25. Patterson, G.T. The relationship between demographic variables and exposure to traumatic incidents among police officers. *Aust J Dis Trauma Stud*. 2001; 2:1-9.
26. Geronazzo-Alman, L., Eisenberg, R., Shen, S., Duarte, C.S., Musa, G.J., Wicks, J., et al. Cumulative exposure to work-related traumatic events and current post-traumatic stress disorder in New York City's first responders. *Compr Psychiatr* 2017; 74:134-143.
27. Adriaenssens, J., De Gucht, V., Maes, S. Determinants and prevalence of burnout in emergency nurses: a systematic review of 25 years of research. *Int J Nurs Stud*. 2015;52(2):649-661.
28. Darensburg, T., Andrew, M.E., Hartley, T.A., Burchfiel, C.M., Fekedulegn, D., Violanti, J.M. Gender and age differences in posttraumatic stress disorder and depression among Buffalo police officers. *Traumatol* 2006; 12:220-8.
29. Jahnke, S.A., Poston, W.S., Haddock, C.K., Murphy, B. Firefighting and mental health: Experiences of repeated exposure to trauma. *Work* 2016;53(4):737-744.
30. Mealer, M. Burnout Syndrome in the Intensive Care Unit. *Future Directions for Research*. *Ann Am Thorac Soc* 2016;13(7):997-998.
31. Stansfeld, S.A., Rasul, F.R., Head, J., Singleton, N. Occupation and mental health in a national UK survey. *Soc Psychiatry Psychiatr Epidemiol* 2011;46(2):101-110.
32. Firth-Cozens, J., Greenhalgh, J. Doctors' perceptions of the links between stress and lowered clinical care. *Soc Sci Med* 1997;44(7):1017-1022.
33. Felton, J.S. Burnout as a clinical entity--its importance in health care workers. *Occup Med (Lond)* 1998;48(4):237-250.
34. Ruotsalainen, J., Serra, C., Marine, A., Verbeek J. Systematic review of interventions for reducing occupational stress in health care workers. *Scand J Work Environ Health*. 2008;34(3):169-178.

35. Virtanen, M., Ferrie, J.E., Gimeno, D., Vahtera, J., Elovainio, M., Singh-Manoux, A., et al. Long working hours and sleep disturbances: the Whitehall II prospective cohort study. *Sleep* 2009;32(6):737-745.
36. Øyane, N.M., Pallesen, S., Moen, B.E., Akerstedt, T., Bjorvatn, B. Associations between night work and anxiety, depression, insomnia, sleepiness and fatigue in a sample of Norwegian nurses. *PLoS One* 2013;8(8):e70228.
37. Hegney, D.G., Craigie, M., Hemsworth, D., Osseiran-Moisson, R., Aoun, S., Francis, K., et al. Compassion satisfaction, compassion fatigue, anxiety, depression, and stress in registered nurses in Australia: study 1 results. *J Nurs Manag* 2014;22(4):506-518.
38. Kim, K., Lee, S., Choi, Y.H. Relationship between occupational stress and depressive mood among interns and residents in a tertiary hospital, Seoul, Korea. *Clin Exp Emerg Med* 2015;2(2):117-122.
39. Harvey, S.B., Modini, M., Joyce, S., Milligan-Saville, J.S., Tan, L., Mykletun, A., et al. Can work make you mentally ill? A systematic meta-review of work-related risk factors for common mental health problems. *Occup Environ Med* 2017;74(4):301-310.
40. van der Molen, H.F., Nieuwenhuijsen, K., Frings-Dresen, M.H.W., de Groene, G. Work-related psychosocial risk factors for stress-related mental disorders: an updated systematic review and meta-analysis. *BMJ Open* 2020;10(7):e034849.
41. Duchaine, C.S., Aubé, K., Gilbert-Ouimet, M., Vézina, M., Ndjaboué, R., Massamba, V., et al. Psychosocial Stressors at Work and the Risk of Sickness Absence Due to a Diagnosed Mental Disorder: A Systematic Review and Meta-analysis. *JAMA Psychiatr* 2020;77(8):842-851.
42. Sohn, M., Choi, M., Jung, M. Working conditions, psychosocial environmental factors, and depressive symptoms among wage workers in South Korea. *Int J Occup Environ Health* 2016;22(3):209-217.
43. Eaton, W.W., Anthony, J.C., Mandel, W., Garrison, R. Occupations and the prevalence of major depressive disorder. *J Occup Med* 1990;32(11):1079-1087.
44. Levy, B.S., Wegman, D.H., Baron, S.L., Sokas, R.K. Occupational and environmental health: recognizing and preventing disease and injury, 6th edition. Oxford University Press, 2011.
45. Themann, C.L., Masterson, E.A. Occupational noise exposure: A review of its effects, epidemiology, and impact with recommendations for reducing its burden. *J Acoust Soc Am* 2019;146(5):3879.
46. Joh, K.O., Park, T.J., Oh, J.I., Paek, D.M., Park, J.S., Cho, S.I. Relationship between workplace physical and chemical hazard exposures and mental health problems in Korea. *Korean J Occup Environ Med* 2011;23(3):287-97.
47. Abbate, C., Micali, E., Giorgianni, C., Munaò, F., Brecciaroli, R., Salmaso, L., et al. Affective correlates of occupational exposure to whole-body vibration. A case-control study. *Psychother Psychosom* 2004;73(6):375-379.
48. Sauni, R., Virtema, P., Pääkkönen, R., Toppila, E., Pyykkö, I., Uitti, J. Quality of life (EQ-5D) and hand-arm vibration syndrome. *Int Arch Occup Environ Health* 2010;83(2):209-216.
49. Russo, M., Lucifora, C., Pucciarelli, F., Piccoli, B. Work hazards and workers' mental health: an investigation based on the fifth European Working Conditions Survey. *Med Lav* 2019;110(2):115-129.
50. Mullins, J.T., White, C. Temperature and mental health: Evidence from the spectrum of mental health outcomes. *J Health Econ* 2019; 68:102240.
51. Li, M., Ferreira, S., Smith, T.A. Temperature and self-reported mental health in the United States. *PLoS One* 2020;15(3):e0230316.
52. Liddell, C., Guiney, C. Living in a cold and damp home: frameworks for understanding impacts on mental well-being. *Public Health* 2015;129(3):191-199.
53. House, R., Wills, M., Liss, G., Switzer-McIntyre, S., Lander, L., Jiang, D. The effect of hand-arm vibration syndrome on quality of life. *Occup Med (Lond)* 2014;64(2):133-135.
54. Ayers, B., Forshaw, M. An interpretative phenomenological analysis of the psychological ramifications of hand-arm vibration syndrome. *J Health Psychol* 2010;15(4):533-542.
55. Milanović, S.M., Erjavec, K., Poljičanin, T., Vrabec, B., Brečić, P. Prevalence of depression symptoms and associated socio-demographic factors in primary health care patients. *Psychiatr Danub* 2015;27(1):31-37.
56. Freeman, A., Tyrovolas, S., Koyanagi, A., Chatterji, S., Leonardi, M., Ayuso-Mateos, J.L., et al. The role of socio-economic status in depression: results from the COURAGE (aging survey in Europe). *BMC Public Health* 2016;16(1):1098.
57. Ibanez, G., Son, S., Chastang, J., Magnier, A.M., Robert, S., Mercier, A., et al. Mental Health Disorders in General Practice in France: A Cross-Sectional Survey. *Transl Biomed* 2016; 07:4.
58. Lacerda-Pinheiro, S.F., Pinheiro Junior, R.F., Pereira de Lima, M.A., Lima da Silva, C.G., Vieira dos Santos Mdo, S., Teixeira Júnior, A.G., et al. Are there depression and anxiety genetic markers and mutations? A systematic review. *J Affect Disord* 2014; 168:387-398.

59. Abbas, R.A., Hammam, R.A., El-Gohary, S.S., Sabik, L.M., Hunter, M.S. Screening for common mental disorders and substance abuse among temporary hired cleaners in Egyptian Governmental Hospitals, Zagazig City, Sharqia Governorate. *Int J Occup Environ Med* 2013;4(1):13-26.
60. WHO, World Health Organization. Mental health policies and programs in the workplace. 2005. Available from: https://apps.who.int/iris/bitstream/handle/10665/43337/9241546794_eng.pdf.
61. Harvey, S.B., Henderson, M., Lelliott, P., Hotopf, M. Mental health and employment: much work still to be done. *Br J Psychiatr* 2009;194(3):201-203.
62. Whiteford, H.A., Degenhardt, L., Rehm, J., Baxter, A.J., Ferrari, A.J., Erskine, H.E., et al. Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *Lancet* 2013;382(9904):1575-1586.
63. Rehm, J., Shield, K.D. Global Burden of Disease and the Impact of Mental and Addictive Disorders. *Curr Psychiatr Rep* 2019;21(2):10.
64. Rajgopal, T. Mental well-being at the workplace. *Indian J Occup Environ Med* 2010;14(3):63-65.
65. HSE, Health and Safety Executive. Managing the causes of work-related stress. A step-by-step approach using the Management Standards. 2007. Available from: <https://safetyresourcesblog.files.wordpress.com/2014/10/managing-the-causes-of-work-related-stress-a-step-by-step-approach-using-management-standards.pdf>.
66. Henderson, M., Harvey, S.B., Overland, S., Mykletun, A., Hotopf, M. Work and common psychiatric disorders. *J R Soc Med* 2011;104(5):198-207.
67. LaDou, J., Harrison, R. *CURRENT Occupational and Environmental Medicine*, 5th Edition, McGraw Hill Press, 2014.
68. CDC, Centers for disease control and prevention. Mental Health in the Workplace. 2018. Available from: <https://www.cdc.gov/workplacehealthpromotion/tools-resources/pdfs/WHRC-Mental-Health-and-Stress-in-the-Workplace-Issue-Brief-H.pdf>.
69. WHO, World Health Organization. Healthy workplaces: a model for action. 2010. Available from: <https://www.who.int/publications/i/item/9789241599313>.
70. Abo El-Ata, G.A. Health Coverage for Workers in Egypt. *Egypt J Occup Med* 2014;38(1):23-42.
71. McKibbin, W.J., Fernando, R. The Global Macroeconomic Impacts of COVID-19: Seven Scenarios. 2020. Available from: <https://www.brookings.edu/articles/the-global-macroeconomic-impacts-of-covid-19-seven-scenarios>.
72. Goyal, P., Choi, J.J., Pinheiro, L.C., Schenk, E.J., Chen, R., Jabri, A., et al. Clinical Characteristics of Covid-19 in New York City. *N Engl J Med* 2020;382(24):2372-2374.
73. Blustein, D.L., Duffy, R., Ferreira, J.A., Cohen-Scali, V., Cinamon, R.G., Allan, B.A. Unemployment in the time of COVID-19: A research agenda. *J Vocat Behav* 2020; 119:103436.
74. Giorgi, G., Lecca, L.I., Alessio, F., Finstad, G.L., Bondanini, G., Lulli, L.G., et al. COVID-19-Related Mental Health Effects in the Workplace: A Narrative Review. *Int J Environ Res Public Health* 2020;17(21):7857.
75. World Health Organization and the International Labour Office. *Occupational Safety and Health in Public Health Emergencies: A Manual for Protecting Health Workers and Responders*, Geneva. 2018. Available from: <https://apps.who.int/iris/bitstream/handle/10665/275385/9789241514347-eng.pdf>.
76. Tam, C.W., Pang, E.P., Lam, L.C., Chiu, H.F. Severe acute respiratory syndrome (SARS) in Hong Kong in 2003: stress and psychological impact among frontline healthcare workers. *Psychol Med* 2004;34(7):1197-1204.
77. Shiao, J.S., Koh, D., Lo, L.H., Lim, M.K., Guo, Y.L. Factors predicting nurses' consideration of leaving their job during the SARS outbreak. *Nurs Ethics* 2007;14(1):5-17.
78. Bruns, D.P., Kraguljac, N.V., Bruns, T.R. COVID-19: Facts, Cultural Considerations, and Risk of Stigmatization. *J Transcult Nurs* 2020;31(4):326-332.
79. Li, W., Yang, Y., Ng, C.H., Zhang, L., Zhang, Q., Cheung, T., et al. Global imperative to combat stigma associated with the coronavirus disease 2019 pandemic. *Psychol Med* 2021;51(11):1957-1958.
80. James, P.B., Wardle, J., Steel, A., Adams, J. Post-Ebola psychosocial experiences and coping mechanisms among Ebola survivors: a systematic review. *Trop Med Int Health* 2019;24(6):671-691.
81. Chersich, M.F., Gray, G., Fairlie, L., Eichbaum, Q., Mayhew, S., Allwood, B., et al. COVID-19 in Africa: care and protection for frontline healthcare workers. *Global Health* 2020;16(1):46.
82. Li, D.J., Ko, N.Y., Chen, Y.L., Wang, P.W., Chang, Y.P., Yen, C.F., et al. COVID-19-Related Factors Associated with Sleep Disturbance and Suicidal Thoughts among the Taiwanese Public: A Facebook Survey. *Int J Environ Res Public Health* 2020;17(12):4479.

83. Li, J., Rose, N. Urban social exclusion and mental health of China's rural-urban migrants - A review and call for research. *Health Place* 2017; 48:20-30.
84. Mucci, N., Traversini, V., Giorgi, G., Tommasi, E., De Sio, S., Arcangeli, G. Migrant Workers and Psychological Health: A Systematic Review. *Sustainability* 2019;12,120.
85. Huang, Y., Zhao, N. Chinese mental health burden during the COVID-19 pandemic. *Asian J Psychiatr* 2020;51:102052.
86. Liu, W., Xu, Y., Ma, D. Work-Related Mental Health Under COVID-19 Restrictions: A Mini Literature Review. *Front Public Health* 2021;9:788370.
87. Atalan, A. Is the lockdown important to prevent the COVID-19 pandemic? Effects on psychology, environment and economy-perspective. *Ann Med Surg (Lond)* 2020; 56:38-42.
88. Abbas, M., Malik, M., Sarwat, N. Consequences of job insecurity for hospitality workers amid COVID-19 pandemic: does social support help? *J Hosp Market Manag* 2021; 2021:1–25.
89. Majeed, M., Irshad, M., Fatima, T., Khan, J., Hassan, M.M. Relationship Between Problematic Social Media Usage and Employee Depression: A Moderated Mediation Model of Mindfulness and Fear of COVID-19. *Front Psychol* 2020;11:557987.
90. Tan, W., Hao, F., McIntyre, R.S., Jiang, L., Jiang, X., Zhang, L., et al. Is returning to work during the COVID-19 pandemic stressful? A study on immediate mental health status and psychoneuroimmunity prevention measures of Chinese workforce. *Brain Behav Immun* 2020; 87:84-92.
91. Song, L., Wang, Y., Li, Z., Yang, Y., Li, H. Mental Health and Work Attitudes among People Resuming Work during the COVID-19 Pandemic: A Cross-Sectional Study in China. *Int J Environ Res Public Health* 2020;17(14):5059.
92. Rana, R.H., Islam, A. Psychological impact of COVID-19 among frontline financial services workers in Bangladesh. *J Workplace Behav Health* 2021;1–12.
93. Bufquin, D., Park, J.Y., Back, R.M., de Souza Meira, J.V., Hight, S.K. Employee work status, mental health, substance use, and career turnover intentions: an examination of restaurant employees during COVID-19. *Int J Hosp Manag* 2021;93:102764.
94. Thunström, L., Newbold, S.C., Finnoff, D., Ashworth, M., Shogren, J.F. The benefits and costs of using social distancing to flatten the curve for COVID-19. *J Benefit-Cost Anal* 2020;11:179–95.
95. Zhu, S., Wu, Y., Zhu, C.Y., Hong, W.C., Yu, Z.X., Chen, Z.K., et al. The immediate mental health impacts of the COVID-19 pandemic among people with or without quarantine managements. *Brain Behav Immun* 2020;87:56-58.
96. Goh, E., Baum, T. Job perceptions of Generation Z hotel employees towards working in Covid-19 quarantine hotels: the role of meaningful work. *Int J Contemp Hosp Manage* 2021;33:1688–710.
97. Delfino, G.F., van der Kolk, B. Remote working, management control changes and employee responses during the COVID-19 crisis. *Account Audit Accoun* 2021;34:1376–87.
98. Mostafa, B.A. The effect of remote working on employees wellbeing and work-life integration during pandemic in Egypt. *Int Bus Res* 2021;14:41–52.
99. Oksa, R., Kaakinen, M., Savela, N., Hakanen, J.J., Oksanen, A. Professional Social Media Usage and Work Engagement Among Professionals in Finland Before and During the COVID-19 Pandemic: Four-Wave Follow-Up Study. *J Med Internet Res* 2021;23(6):e29036.
99. Oksa, R., Kaakinen, M., Savela, N., Hakanen, J.J., Oksanen, A. Professional Social Media Usage and Work Engagement Among Professionals in Finland Before and During the COVID-19 Pandemic: Four-Wave Follow-Up Study. *J Med Internet Res* 2021;23(6):e29036