

The Study of the Relationship between Burnout Symptoms and International Labour Organization Occupational Groups among Hospital Workers of a Private Hospital in Rayong Province.

Kawalee Sadangrit¹ ; Srirat Lormphongs¹



Kawalee Sadangrit

Abstract

OBJECTIVES: To study the relationship between burnout symptoms and International Labour Organization (ILO) occupational groups among hospital workers of a private hospital in Rayong province. Burnout symptoms are included in the Eleventh Revision of the International Classification of Diseases (ICD-11) as an “occupational phenomenon” defined as: “Burn-out is a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: Emotional Exhaustion, Depersonalization and Low Personal Accomplishment. Burnout symptoms can affect an individual’s physical and psychological perception, but this phenomenon can be prevented.

MATERIALS AND METHODS: The population of the study consisted of 913 hospital workers. The data obtained from questionnaires completed by research participants were collected via electronic system over 2 weeks. Every hospital worker completed the questionnaire, results were classified by ILO Data analysis using descriptive statistic and regression analysis.

RESULTS: Most of the hospital workers were female, aged 25-44 years old, non smokers, exercising 1-3 times a week, have worked in hospital around 1-5 years, all full-time employees working 41-50 hours per week. The occupational group codes of the three highest numbers of the study population were 322 [modern health associate professionals (except nursing)], 223 (nursing and midwifery professionals) and 123 (departmental managers) at a ratio of 39.21%, 29.24%, and 7.01%, respectively. The relationship between burnout symptoms and ILO occupational groups among hospital workers was not statistically significant.

CONCLUSION: This study proposes we better communicate, promote health and well-being in hospital workers. Recommendations for the corporate workplace are to promote health promotion programs, education about work-life balance, sleep hygiene, and basic stress management to create an effective and happy workplace.

Keywords: hospital workers, occupational groups, burnout symptoms

In modern society, people spend an estimated 90% of their day in buildings or offices¹; moreover, the population aged 21-60 years old comprises a large group of the population and is a main driving force of a nation’s economic growth. Therefore, the working potential of this group should be developed, and the burnout syndromes should be considered “burnout symptoms” as a multidimensional concept integrating an individual’s physical and psychological perception, and their level of freedom, without depending on personal beliefs influenced by culture, values and an individual’s goals in life.²

Medical personnel have to handle tremendous stress and typically experience a high rate of burnout symptoms and a high turnover rate. This is due to heavy workloads and also having to cope with the emotions of patients and their relatives, of shift work, sporadic work schedules, and inadequate rest, which can cause burnout symptoms to occur.

Received: July 11, 2022

Revision received: August 24, 2022

Accepted after revision: September 5, 2022

BKK Med J 2023;19(1): 1-7.

DOI: 10.31524/bkkmedj.2023.11.001

www.bangkokmedjournal.com

A result of burnout symptoms may include physical diseases which are frequently found in people with burnout symptoms including cardiovascular disorders and fibromyalgia.³ Moreover, burnout symptoms may cause potential risks of developing Type 2 Diabetes at a rate of 1.84 times higher than average.⁴ In addition, burnout symptoms also affect mental and socio-psychological conditions such as stress, inactivity and increased smoking. Burnout symptoms can become a repeated cycle then these factors may ultimately lead to “Ischemic Heart Disease”.² However burnout symptoms can be prevented and mitigated if we have a good understanding of the condition. For example, relaxation from work with adequate rest, as well as the development of a good quality of working life for this group of workers will have tremendous impacts on their wellbeing. This can create positive feelings towards themselves and a higher engagement in their work and organization. It can also help promote self-development so that they become more highly skilled workers, helping to reduce problems such as absence from work, resignation, accidents and also promote good outcomes and services in terms of quality and quantity⁵. Therefore, burnout symptoms should be considered and prioritized in organizations because employees are seen as the most valuable and important resource to an organization. In this regard, self-evaluation for risk factors or behavioral changes detected by coworkers or supervisors may help to identify potential cases early before they lead to burnout.

“Workers” are regarded as the most valuable and important resource to organizations; therefore the workplace environment should favor high performance at work, i.e., when workers have a positive regard towards their duties, have job security, and apply themselves with happiness and engagement, which will have positive results within organizations; for example, it helps increase the productivity of organizations and the motivation of employees in performing better; it also helps increase morale and encouragement of workers because good mental health leads to higher work satisfaction of workers and motivation in the work performance; it also creates a bond and loyalty to organizations⁵ and encourages staff to continuously learn and invest in self-development.

This research aimed at collecting general data and classified occupational group codes according to ILO standards with the data of burnout symptoms among hospital workers of a private

hospital in Rayong Province. It studied the relationship between levels of burnout symptoms and occupational group codes under ILO standards, with a view to the continued improvement and management of burnout symptoms in hospital workers and to further develop guidelines to create greater motivation in workers to work at their full potential.

Materials and Methods

This research is a cross-sectional analytic study, aiming to find the relationship between variables of burnout symptoms and occupational group code under ILO standard. The study group consisted of workers who have been working for at least 3 months in a private hospital in Rayong Province in 2021, totalling 913 people willing to participate in this research. The exclusion criteria were incomplete answers by respondents of the questionnaires as prescribed or failure to further collect data.

Data collection tools consisted of:

1. Tools for collection of personal data of hospital workers by referring to QoWL scales and surveys, Department of Psychology, University of Portsmouth, A.D.2007, totalling 8 items⁶;

2. Tools for collection of data of burnout symptoms from Test for Health Officers Burnout Symptoms, translated from the Test Form of Maslach Burnout Inventory, totalling 22 items, with Cronbach's alpha value 0.8⁷ addressing 3 scales:

- **Emotional Exhaustion** measures feelings of being emotionally overextended and exhausted by one's work.
- **Depersonalization** measures an unfeeling and impersonal response toward patients.
- **Personal Accomplishment** measures feelings of competence and successful achievement in one's work.

Indicate how frequently the following statements apply and add the points indicated on top of the respective in 7 level. 1 = At least a few times a year, 2 = At least once a month, 3 = Several times a month, 4 = Once a week, 5 = Several times a week, 6 = Every day

Individuals are considered as shown in **Table 1** and overall symptoms of burnout are analysed. **Scores are shown in Table 2.**

Table 1: Three scales of Burnout

	EE < 17	EE 18 - 29	EE > 30
	Low degree	Moderate degree	High degree
Depersonalisation	DP < 5	DP 6 - 11	DP > 12
	Low degree	Moderate degree	High degree
Personal accomplishment assessment	PA < 33	PA 34 - 39	PA > 40
	Low degree	Moderate degree	High degree

Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA)

Table 2: Symptoms of Burnout

Low	<ul style="list-style-type: none"> Low scores on either the EE and/or DP subscales with moderate or high PA
Intermediate	<ul style="list-style-type: none"> EE DP and PA in moderate degree
High and risky	<ul style="list-style-type: none"> High scores on either the EE (total score of 30 or higher) plus DP (total score of 12 or higher) subscales High EE score plus either a high DP score or a low PA score

Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA)

3. Tools for classification of career groups: International Standard Classification of Occupations⁸.

The researcher has collected personal data from hospital workers using an electronic system (QR Code) completion of the personal data on the first page. Followed by the questionnaires relating to the quality of sleep and a form listing the burnout symptoms tests of each person on the next page; subsequently, the researcher has classified the hospital workers under the standard ILO occupational code. One limitation of this research is that the participating population did not include the occupation of “physician”.

According to the data analysis, descriptive statistics were used, including quantities, percentages, lowest value, highest value, average and standard deviation, to categorize personal data, occupational group code by ILO standard classification, and levels of burnout symptoms in hospital workers. Inferential statistics were used, including regression analysis, to test the relationship between levels of the burnout symptoms and the occupational group code under ILO standard.

This research was evaluated and issued with a certificate of human research ethics from the Human Research Ethics Committee of the Burapha University on 15th March 2021; Research Project Code: G-HS 118/25633.

Result

Personal Data of Hospital Workers

According to the study, it was found that most hospital workers were females (91.59%), aged between 25-44 years old (80.83%); moreover, hospital workers were non-smokers (98.80%) and exercised 1-2 times/week (68.67%). The frequencies interval years of service were 1-5 years (45.13%). Most hospital workers had family burdens and responsibilities (83.02%) and worked as full-time regular employees with the most frequencies of interval of working hours, i.e., 41-50 hours/week (66.81%). The majority of workers had not taken sick leave in the past year (58.93%). The population with the top 5 career codes included, firstly, career code 322, (modern health practitioners (except for nursing)), career code 223 (professional nurses and obstetrics), career code 123 (department managers), career code 411 (secretary and data recording officer), and career code 421 (cashiers and related operators), 39.21%, 29.24%, 7.01%, 6.46% and 5.51% respectively.

Burnout symptoms of Hospital Workers Classified by Levels of Symptoms

According to the study of levels of burnout symptoms in hospital workers, it was found that most workers had low burnout symptoms, 72.78% of all workers, of those the majority were females (92.85%), aged between 25-44 years old (92.85%); meanwhile, hospital workers were non-smoking (99.09%) and exercising 1-2 times/week (68.49%). The frequencies interval years of service was 1-5 years (42.47%). Most hospital workers had family burdens and responsibilities (82.56%) and worked as full-time regular employees with the highest frequencies of interval of working hours, i.e., 41-50 hours/week (68.49%). The hospital workers had health limitations (2.59%) and most workers had not taken sick leave in the past year (58.60%), followed by levels of high risks of burnout symptoms (24.73%), most of these were females (90.13%), aged between 25-44 years old (80.83%); meanwhile, hospital workers were non-smoking (97.85%) and exercising 1-2 times/week (69.96%). The frequencies interval years of service was 1-5 years (52.36%). Most hospital workers had family burdens and responsibilities (83.69%) and worked as full-time regular employees with the most frequencies of interval of working hours, i.e., 41-50 hours/week (63.09%). The hospital workers with health limitations (2.15%) and most workers had not taken sick leave in the past year (60.09%), and of the intermediate level of the burnout symptoms (2.49%), the majority were females (95.65%), aged between 25-44 years old (80.83%); meanwhile, hospital workers in this group were non-smoking and exercising 1-2 times/week (60.87%). The frequencies interval years of service was 1-5 years (47.83%). Most hospital workers had family burdens and responsibilities (86.96%) and worked as full-time regular employees with the most frequencies of interval of working hours, i.e., 41-50 hours/week (56.52%). This group had no health limitations and had not taken sick leave in the past year (56.52%) as shown in Table 3.

Table 3: Numbers and percentages of hospital workers classified by levels of symptoms of the burnout symptoms (n = 913)

Levels of burnout symptoms	n (%)
Low	657 (72.78)
Intermediate	23 (2.49)
High and risky	233 (24.73)

Numbers of Hospital Workers Classified by Levels of the Burnout symptoms and Career Codes under ILO

According to the study, it was found that the top-5 workers groups as per career codes with burnout symptoms were career code 253 (other professional instructors) and career code 224 (professional social science practitioners and other practitioners) (100%); career code 513 (personal service providers and related operators) (42.86%); career code 913 (homemakers and related assistants, cleaners and laundry service providers) (33.33%); career code 341 (finance and sale operators) (30.00%); and career code 421 (cashiers and related operators) (29.79%); meanwhile, according to the workers groups as per career codes without burnout symptoms at level of high risks

were career code 214 (architects, engineers and related professional practitioners); career code 315 (quality and safety auditors); and career code 323 (professional nurses and obstetrics); provided the number of workers in each group of career codes was different, as shown in Table 4.

Test results of the relationship between levels of symptoms of burnout symptoms and occupational group codes under ILO standard

As for the relationship between levels of symptoms of burnout symptoms and occupational group code under ILO standard, it was found that there was no relationship, as shown in Table 5.

Table 4: Numbers and percentages of hospital workers classified by levels of burnout symptoms and career codes under ILO

Career Code	Levels of symptoms of the burnout symptoms				
	Low n(%)	Intermediate n(%)	Risky and High n(%)	Total n(%)	Ranking
123	49 (76.56)	1 (1.56)	14 (21.88)	64 (100.00)	9
214	2 (100.00)	0 (0.00)	0 (0.00)	2 (100.00)	15
222	7 (87.50)	0 (0.00)	1 (12.50)	8 (100.00)	13
223	189 (70.79)	6 (2.25)	72 (26.97)	267 (100.00)	6
235	0 (0.00)	0 (0.00)	2 (100.00)	2 (100.00)	1
243	8 (88.89)	0 (0.00)	1 (11.11)	9 (100.00)	14
244	0 (0.00)	0 (0.00)	1 (100.00)	1 (100.00)	1
311	3 (60.00)	1 (20.00)	1 (20.00)	5 (100.00)	10
315	3 (100.00)	0 (0.00)	0 (0.00)	3 (100.00)	15
321	20 (76.92)	1 (3.85)	5 (19.23)	26 (100.00)	11
322	260 (72.63)	6 (1.68)	92 (25.70)	358 (100.00)	7
323	2 (50.00)	2 (50.00)	0 (0.00)	4 (100.00)	15
341	6 (60.00)	1 (10.00)	3 (30.00)	10 (100.00)	4
411	43 (72.88)	3 (5.08)	13 (22.03)	59 (100.00)	8
421	31 (65.96)	2 (4.26)	14 (29.79)	47 (100.00)	5
422	20 (83.33)	0 (0.00)	4 (16.67)	24 (100.00)	12
513	12 (57.14)	0 (0.00)	9 (42.86)	21 (100.00)	2
913	2 (66.67)	0 (0.00)	1 (33.33)	3 (100.00)	3
Total	657 (71.96)	23 (2.52)	233 (25.79)	913 (100)	-

Table 5: Relationship between levels of symptoms of burnout symptoms and occupational group code under ILO standard

Data	95% CI	RR	p
Relationship between levels of symptoms of burnout symptoms and occupational group code under ILO standard	-4.156-9.58	0.0006	0.438

Discussion

According to this study of burnout symptoms in hospital workers, it was found that the majority of workers had burnout symptoms at a low level (72.78%); there were workers with

burnout symptoms at risky and high levels around 24.73% whereas, this percentage was similar to the study of Houkes I et al.⁹ which found that physicians or public health workers had burnout symptoms but were still able to work (approximately 20%). In turn, the results were higher than those found in the

study of Mahidol Management College, Mahidol University which found that the general working-age population in Bangkok had burnout symptoms (approximately 12%)¹⁰. The researcher studied only hospital workers in service and care units who had heavy workloads, therefore having to cope with the emotions of patients and their relatives; and the number thereof may differ from the general working-age population in Bangkok. This could possibly be as result of people with lifestyles surveyed, with trial and error learning on the job. The issue remains that the majority of large corporate workplaces have designed a working environment that is difficult for their workers to learn in and to further progress their career development in their prescribed roles; as a result, workers ineffectively use their abilities favorably to perform their work, as the management method of large corporate workplaces is measured largely by Key Performance Indicators (KPIs)¹¹; therefore, rules and policies have determined that workers shall be able to multitask to reduce internal expenses. These rules are designed to increase work efficiency and stability but reduce space for expression of differing personalities. This can make employees feel that they have not taken part in decision-making relating to management policy and selection of works. This can result in stress from change management, changes in work practices, in conformity with the study of the University of Houston, USA, saying that multitasking has caused more sadness and anxiety; whereby, such sadness and negative emotions result from constant job rotations, causing direct impacts on mental health without staff or management awareness. The more often job rotation occurs with a high frequency, the more unhappiness and anxiety arises from work being left incomplete.^{12,13} When taking account of groups of workers as per career codes, it was found that each career group has a different number of workers; but the top 3 occupational group codes have a greater proportion of high risk and numbers of workers with burnout symptoms; and groups of workers without such symptoms have a similar number of workers, i.e., 1-3 person(s). It can be said that factors of burnout symptoms may not depend on the number of workers working in the same duties and careers.

According to the results drawn from the study of relationship between occupational group code under ILO standard and levels of symptoms of burnout symptoms, it was found that they were unrelated; where occupational group code under ILO standard had no impact on the levels of symptoms of burnout symptoms; in other words, any career group of hospital workers may suffer burnout symptoms; whereby, the nature of the work and role had no relationship with the incidence of burnout symptoms. It can be said that symptoms of burnout symptoms could have been resulting from a loss of work-life balance² and other causative factors of burnout symptoms; for example, lack of management and good decision-making, with high expectation and performance handling works incompatible with their skills; handling uncontrollable and ever-changing situations; challenging working environment or working under pressures and stress at all times; lack of clarity of workload; non-recognition from supervisors or colleagues⁷ -- such as career code 243, which

in our study totalled 9 workers, one of whom had high levels of symptoms of burnout; meanwhile, the other workers had low levels of symptoms. It was possible that this person's efforts may not have been sufficiently recognized by colleagues or may have been experiencing more work pressures than others. Similarly, under the career codes of 235 and 244, there were only 1-2 workers; as a result, they had to assume high responsibilities for a lot of work and for high performance of delivery which is unsustainable. This created stress because there were only 1-2 workers in this career code which caused there to be a high expectation of delivery and performance of work because there was no room for mistakes. For performance of works that are in disarray, workers had to use a lot of resourceful thinking and increased physical exertion which caused fatigue and lack of social support. These factors accelerate symptoms of burnout symptoms among working-age population. In the pandemic, people had to organize more online meetings, and it was difficult for workers in each department to read the body language of one another, including voice tones, facial expressions, gestures and so on; as a result, they had to work harder to attempt to communicate without the benefit of body language in person, and workers felt fatigue and stress in the meetings; in addition, pictures and sounds in online meetings may be delayed, unlike a face-to-face conversation, and workers felt that it was difficult to focus and concentrate on the works and felt that the atmosphere was less friendly and conversational. In addition, other technical problems were found such as loss of Internet, unresponsive images, unsmooth sounds all causing fatigue and more possibilities of burnout symptoms.

The World Health Organization (WHO) announced burnout symptoms as a health condition which must receive treatment (ICD11, 2022)¹⁴ as an imminent condition experienced in urban societies and new generations of people. Therefore in the first instance it is recommended that workers and corporate workplaces begin by explaining how to take care of oneself by adjusting the work-life balance. It was found that many workers are about to experience burnout symptoms, and therefore it is important to put in measures to prevent physical and emotional fatigue. This could include getting enough sleep, eating complete meals and healthy foods, releasing stress by doing exercises or pursuing favorite activities, limiting the time of use of communication devices and social media, prioritising work within the timeframe for work, creating a scope of work to help avoid excessive workloads, adjusting points of view or attitudes so the value of work done is duly appreciated and recognized, helping others in everyday life or going out to do voluntary activities. All these measures help employees to increase self-esteem which in turn plays a significant role in reducing the risks of developing burnout symptoms.

Conclusion

According to this study, the relationship between the occupational group code under ILO standard and levels of symptoms of burnout symptoms is not statistically significant. ($p = 0.438$)

Recommendations

1. Corporate workplaces should continuously recommend and communicate to personnel to be aware of the importance of taking care of health. Workplaces can organize health promotion activities and give information to help employees to focus on their health, improving their physical stamina by ensuring they experience effective rest and sleep, and allocate time to rest from work or corporate workplace, with a genuine day-off from work during the day or week, eating nutritious foods to help support personnel's physical condition so they are able to work with higher levels of happiness and higher performance in their roles.

2. Corporate workplaces can organize training on how to reduce stress during the day. This could include simple exercises such as release of muscle stress on neck, shoulders, palms and face by taking a short break before starting work or after finishing work to stretch, and at times during the work day; for example, before attending a meeting or before using an elevator. Corporate workplaces can promote regular activities to help employees relax, body and mind, to improve concentration and to help practice self-care and to increase awareness of their intrinsic value to the corporate workplace.

3. Corporate workplaces can encourage employees to keep checking their feelings on a daily basis, and particularly during critical situations such as the pandemic when hospital personnel had to work harder. It is important to emphasise the importance of mental health being as essential as physical health care. Corporate workplaces may start with opening the dialogue on mental health, with daily greetings such as "How did you feel during last week?" This also shows that the employer cares and is monitoring the wellbeing of its employees. The workplaces may offer support such as "Do you want any

work-related assistance?". This type of question may make personnel feel valued and encouraged during tough times. However, corporate workplaces should highlight the importance to the feelings of personnel at all times, and in all roles, from work supervisors to colleagues who are in the same environment to notice emotions and behaviors of their colleagues. Particularly if there is a negative change in behaviour, it is important to enhance interpersonal communication, encouraging active listening, to give encouragement to personnel to look after their health while performing their duties.

4. Corporate workplaces an foster "happy workplaces" by promoting respect for mutual decision-making and jointly defining the performance of works by the corporate workplace by clearly identifying the goals of work and by clearly defining workloads of each individual in accordance with their experience and skills.

5. For online meetings, these should be brief and concise. Before starting each online meeting, the corporate workplace should determine the meeting's objectives and topics, limiting the number of employees involved, as it has been shown that stress from online meetings can partly be a result of feeling constantly monitored or expected to be present in front of the cameras. In internal meetings, a camera may be turned off to reduce the fatigue and stress from the meeting, and this may help personnel feel relief from the thought of being constantly monitored and encouraged to work more creativity.

6. Corporate workplaces can consider an adjustment of wage rates to match workloads expected and crisis situations, which is another way to incentivize hard-working personnel, as wages are tangible forms of rewards and expression of care paid by the corporate workplace.

References

1. Soisuda Kesornthong. *Sick building syndrome*. Bangkok: Glaimor; 2006.
2. Cannon WB. The inter relation of emotions as suggested by recent physiological researchers. *AJP* 1994;25. doi:10.2307/1413414
3. Toker S, Melamed S, Berliner S, et al. Burnout and risk of coronary heart disease: a prospective study of 8,838 employees. *Psychosom Med* 2012;74(8):840-7. doi: 10.1097/PSY.0b013e31826c3174.
4. Melamed S, Shirom A, Toker S, et al. Burnout and risk of type 2 diabetes: a prospective study of apparently healthy employed persons. *Psychosom Med* 2006;68(6):863-9. doi: 10.1097/01.psy.0000242860.24009.f0.
5. Siriwan J. *Quality of work life and work environment affecting organizational commitment employee*. Bangkok: Rajamangala University of Technology Thanyaburi; 2020.
6. Easton. S, Laar. DV. User Manual for the Work-Related Quality of Life (WRQoL) Scale A Measure of Quality of Working Life. 2 ed. Portsmouth, P01 2DY United Kingdom: University of Portsmouth, Portsmouth; 2007.
7. Maslach, C., Jackson, S. E., & Leiter, M. P. (1997). Maslach Burnout Inventory: Third edition. In C. P. Zalaquett & R. J. Wood (Eds.), *Evaluating stress: A book of resources* (pp. 191–218). Scarecrow Education.
8. International Labour Office (ILO). International standard classification of occupational: ISCO-08. Volume 1: Structure, group definitions and correspondence tables. Geneva: ILO, 2012
9. Houkes I, Winants Y, Twellaar M, et al. Development of burnout over time and the causal order of the three dimensions of burnout among male and female GPs. A three-wave panel study. *BMC Public Health* 2011;11(1):240. doi: 10.1186/1471-2458-11-240.
10. Bangkok experienced occupational burnout symptoms: Mahidol University, 2019 Accessed February 23, 2021, at. <https://www.bizpromptinfo.com/ຄົນສັງເກດວັດ-ຄົນດີວິລຸມສົ່ມ/.html>
11. Ministry of public health strategy and planing division. Key performance indicators in public health. Nonthaburi, 2021

12. Blank C, Zaman S, Wesley A, et al. CHI '20: Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems 2020:1–12. doi: 10.1145/3313831.3376282
13. Tubbs S. Multitasking in the workplace can lead to negative emotions. University of Houston. 2020. (Accessed February 25, 2021 at <https://uh.edu/news-events/stories/2020/may-2020/05112020-multitasking-in-workplace-and-negative-emotions.php>).
14. World Health Organization. ICD-10 : International Statistical Classification of Diseases and Related Health Problems : Tenth Revision. 2nd ed. Geneva: World Health Organization; 2004. <https://apps.who.int/iris/handle/10665/42980>