

Association of work performance with absenteeism and presenteeism among support workers in a medical school hospital, Thailand

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Abstract

Purpose – The aim of the study is to determine the prevalence of absenteeism and presenteeism and explore their association with work performance among support workers in a medical school hospital in Thailand.

Design/methodology/approach – A cross-sectional study was conducted among 1,102 support workers in the Faculty of Medicine Ramathibodi Hospital, Mahidol University, in June–August 2020. The World Health Organization Health and Work Performance Questionnaire (HPQ) was used to assess absenteeism, presenteeism, work performance and related factors. Multiple logistic regression was used to examine the association between current work performance and absenteeism and presenteeism in the past year.

Findings – A total of 505 (45.8%) support workers completed the self-report questionnaire. Prevalence of sickness absence, non-sickness absence and presenteeism in the past year was 54.2%, 81.4% and 48.1%, respectively. Sickness absence and presenteeism in the past year were significantly associated with increased odds of poor work performance: (OR 3.05, 95% CI: 1.24–7.49) and (OR 5.12, 95% CI: 2.25–11.64), respectively. Support workers with high levels of stress and burnout were 3.89 (95% CI: 1.56–9.68) and 2.66 (95% CI: 1.50–4.72) times more likely to report poor work performance.

Originality/value – Sickness absence and presenteeism are associated with poor work performance in hospital support workers. Other factors such as stress and burnout also contribute to poor work performance, and interaction among these factors needs further research. To improve productivity, hospital administrators might consider intervention programs to enhance work performance among workers with sickness absence and presenteeism.

Keywords Absenteeism, Hospital support workers, Presenteeism, Work performance, Medical school hospital, HPQ

Paper type Research paper



Introduction

Personnel work performance directly affects the organization's productivity. Poorly performing employees can decrease their overall productivity in both quality and quantity. To increase personnel work performance and fully utilize human resources capabilities, the organizations have to address factors that cause poor performance among employees [1].

Absenteeism is a condition when workers do not show at work on the working day, which may be caused by any condition [2]. In comparison, presenteeism is workers who come to work despite feeling sick due to physical health illness or mental health problems [3, 4]. Both absenteeism and presenteeism affect the organization's expenditures [5, 6]. Absenteeism increases the organization's direct cost, such as replacement worker costs, and indirect cost, such as productivity loss due to replacement or co-worker and supervisor productivity loss. When presenteeism workers show at work, they are incapable of working at their best performance due to health problems. Moreover, presenteeism increases the rate of accidents and can cause the spreading of infectious diseases in the workplace [7].

Hospital or the healthcare sector is an organization with two groups of personnel. Firstly, "health service providers" are the persons who directly provide medical services, such as doctors, nurses, pharmacists, dentists and medical technologists. Another group includes "support workers" who do not directly provide medical services but are the persons who work as the hospital's back office. The support workers consist of diverse personnel such as executives, engineers, accountants, statisticians, clerks, housekeepers and security guards. To provide efficient healthcare service, support workers, approximately one-third of the total healthcare workers, have a critical role in the management and support all the service activities in the hospital [8]. The work performance of support personnel would affect the quality and safety of health service systems depending on the responsibility. For example, the absence or improper performance of cleaners could increase the rate of hospital-acquired infection [9], and inadequate function of security guards and systems affect safety in the hospital [10].

The prevalence of absenteeism in healthcare workers varied in the range of about 20% to 90% [11–13]. The study in healthcare workers in Thailand found the sickness absence prevalence was 52.5% [14]. The annual prevalence of presenteeism among healthcare workers also varied from 50% to 85% [7, 15, 16]. In Thailand, the presenteeism prevalence was 58.6% among medical residences and interns [17]. The absenteeism among healthcare workers affected the hospital in many ways, such as reducing patient quality care, increasing complaints, lowering colleagues' morale and increasing recruitment and overtime costs [18]. The healthcare workers' presenteeism also had a broad consequence. The effects of presenteeism on workers and colleagues were decreased performance, difficulty in concentrating on working, poor communication with the caring team and increased negative mood or stress. Consequently, the presenteeism decreased patient care quality and increased the risk of spreading the infection to the patients and colleagues [7, 19].

Most of the studies on absenteeism, presenteeism or work performance were conducted in health service providers [6, 7, 12–19]; however, studies among the hospital support workers are limited. The present study aims to determine the prevalence of absenteeism, presenteeism in support workers and their association with work performance. The study might help understand the relationship and plan for improving the work environment and related factors to reduce the adverse impact on healthcare services.

Methodology

Study design and sample selection

A cross-sectional study was conducted among support workers in the Faculty of Medicine Ramathibodi Hospital, Mahidol University, in June–August 2020. The sample size was

calculated for a multiple logistic regression analysis to determine the association between absenteeism, presenteeism, and work performance using G*power 3.1 program based on an alpha error of study as 0.05; thus, a sample size required 579 participants.

There were 1,102 support workers in 17 divisions in the hospital, including division of physical and facilities, finance, human resource, information, engineering services, procurement, corporate communication, audiovisual, management, internal affair, policy, health promotion, support center, law, internal audit, risk management and work quality development. The inclusion criteria included the support workers who were working in the hospital at the time of study, and the exclusion criteria were the support workers who had been working less than one year. To secure the number of respondents, all the support workers who had been working for at least 1 year at the survey time were invited to participate.

Measurements

The questions on absenteeism, presenteeism and work performance were based on the World Health Organization Health and Work Performance Questionnaire (HPQ) short-form [3, 20]. The questions were translated by the authors and reviewed by 2 occupational health experts in the hospital. The index of item objective congruence (IOC) for each question was 1. The questionnaire was tested for reliability with a Cronbach's alpha of 0.81. The job burnout was assessed by a single self-rated question [21], and the stress level was evaluated by the Srithanya stress scale (ST-5) [22]. The online questionnaire website location was sent to all staff. Participants voluntarily responded to the consent and questionnaire.

Dependent variables

The participants were asked to assess their current work performance using questions modified from the HPQ. The score ranged between a lower bound of 0 (the worst of performance) and an upper bound of 10 (the best of performance). A score of less than 8 was categorized into the "poor work performance," and 8 or higher was classified into the "good work performance" [3, 20].

Independent variables

Absenteeism questions included both sickness absence and non-sickness absence. The questions asked about the number of days in the past 1 year that participants were absent due to health-related problem and non-health-related conditions separately. The questions about presenteeism asked the number of days in the past 1 year that participants had come to work while sick, felt they should take sick leave or were incapable of working with full performance. The number of sickness absence, non-sickness absence and presenteeism in the past 1 year were categorized into 4 levels: (0) = "0 days," (1) = "1-5 days," (2) = "6-10 days" and (3) = "more than 10 days."

Demographic and work characteristics included gender (male/female), age (<40 and >40 years old), shift working (yes/no), employment duration in years (1-2, 3-5, 5-10, and >10) and job satisfaction (low, moderate, high). The occupations were also assessed according to the International Standard Classification of Occupations (ISCO-08) [23] and categorized as skilled workers (managers, professionals and technicians), semi-skilled workers (clerks, service workers, skilled agricultural, craft workers and plants or machine operators) and unskilled workers. The stress was assessed by the stress assessment (ST5) questionnaire (low, moderate, high and very high). Job burnout was self-rated on a Likert scale from 0 (no burnout) to 10 (the highest burnout) and was categorized to low burnout level (score 0-5) and high burnout level (score 6-10) [21].

Ethical consideration

Ethical approval was provided by the Human Research Ethics Committee, Faculty of Medicine Ramathibodi Hospital, Mahidol University (COA. MURA 2020/903).

Statistical analysis

Descriptive statistics described the frequency and percentage for each variable. The association between the dependent variable and independent variables was analyzed by multiple logistic regression. The final model included the independent variables significantly associated with work performance (p -value <0.05) from univariate analysis. Independent variables included age, occupation, shift working, job satisfaction, stress, burnout, sickness absence and presenteeism. The adjusted odds ratios and 95% confidence interval (CI) were calculated and reported. SPSS version 18.0 was used to analyze the data.

Results

Demographic characteristics and work performance

A total of 505 (45.8%) support workers participated in the study. The majority (70.9%) of the participants were female. The proportion of the support workers aged 40 or under was 46.3%. The support workers aged 40 or under had a higher proportion of poor work performance than those aged more than 40. Most support workers (49.1%) were semi-skilled, and 44.0% had poor work performance. A total of 190 (37.6%) support workers had shift work. Most support workers (54.6%) had been employed for more than 10 years. Work performance in different employment duration had no difference. In all, 443 (87.7%) support workers had high job satisfaction. The higher the job satisfaction level, the lower the proportion of poor work performance (Table 1).

The prevalence of sickness absence, non-sickness absence and presenteeism in the past 1 year was 54.2%, 81.4% and 48.1%, respectively. 315 (62.3%) participants were categorized as good work performance. The proportion of workers with poor work performance differed by stress levels (p -value <0.01). In all, 81 (16.0%) support workers rated themselves with high job burnout. The proportion of high job burnout workers with poor work performance was higher than the low job burnout workers (63.0% and 32.8%, p -value <0.01). Sickness absence and presenteeism were positively associated with poor work performance (Table 2).

Analyzing by occupation, the unskilled workers had the lowest prevalence of sickness absence, non-sickness absence and presenteeism in the past 1 year compared with skilled and semi-skilled workers (Table 3).

Work performance and related factors

In the multiple logistic regression model, after controlling variables, age, shift work and job satisfaction were not associated with work performance. Compared to unskilled workers, the semi-skill occupation was more likely to have poor work performance (adjusted OR 2.18, 95% CI: 1.08–4.40). The high level of stress and high job burnout were, respectively, 3.89 (95% CI: 1.56–9.68) and 2.66 (95% CI: 1.50–4.72) times more likely to have poor work performance.

The support workers with more than 10 days of sickness absence in the past 1 year were significantly associated with poor work performance (adjusted OR 3.05, 95% CI: 1.24–7.49) compared to no sickness absence. The support workers with presenteeism for 6–10 days and more than 10 days in the past 1 year were, respectively, 4.78 (95% CI: 2.35–9.72) and 5.12 (95% CI: 2.25–11.64) times more likely to report poor work performance (Table 4).

Among the skill occupation group, the support workers with presenteeism for 6–10 days in the past 1 year were 3.50 (95% CI: 1.14–10.78) times more likely to report poor work performance. The semi-skilled occupation group with non-sickness absence for 6–10 days in

Table 1.
Baseline characteristics and work performance of support workers. (*n* = 505)

Variables	Total <i>n</i> (%)	Good performance <i>n</i> (%)	Poor performance <i>n</i> (%)	<i>p</i> -value
<i>Gender</i>				
Male	147 (29.1)	94 (64.0)	53 (36.0)	0.64
Female	358 (70.9)	221 (61.7)	137 (38.3)	
<i>Age (years)</i>				
≤40	234 (46.3)	133 (56.8)	101 (43.2)	0.02
>40	271 (53.7)	182 (67.2)	89 (32.8)	
<i>Occupation</i>				
Skill	176 (34.9)	114 (64.8)	62 (35.2)	<0.01
Semi-skill	248 (49.1)	139 (56.0)	109 (44.0)	
Unskilled	81 (16.0)	62 (76.5)	19 (23.5)	
<i>Shift work</i>				
No	315 (62.4)	184 (58.4)	131 (41.6)	0.02
Yes	190 (37.6)	131 (68.9)	59 (31.1)	
<i>Employment duration</i>				
1-2 year(s)	41 (8.1)	20 (48.8)	21 (51.2)	0.16
3-5 years	69 (13.7)	42 (60.9)	27 (39.1)	
5-10 years	119 (23.6)	71 (59.7)	48 (40.3)	
>10 years	276 (54.6)	182 (65.9)	94 (34.1)	
<i>Job satisfaction</i>				
Low	5 (1.0)	1 (20.0)	4 (80.0)	<0.01
Moderate	57 (11.3)	26 (45.6)	31 (54.4)	
High	443 (87.7)	288 (65.0)	155 (35.0)	
<i>Stress level</i>				
Low	292 (57.8)	208 (71.2)	84 (28.7)	<0.01
Moderate	161 (31.9)	90 (55.9)	71 (44.1)	
High	32 (6.3)	9 (28.1)	23 (71.9)	
Very high	20 (4.0)	8 (40.0)	12 (60.0)	
<i>Burnout</i>				
Low	424 (84.0)	285 (67.2)	139 (32.8)	<0.01
High	81 (16.0)	30 (37.0)	51 (63.0)	

the past 1 year was 0.34 (95% CI: 0.15–0.76) times less likely to report poor work performance. The support workers with presenteeism for 6-10 days and more than 10 days in the past 1 year were, respectively, 4.75 (95% CI: 1.84–12.31) and 4.02 (95% CI: 1.23–13.11) times more likely to report poor work performance. The unskilled occupation with sickness absence for 6-10 days in the past 1 year was 49.03 (95% CI: 2.53–947.43)* times more likely to report poor work performance (Table 5).

Discussion

The present study found that the prevalence of sickness absence and presenteeism in the hospital was, respectively, 54.2% and 48.1%. Sickness absence and presenteeism were independently associated with poor self-assessed work performance. In addition, we found that stress and job burnout were also associated with poor work performance.

The prevalence of sickness absence among hospital support workers was relatively similar to prevalence among healthcare workers of Chaiear’s study [14], but lower than Gaudine and Gregory [12]. This difference may arise from the study population. Moreover, it might also be due to the shortage of personnel that resulted in difficulty to replace the absence

Variables	Total <i>n</i> (%)	Good performance <i>n</i> (%)	Poor performance <i>n</i> (%)	<i>p</i> -value
<i>Sickness absence in the past 1 year (days)</i>				
0	231 (45.8)	164 (71.0)	67 (29.0)	<0.01
1-5	189 (37.4)	114 (60.3)	75 (39.7)	
6-10	53 (10.5)	27 (50.9)	26 (49.1)	
>10	32 (6.3)	10 (31.2)	22 (68.8)	
<i>Non-sickness absence in the past 1 year (days)</i>				
0	94 (18.6)	56 (59.6)	38 (40.4)	0.76
1-5	164 (32.5)	104 (63.4)	60 (36.6)	
6-10	172 (34.1)	111 (64.5)	61 (35.5)	
>10	75 (14.8)	44 (58.7)	31 (41.3)	
<i>Presenteeism in the past 1 year (days)</i>				
0	262 (51.9)	196 (74.8)	66 (25.2)	<0.01
1-5	149 (29.5)	91 (61.1)	58 (38.9)	
6-10	55 (10.9)	17 (30.9)	38 (69.1)	
>10	39 (7.7)	11 (28.2)	28 (71.8)	

Table 2. Work performance by absenteeism and presenteeism among support workers. (*n* = 505)

Variables	Skill (<i>n</i> = 176)	Occupation, <i>n</i> (%) Semi-skill (<i>n</i> = 248)	Unskilled (<i>n</i> = 81)	<i>p</i> -value
<i>Sickness absence in the past 1 year (days)</i>				
0	76 (43.2)	105 (42.3)	50 (61.7)	0.03
1-5	72 (40.9)	98 (39.5)	19 (23.5)	
6-10	15 (8.5)	32 (12.9)	6 (7.4)	
>10	13 (7.4)	13 (5.2)	6 (7.4)	
<i>Non-sickness absence in the past 1 year (days)</i>				
0	22 (12.5)	41 (16.5)	31 (38.2)	<0.01
1-5	59 (33.5)	76 (30.7)	29 (35.8)	
6-10	63 (35.8)	93 (37.5)	16 (19.8)	
>10	32 (18.2)	38 (15.3)	5 (6.2)	
<i>Presenteeism in the past 1 year (days)</i>				
0	75 (42.6)	128 (51.6)	59 (72.8)	<0.01
1-5	69 (39.2)	72 (29.0)	8 (9.9)	
6-10	18 (10.2)	29 (11.7)	8 (9.9)	
>10	14 (8.0)	19 (7.7)	6 (7.4)	

Table 3. The number of sickness absence, non-sickness absence and presenteeism distributed by occupational group (*n* = 505)

personnel. This study found that presenteeism annual prevalence is slightly lower than that of other studies [15–17], which might be due to many factors such as the difference in the definition of presenteeism, workload, workers' health and working environment.

The association of sickness absence with poor work performance was reported in other studies [5]. Work performance depends on the severity of the disease and the length of the absence. A mild illness or an acute condition led to a short period of sickness absence. Sick leave allows personnel to recover and return to work normally. The more severe the disease, the more extended period or more frequent the sickness absence. The consequences of more extended periods or more frequent sickness absence were inactiveness, stress or depressed mood and work skill decrement. Poor health status affects physical and mental health, so the employees could not perform their tasks effectively [24].

For presenteeism, the finding was consistent with another study [5]. The workers who came to work with feeling physically or mentally sick would perform their work with reduced

Variables	Crude odds ratio (95% CI)	Adjusted odds ratio (95% CI)
<i>Age (years)</i>		
≤40	1.55 (1.08–2.23)*	1.28 (0.82–2.00)
>40	Reference	Reference
<i>Occupation</i>		
Skilled occupation	1.77 (0.97–3.23)	1.14 (0.53–2.46)
Semi-skilled occupation	2.56 (1.44–4.53)*	2.18 (1.08–4.40)*
Unskilled occupation	Reference	Reference
<i>Shift work</i>		
No	1.58 (1.08–2.31)	1.45 (0.92–2.29)
Yes	Reference	Reference
<i>Job satisfaction</i>		
Low	7.43 (0.82–67.08)	1.21 (0.12–12.62)
Moderate	2.22 (1.27–3.87)*	1.41 (0.72–2.76)
High	Reference	Reference
<i>Stress level</i>		
Low	Reference	Reference
Moderate	1.95 (1.31–2.92)*	1.48 (0.95–2.32)
High	6.32 (2.81–14.24)*	3.89 (1.56–9.68)*
Very high	3.71 (1.47–9.41)*	1.25 (0.41–3.81)
<i>Burnout</i>		
Low	Reference	Reference
High	3.49 (2.13–5.72)*	2.66 (1.50–4.72)*
<i>Sickness absence in the past 1 year (days)</i>		
0	Reference	Reference
1-5	1.61 (1.07–2.42)*	1.25 (0.79–2.00)
6-10	2.36 (1.28–4.33)*	1.23 (0.60–2.53)
>10	5.39 (2.42–11.98)*	3.05 (1.24–7.49)*
<i>Presenteeism in the past 1 year (days)</i>		
0	Reference	Reference
1-5	1.89 (1.23–2.91)*	1.45 (0.89–2.36)
6-10	6.64 (3.51–12.54)*	4.78 (2.35–9.72)*
>10	7.56 (3.57–16.02)*	5.12 (2.25–11.64)*

Table 4. Simple and multiple logistic regression of associated factors with work performance

Note(s): * Statistically significant (p -value < 0.05)

capacity, attention and engagement [4]. The common health problems associated with sickness absence and presenteeism were similar (e.g. back pain and musculoskeletal problem, allergies, gastrointestinal problem, sleep problem and mental health) [25, 26]. There are many reasons for presenteeism among workers, such as not wanting to burden their colleagues, enjoy working, other workers could not finish the job, do not want to take a sickness absence or even do not want to be considered as lazy or be low-productive [27]. This study found a strong association between presenteeism and poor work performance than sickness absence and poor work performance. So, the organizations should balance the consequence to workers' work performance while approaching the sickness absence and presenteeism issue. Non-sickness absence, such as vacation leave or personal leave, is not related to the health problem. Non-sickness absence had no association with poor work performance. The leave might allow the workers to take a break from work, reducing the factor associated with impaired work performance, for example, stress and pressure from work, and return to work with standard performance.

Variables	Adjusted odds ratio (95 %CI) ¹		
	Skilled occupation	Semi-skilled occupation	Unskilled occupation
<i>Sickness absence in the past 1 year (days)</i>			
0	Reference	Reference	Reference
1-5	0.80 (0.37–1.71)	1.59 (0.87–2.92)	4.09 (0.62–26.80)
6-10	3.35 (0.96–11.70)	0.74 (0.30–1.86)	49.03 (2.53–947.43)*
>10	3.16 (0.86–11.63)	2.27 (0.61–8.49)	– [#]
<i>Non-sickness absence in the past 1 year (days)</i>			
0	Reference	Reference	Reference
1-5	1.55 (0.49–4.88)	0.52 (0.23–1.17)	0.88 (0.22–3.54)
6-10	1.46 (0.47–4.58)	0.34 (0.15–0.76)*	0.52 (0.50–5.34)
>10	1.03 (0.29–3.70)	0.54 (0.20–1.43)	4.76 (0.44–52.13)
<i>Presenteeism in the past 1 year (days)</i>			
0	Reference	Reference	Reference
1-5	1.26 (0.59–2.72)	1.52 (0.80–2.88)	1.90 (0.19–18.93)
6-10	3.50 (1.14–10.78)*	4.75 (1.84–12.31)*	– [#]
>10	3.90 (1.00–15.30)	4.02 (1.23–13.11)*	– [#]

Note(s): ¹ The odds ratio was adjusted by age, shift work, job satisfaction, stress level and burnout
* Statistically significant (*p*-value < 0.05)
[#] The odds ratio unable to be analyzed due to the absence of comparing data

Table 5. Multiple logistic regression of absenteeism and presenteeism with work performance distributing by occupation

The findings showed that poor work performance was more common in semi-skilled occupation. This phenomenon might be explained by Karasek’s model [28], which states that job strain is caused by the association between psychological job demand and job decision latitude, the extent to which one can make decisions and exercise control over their work. Most semi-skilled occupations (clerks, service workers or office workers) are high psychological demand jobs but low-decision latitude. These caused high strain and stress occupation and might cause poor work performance. Most skilled occupations (managers, executives or supervisors) fall under high demands and high-decision latitude. These groups are categorized as active jobs, in which there is a high motivation to self-develop or self-improve.

The stress level had an association with performance in a non-linear form. The Yerkes-Dodson [29] law explains the relationship between stress and performance in inverted-U shape. The optimum stress level could encourage the highest performance. In comparison, too low or too high stress level caused lower performance. However, only 20 participants reported very high stress. This might cause non-responder bias and there may be no association between very high-stress workers and poor work performance. High job burnout is negatively associated with work performance. The burnout caused attention deficit, reduced job engagement, declined productivity and increased the rate of accident, and thus burnout might be associated with the decrease of overall work performance [30]. Overall, stress and burnout affect work performance by causing attention deficit, reducing job engagement, decreasing productivity and increasing accidents [24, 30]. The findings of the present study had implications on providing information to the hospital administration so that they could consider intervention programs to improve work performance and alleviate factors related to sickness absence and presenteeism among the hospital workers.

The present study has its strength in the study population, including many types of occupations and relatively large sample size. The results could be applied to support workers in other large hospitals. There are some limitations in the present study. Firstly, the cross-sectional study design may preclude the conclusion of a cause-effect relationship. Secondly,

data on absenteeism, presenteeism and work performance were collected using a self-reported questionnaire, which may be subject to recall bias from respondents. Thirdly, the study's response rate was low, and so the targeted population's representativeness might be limited. Lastly, self-assessment work performance levels could differ among each person depending on personality. Workers might overrate themselves. However, this study used a standardized questionnaire to obtain, which should minimize the bias to some degree. Future research might use supervisor appraisal or other methods to measure work performance. Finally, the study of one medical school hospital might limit the application to other settings with different contexts. However, findings from the present study can still apply to other large healthcare facilities with similar characteristics.

Conclusion

Sickness absence and presenteeism were associated with poor work performance in hospital support workers. Other factors, such as stress and burnout, also contribute to poor work performance, and interaction among these factors needs further research. To improve productivity, hospital administrators might consider intervention programs to enhance work performance among workers with sickness absence and presenteeism.

Conflict of Interest: None

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