

10-1-2021

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Recommended Citation

Nithivasin, Sunansa and Kalayasiri, Rasmon (2021) "Work addiction, workplace stress, and burnout syndrome among teachers in the Armed Forces Academies Preparatory School," *Chulalongkorn Medical Journal*: Vol. 65: Iss. 4, Article 6.

DOI: 10.14456/clmj.2021.51

Available at: <https://digital.car.chula.ac.th/clmjjournal/vol65/iss4/6>

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Original article

Work addiction, workplace stress, and burnout syndrome among teachers in the Armed Forces Academies Preparatory School

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Background: Teachers have many aspects roles of responsibilities which consume more time than usual and could lead to work addiction and burnout syndrome. However, there has never been any study on work addiction and burnout syndrome among teachers in Thailand in order to raise awareness and seek for prevention measures of these work addiction and burnout of teachers in the future.

Objective: The purpose of this study was to determine the prevalence and associated factors of work addiction and burnout syndrome in teachers.

Methods: This cross-sectional descriptive study was conducted by 113 teachers of the Armed Forces Academies Preparatory School by using Thai version of questionnaires about demographic data, work-related data, Thai job content questionnaires (Thai JCQ), bergen work addiction scale (BWAS), and Thai Version of Maslach Burnout Inventory (Thai MBI). The statistical analysis were frequency, percentage, mean, standard deviation, median and logistic regression.

Results: The study found that the prevalence of work addiction and burnout syndrome among the teachers in the Armed Forces Academies Preparatory School was 11.5% and 30.1%, consecutively. The factors affecting work addiction included psychological job demand, while personal factors and work-related factors did not affect work addiction. The study also found that the factors affecting burnout syndrome was job control and job security.

Conclusion: The study inferred that the prevalence of work addiction was not as high as one found in the previous study partly because of different groups of studied population and questionnaires and the teachers did well on time management. On the other hand, the prevalence of burnout syndrome was fairly high. Nevertheless, screening and searching people who are potentially at risk may help prevent them from work addiction and burnout syndrome and may also help pave ways for taking care of those with the conditions.

Keyword: Work addiction, burnout syndrome, Teachers in Armed Forces Academies Preparatory School.

Nowadays, teachers have varied roles and responsibilities including teaching role, morality and ethics trainings, research role, cultural transfer, human relations, special duties, student performance report, educational guidance, and student activities. A survey of 1,500 teachers by Randstad found that 46.0% of school teachers worked overtime for 10 hours per week, 52.0% stopped socializing with friends due to

work at school, 3 out of 4 teachers did not have enough rest, 44.0% worked on holidays, 45.0% got a break for only 1 hour per day, 44.0% had stress related to work during the past 6 months, 84.0% said they did not expect to receive a higher salary, and 72.0% felt obliged to go to work despite their illness. The survey also revealed interesting information that teacher labor during the working age of 30 - 49 years old tended to resign easily resulting in a shortage of experienced teachers.⁽¹⁾ It was found that teachers of the Armed Forces Academies Preparatory School had doubled roles as they must have both teaching profession and military profession. What makes teachers in the Armed Forces Academies Preparatory School different from those in other institutions is the school's

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Received: January 29, 2020

Revised: March 20, 2020

Accepted: April 7, 2020

learning program with a primary mission of producing personnel stationed in the Royal Thai Armed Forces and the Royal Thai Police. The military academy is an intensive source of leadership cultivation with a purpose of training civilians to become perfect soldiers. Thus, the duty of teachers in the military school must be upheld with discipline, military regulations, and greater sacrifice and responsibility. Due to organization's operational agreements and responsibilities, the teachers had to spend more time on working than usual leading to exhaustion caused by excessive work and work addiction.⁽²⁾

Work addiction is a behavior that involves heavy work for a long period of time. Allowing excessive work to separate other things from their lives, people with work addiction, therefore; lose control and lose interest in work. This results in negative relationships with themselves, society and emotions, which can adversely affect their health. The study found that psychologically, work addiction caused stress, difficulty sleeping, feeling tired easily and difficulty waking up. Besides, the connection between the work addiction and burnout syndrome⁽³⁾ was also found. There has been a research describing careers that require excessively long hours of work, various duties, and high expectations from society such as doctors, lawyers, psychologists⁽⁴⁾ were at risk for work addiction and the teacher career was considered as one in five of the high stress professions. Teachers with burnout syndrome not only affected individuals but also affected students.⁽⁵⁾ There has been an awareness in foreign countries regarding work addiction in population surveys, for examples, the study by Andreassen CS, *et al.*⁽⁶⁾ using Bergen Work Addiction Scale found that 7.3% - 8.3% of Norwegian people suffered from work addiction. In Hungary, Dr. Zsolt Demetrovics conducted a survey using the Work Addiction Risk Test and found that 8.2% of Hungarian population aged 18 - 64 years old were work addicts with working week of 40 hours which posed high risk of work addiction.⁽⁷⁾ In addition, a survey of American citizens conducted in the United States found that the prevalence of work addiction was as high as 10.0% and some researchers even found that the prevalence was as high as 15.0% - 25.0%.⁽⁸⁾

As for Thailand, recently there has been no research to explore work addiction at the national level. It was also found that, in the last 10 years, the number of researches related to work addiction in risk-occupation groups was still small. Therefore, this research focused on collecting data on work addiction

and burnout syndrome among the teachers in the Armed Forces Academies Preparatory School to study the prevalence and relevant factors of work addiction among the teachers recognized as one of professions being at risk of work addiction and burnout syndrome to raise awareness and seek ways to prevent the conditions in the future.

Materials and methods

Descriptive cross-section study was used as a research methodology in this study. The study population was a group of teachers of the Armed Forces Academies Preparatory School during 2018 - 2019 period. The population had to meet the inclusion criteria consisting of Thai male or female and full time teachers at the Armed Forces Academies Preparatory School. On the contrary, the exclusion criteria were inability to read or write in Thai, for example, foreigner teachers. The total population was 113 teachers.

The collection instruments were: 1) a demographic data questionnaire; 2) a work-related questionnaires; 3) Thai job content questionnaires (Thai JCQ), The Bergen Work Addiction Scale (BWAS), and Thai Version of Maslach Burnout Inventory (Thai MBI). In order to collect the data for this study, the questionnaires were prepared in hard copies. After obtaining permission from the Armed Forces Academies Preparatory School's principal, the hard copies were distributed among the teachers and were explained by the researcher. The teachers were assured that the results would be only employed for the the research . The approximate time for submitting the answer was 20 minutes. In the next step, aqll the data was insert into SPSS software for statistical analysis.

Data collection was conducted in August 2019. This study was approved by the Institutional Review Board (IRB), the Faculty of Medicine, Chulalongkorn University (COA No. 636/2019). All subjects and caregivers were informed of the objectives and methods of the present study.

Measurements

The questionnaire consists of 5 parts which are as follows:

- Personal data of the respondents consisting of gender, age, marital status, education level, average monthly income, and family burdens.
- Working factors of the respondents consisting of the number of working hours, duration of employment (years), job title, department and job description.

- Information regarding work-related stress using the 45-item Thai Job Content Questionnaire (Thai-JCQ)⁽⁹⁾ to consider 6 areas: job control, psychological job demand, physical job demand, job security, social support, and hazard at work. Each item has a response set of four-point Likert scales that range from 1 strongly disagree to 4 strongly agree except hazard at work which range from 1 to 3. The factor analysis showed adequate construct validity of Thai-JCQ. The Cronbach's alpha coefficient was satisfactory for five factors of 0.71 - 0.86 except job security scale, which was moderately acceptable at 0.55.⁽¹⁰⁾ The factor analysis was tested by using the median to divide data into low level and high level.

- The work addiction assessment form which assessed the condition over the past year using the questionnaire developed from Bergen Work Addiction Scale (BWAS) and was adjusted into a Thai language version. The content was approved by 3 experts and Cronbach's alpha coefficient was 0.76.⁽⁴⁾ The questionnaire consisted of seven questions and the cut point criteria was used. The respondent would have been considered to have work addiction if the cut points were greater than or equal to 4 points for 4 or more items.

- The burnout syndrome assessment using the Maslach Burnout Inventory (MBI) 22 items by Maslach and Jackson adjusted Thai language version by Shaikh W, *et al.*⁽¹¹⁾ The assessment considered 3 criteria; emotional exhaustion (Cronbach's alpha coefficient 0.92), scores from 27 - 54 points were considered high level of burnout, depersonalization (Cronbach's alpha coefficient 0.91), scores from 13 - 30 points were considered high level of burnout, and decreased occupational accomplishment (Cronbach's alpha coefficient 0.93), scores from 0 - 31 points were considered high level of burnout. Those with high level of burnout from up to 2 criteria were considered to suffer from burnout syndrome.

Statistical analysis

Personal factors, working factors, workplace stress conditions, work addiction, and burnout syndrome were analyzed using frequency count and percentage. Information regarding workplace stress in each area was presented with frequency and percentage using the median to divide data into two groups which were low level and high level. As for inferential statistics, multiple logistic regression statistics was used to analyze the influence of various factors affecting work addiction and burnout

syndrome, with the odds ratio as a measure of the relationship.

Results

In the study of 113 people, most of them were female (57.5%) at the age group Of 31 - 40 years (42.5%), mostly single (56.7%), with a Master's Degree in education (52.2%), with monthly income from 21,000 - 30,000 THB (36.3%), a low burden (financial responsibility does not cause them to suffer too much anxiety.) (54.0%), and no congenital disease (85.8%) as shown in Table 1.

Work factors data

From collected data regarding work, most of the samples have average working hours of 40 hours per week (8 hours / day) (50.4%), with duration of employment of more than 15 years (30.1%), most of them were in professional level (41.5%), most of them were in the Department of Mathematics (25.7%), and most of them performed duties related to classroom management (89.4%) as shown in Table 1.

Workplace stress data

Workplace stress data has found that the studied sample group's most workplace stress factors are in the high level in all aspects which are job control is at 54.9%, psychological job demand is at 50.4%, physical job demand is 52.2%, job security is at 77.9%, social support is at 80.5%, hazard at work is at 54.9%, as shown in Table 2.

Work addiction data

Work addiction assessment of the studied samples of teachers at in the Armed Forces Academies Preparatory School consists of all 7 questions, for people with work addiction, used criteria for people with scores from 4 points onward found that there are 13 work addiction people which is a calculation of 11.5% as shown in Table 3.

Burnout syndrome data

Burnout syndrome assessment found that; emotional exhaustion of high level is 23.9%, reduced individualism assessment is at 20.4%, personal failures assessment of high level is 40.7%. When using up to 2 criteria with high level Burnout syndrome found that there are 34 people with burnout, calculated as 30.1% as shown in Table 4.

Table 1. Personal data and work factors (n = 113).

Personal data	n (%)	Work factors	n (%)	Work factors	n (%)
Gender		Number of working hours		Teaching and learning responsibility	
Male	48 (42.5)	40 hours/week	57 (50.4)	Yes	101 (89.4)
Female	65 (57.5)	More than 40 hours/week	56 (49.6)	No	12 (10.6)
Age		Duration of work		Training responsibility	
21 - 30 years	25 (22.1)	Less than 1 year	12 (10.6)	Yes	29 (25.7)
31 - 40 years	48 (42.5)	1 - 5 years	20 (17.7)	No	84 (74.3)
41 - 50 years	31 (27.4)	6 - 10 years	15 (13.3)	Research responsibility	
51 - 60 years	9 (8.0)	More than 15 years	34 (30.1)	Yes	38 (33.6)
Civil status		Job positions		No	75 (66.4)
Married	44 (38.9)	Assistant teacher	42 (37.2)	Administration responsibility	
Single	64 (56.7)	Practitioner teacher	22 (19.4)	Yes	35 (31.0)
Separated/divorced/ widowed	5 (4.4)	Professional teacher	47 (41.6)	No	78 (69.0)
Highest education		Senior professional teacher	2 (1.8)	Various projects responsibility	
Bachelor's Degree or equivalent	49 (43.4)	Department (learning subject)		Yes	46 (40.7)
Master's Degree	59 (52.2)	Mathematics	29 (25.7)	No	67 (59.3)
Doctorate's Degree (Ph.D.)	5 (4.4)	Science	23 (20.4)	Other responsibilities	
Monthly income		Thai language	12 (10.6)	Yes	15 (13.3)
Less than/equal to 20,000 Thai baht	28 (24.8)	Foreign languages	15 (13.3)	No	98 (86.7)
21,000–30,000	41 (36.3)	Social science	9 (7.9)		
30,001–40,000	32 (28.3)	Counseling psychology	2 (1.8)		
40,001–50,000	5 (4.4)	Arts	5 (4.4)		
More than 50,000	7 (6.2)	Physical education	10 (8.8)		
Family burden		Soldier	8 (7.1)		
Little burden	61 (54.0)				
Medium burden	45 (39.8)				
Heavy burden	7 (6.2)				
Medical disease					
No	97 (85.8)				
Yes	16 (14.2)				

Table 2. Emotion levels of assessment of job stress classified by median (n = 113).

Assessment of job stress	Levels of assessment of job stress	
	Low level amount (%)	High level amount (%)
Job control	51 (45.1)	62 (54.9)
Psychological job demand	56 (49.6)	57 (50.4)
Physical job demand	54 (47.8)	59 (52.2)
Job security	25 (22.1)	88 (77.9)
Social support	22 (19.5)	91 (80.5)
Hazard at work	51 (45.1)	62 (54.9)

Table 3. Number of people with work addiction in different aspects (n = 113).

Work addiction assessment	Number of people with 4 to 5 points	Percentage
Saliency	34	30.1
Tolerance	40	35.4
Mood modification	13	11.5
Relapse	18	15.9
Withdrawal	13	11.5
Conflict	34	30.1
Problems	17	15.1
Work addicted people*	13	11.5

*People with at least 4 points of at least 4 aspects

Table 4. Burnout levels (n = 113).

Burnout assessment	Burnout levels assessment		
	Low level amount (%)	Medium level amount (%)	High level amount (%)
Emotional exhaustion	64 (56.6)	22 (19.5)	27 (23.9)
Depersonalization	81 (71.7)	9 (8.0)	23 (20.3)
Decreased occupational accomplishment	50 (44.2)	17 (15.1)	46 (40.7)
Burnout syndrome people (up to 2 criteria with high level)	Amount 34		Percentage 30.1

Various factors affects work addiction

Based on bivariate analysis where *P* - value is less than or equal to 0.25, we examined potential multicollinearity $P < 0.07$ which then used in multiple logistic regression in order to find variables that affect work addiction such as civil status, education, monthly income, family burden, number of working hours, job positions, psychological job demand and social support. The results revealed that psychological job demand has statistically significant influence on work addictions. Correlation of psychological job demand and work addiction (OR > 1) as shown in Table 5.

Various factors affect burnout syndrome studies

By using bivariate analysis where *P* - value is less than or equal to 0.25, we examined potential multicollinearity $P < 0.07$ which then used in multiple logistic regression in order to find variables that affect burnout syndrome such as job control, psychological job demand, physical job demand, job security, social support, hazard at work and work addiction conditions. It was found that job control and job sesecurity are statistically significant and are protective factors to burnout syndrome (OR < 1) as shown in Table 5.

Discussion

The study has found that work addicts are calculated to 11.5%. When compared to previous studies, we found that the prevalence of work addiction variably depend on the studied sample group who entered the surveys and tools used in testing for work addiction with their concepts are different in some ways. In this study we found that the prevalence of work addiction is less than Netirojanakul W, *et al.*⁽¹²⁾ which studied on work addiction of nursing career in one hospital in Bangkok, and less than Orosz G, *et al.*⁽¹³⁾, which studied staffs in Hungary. Both mentioned studies used Bergen Work Addiction Scale (BWAS) test as well as this study. While the prevalence in this study is higher than the study of workaholism in Norwegian employees of Andreassen CS, *et al.*⁽⁶⁾, sample groups are different. The studied sample group is in teaching profession, whom requested high responsibility. Even though they must be responsible for their students, teaching and teaching preparations may occasionally cause brain exhaustion, but most of the teachers are able to manage working hours with their responsible work tasks.

Table 5. Relationships between various factors and work addiction analyzed by Multiple Logistic Regression Statistics.

Relationship between various factors affects work addiction			Relationship between various factors affects burnout		
Factors	Crude OR (95% CI) ^a	Adjusted OR (95% CI) ^a	Factors	Crude OR (95% CI) ^a	Adjusted OR (95% CI) ^a
Civil status			Job control		
Single/widowed	1.00	1.00	Low level	1.00	1.00
Married	2.32 (0.60 - 8.94)	0.34 (0.07 - 1.71)	High level	0.25 (0.10 - 0.64) *	0.31 (0.10 - 0.93) *
Education			Psychological job demand		
Bachelor's degree	1.00	1.00	Low level	1.00	1.00
Higher than bachelor's degree	4.88 (1.03 - 23.14) *	2.48 (0.37 - 16.57)	High level	3.00 (1.19 - 7.60) *	1.43 (0.36 - 5.62)
Monthly income			Physical job demand		
Less than/Equal to 20,000 THB	1.00	1.00	Low level	1.00	1.00
21,000 – 30,000 THB	0.67 (0.09 - 5.04)	0.41 (0.03 - 4.95)	High level	3.44 (1.32 - 9.00) *	1.72 (0.42 - 7.09)
More than 30,000 THB	3.34 (0.66 - 16.79)	1.68 (0.11 - 25.28)			
Family burden			Job security		
Medium to high burden	1.00	1.00	Low level	1.00	1.00
Low burden	0.18 (0.15 - 1.61)	0.74 (0.15 - 3.60)	High level	0.18 (0.07 - 0.46) *	0.20 (0.06 - 0.62) *
Number of working hours			Social support		
40 hr./week	1.00	1.00	Low level	1.00	1.00
More than 40 hr./week	3.91 (1.02 - 15.08) *	2.75 (0.58 - 12.95)	High level	0.356 (0.13 - 0.96) *	0.47 (0.13 - 1.75)
Job positions			Hazard at work		
Assistant teacher	1.00	1.00	Low level	1.00	1.00
Practitioner teacher (K1)	2.00 (0.26 - 15.26)	2.14 (0.13 - 35.99)	High level	5.06 (1.75 - 14.60) *	3.06 (0.88 - 10.66)
Social Science/Counseling psychology /Arts / Physical Education / Soldier	1.00	1.00	Work addiction conditions		
Mathematics/Science	1.33 (0.23 - 7.71)	3.03 (0.21 - 44.64)	Without work addiction	1.00	1.00
Thai language /Foreign languages	5.60 (1.06 - 29.68) *	1.94 (0.16 - 23.72)	With work addiction	0.35 (0.03 - 1.91)	0.11 (0.01 - 1.40)
Psychological job demand					
Low level	1.00	1.00			
High level	6.46 (1.36 - 30.64) *	5.92 (1.10 - 32.04) *			
Social Support					
Low level	1.00	1.00			
High level	0.33 (0.10 - 1.13)	0.34 (0.08 - 1.54)			

a = 95% confidence interval, *Statistically significant. Used statistics a = Pearson's Chi square test, OR = odds ratio,

*Statistically significant

Factor related to work addiction is psychological job demand. People with high level psychological job demand prone to have more work addiction than the low-level people. They spend most of their time working otherwise, they feel guilt and anxiety, causing them to continuously work harder and longer period of times until it leads to work addiction. Therefore, prevention measures should have created fun atmosphere at workplace, conduct happiness assessment periodically, and workloads assessment. When compared to previous studies, Netirojjanakul W, *et al.*⁽⁴⁾ found that psychological job demand is related to work addiction. Also, this study is in accordance with Andreassen CS, *et al.*⁽⁶⁾ that sensitive personality and consciousness personality are at risk of work addiction.

Factor related to Burnout syndrome are job control and job security where these two act as protective factors. This may be due to the ability to freely think, make decisions, and maximize their work, hence, increasing the motivation to work hard and advance forward. Similarly, people with high job security are more likely to be motivated to work hard for promotions as mentioned by Cooper and Catwright that the lack of security can result in job dissatisfaction and lack of career advancement which eventually leads to burnout.⁽¹⁴⁾ For this reason, companies should consider providing opportunities for the teachers to share their opinions and make decisions regarding their work to help build motivation for career advancement and increase salary when presented with deserving work.⁽¹⁴⁾

There may be some possible limitation in this study. As a cross-sectional study, it did not allow researches to make a conclusion about cause-effect phenomenon. The questionnaires were self-reported data so that it is possible to contain several potential sources of bias as they are working under strict rules and regulation. In addition, the study did not encompass all teachers who have vulnerable to high work addiction, stress, and burnout in different areas. Therefore, our findings may have under-estimated this issue investigated in the studied population.

Conclusion

The prevalence of work addiction of teachers in the Armed Forces Academies Preparatory School is 11.5% which is low compared to previous studies due to different sample groups, questionnaires, and teachers well time management whereas the prevalence of burnout is 30.1%. The factor that affects

work addiction is psychological job demand and the factors that affect Burnout syndrome are job control and job security. Therefore, there should be a creation for work atmosphere to initiate positive working environment, having happiness assessment at work periodically to motivate teachers to see the benefits of having job security in their work, have a high salary from the opportunity received which will make them content at work.

Conflict of interest

The author, hereby, declares no conflict of interest.

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