



## ANALYSIS OF WORKLOAD AND WORK-RESULT LEVELS ON WORK FATIGUE IN ELEMENTARY SCHOOL TEACHERS IN WEST KARAWANG DISTRICT

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### Abstrak

Kelelahan kerja merupakan melemahnya tenaga untuk melakukan suatu kegiatan atau penurunan daya kerja dan berkurangnya ketahanan tubuh untuk bekerja. Kelelahan kerja menyebabkan kinerja guru terganggu. Tujuan penelitian ini adalah mengidentifikasi tingkat kelelahan kerja pada guru sekolah dasar. Metode penelitian yang digunakan adalah kuantitatif berbentuk dekriptif analitik dengan desain penelitian cross-sectional. Sampel penelitian sebanyak 190 orang guru, diambil menggunakan teknik consecutive sampling. Analisis bivariat dengan menggunakan uji chi-square menunjukkan hubungan yang bermakna antara beban kerja dan tingkat stres dengan terjadinya kelelahan kerja pada guru sekolah dasar. Temuan penelitian ini menyarankan perlu dilakukannya upaya promotif dan preventif serta skrining kesehatan secara rutin di sekolah sehingga guru sekolah dasar dapat bekerja secara optimal dan terhindar dari masalah kelelahan kerja.

**Kata Kunci:** beban kerja, tingkat stress akibat kerja, kelelahan kerja, guru, sekolah dasar, keperawatan kesehatan kerja

### Abstract

*Work exhaustion is a weakening of energy to carry out an activity or a decrease in work power and a decrease in the body's resistance to work. Fatigue causes teacher performance to be disrupted. The purpose of this study was to identify the level of workload, stress, and work fatigue in elementary school teachers. The research method used is quantitative analytic descriptive with cross-sectional research design. The research sample was 190 teachers, taken using consecutive sampling technique. Bivariate analysis using the chi-square test showed a significant relationship between workload and stress levels with the occurrence of work fatigue in elementary school teachers. The findings of this study suggest the need to conduct promotive and preventive services and routine health screening in schools so that elementary school teachers can work optimally and avoid work fatigue problems.*

**Keywords:** workload, level of stress, work fatigue, teacher, elementary school, occupational health nursing

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## INTRODUCTION

The world population is estimated at 7,442 billion people, of which 3,415 billion are workers (World Bank, 2016). This means that almost half or 45.9% of the world's population is included in the category of workers. The Central Statistics Agency (2017) stated that the workforce in Indonesia consisted of 131.55 million people or 50.6% of Indonesia's total population, the number of people working in the same year was 124.54 million people. Data from the Ministry of Education and Culture of the Republic of Indonesia (2018) reports that currently in Indonesia there are 466,074 male teachers and 1,014,149 female teachers. Meanwhile, in West Java province, there are currently 68,083 male teachers and 130,855 female teachers. Meanwhile, in Karawang Regency there are currently 3,458 male teachers and 5,420 female teachers. The details are 64% elementary school teachers, 25% junior high school teachers and 11% high school teachers.

The Ministry of Education and Culture of the Republic of Indonesia in 2018 reported that nationally the ratio between teachers and students in Indonesia is 1 teacher to 13 students, in West Java it is 1 teacher to 18 students, while in Karawang Regency it is 1 teacher to 21 students. Thus it can be concluded that the workload of elementary school teachers in Karawang Regency is higher when compared to that in West Java and nationally in Indonesia. This means that every elementary school teacher who is on duty in Karawang Regency has to educate almost twice as many students every day as other elementary teachers who are on duty in Indonesia. Research in Finland by Kalimo & Hakanen (2000) states that teaching is a profession that has a high level of workload compared to other professions. Research by Shernoff et. al. (2011) for educators in urban areas, excessive workload causes work fatigue.

Grandjean (1998; in Setyawati, 2010) added that factors that can cause work fatigue are monotonous work activities (Heihonen et. al., 2013; Jans, Proper, & Hildebrant, 2007; Dobson et. al., 2013), high workload (Liu & Ramsey, 2008); O'Donnell & Lambert, 2008; Pearson & Moomaw, 2005; Plash & Piorotrowski, 2006; Rieg et. al., 2007; Yogisutanti, 2011; Prasetyono, 2015), high levels of work stress (Mahan et. al., 2010; Betoret, 2006; Blase Blase, & Du, 2008; Yogisutanti, 2011), medical history of experiencing health problems (Cheong et. al.), status inadequate

nutrition, and a physical and psychosocial environment that is not conducive to carrying out work (Stanhope & Lancaster, 2016).

The health risks experienced by school teachers increase when teachers experience work fatigue. Allender, Rector, & Warner (2014) stated that the higher the level of risk a person is exposed to, the more vulnerable that person is to experiencing health problems. Therefore understanding the risk factors of a health problem is very important to develop an effective strategy for efforts to improve public health status (WHO, 2009).

Work fatigue can result in errors in taking action (Gawande et. al., 2003; in Prasetyono, 2015), decreased quality of life (Patrajaya et. al., 2003; Prasetyono, 2016), experiencing health problems such as chronic disease and financial high health (Carnethon, 2004; Guzik, 2013), anxiety and depression (Cheong et. al., 2010), and stress (Geving, 2007; Kokkinos, 2007; Grayson & Alvares, 2008; Yogisutanti, 2011). Teacher psychological instability due to work fatigue can trigger physical, emotional and psychological violence on students. According to the United Nations International Children's Emergency Fund (UNICEF) in 2006 stated that 80% of the violence experienced by students was carried out by their teachers.

The Indonesian Child Protection Commission (KPAI) on May 30 2018 reported that there were 161 incidents of violence against students, including victims of brawls (14.3%), perpetrators of brawls 19.3%), victims of violence/bullying (22.4%), perpetrators of violence/bullying (25.5%), and victims of education policies (18.7%). Cases of violence against students occupy the top 4th position after pornography and cyber crime cases. Most cases (21%) of violence against students according to KPAI (2018) were reported from the Greater Jakarta and Karawang areas.

Occupational health nurses can play a role in reducing work fatigue in teachers in elementary schools. Anderson and McFarlane (2016) state that occupational health nurses are responsible for health education programs in the workplace. Meanwhile, Lusk (1990; in Stanhope & Lancaster, 2004) states that the role of occupational health nurses is health service providers (clinician/caregiver) and health educators (health educators). This role is given through the necessary nursing care, for example to elementary school

teachers as a working group, covering aspects of biology, social and spiritual psychology so that these elementary school teachers can live healthier lives and even achieve a prosperous standard of living. The purpose of this study was to identify factors related to job burnout in elementary school teachers using an occupational health nursing approach.

## METODE

### Research design

This research is a type of quantitative research in the form of analytic descriptive with a cross-sectional research design. The population in this study were all elementary school teachers who live in West Karawang District, totaling 628 people (Dapodikdasmen RI, 2018). The total sample size is 190 people taken from 12 elementary schools in West Karawang District selected by consecutive sampling technique. Inclusion criteria in the study were elementary school teachers teaching in West Karawang District, working for at least 3 years, ASN and non-ASN employee status and willing to be research respondents.

### Research Instrument

The instrument used in this study, namely a questionnaire consisting of the characteristics of the respondents, workload and stress levels due to work and its relationship with the level of work fatigue modified from previous studies. The reliability test value using Cronbach alpha is 0.884.

### Research ethics

This research has been declared to have passed the ethical test by the Ethics Committee of the Faculty of Nursing, University of Indonesia (number: 298/UN2.F12.D/HKP.02.04/2018). Data retrieval has gone through the approval of the school principal and filled in informed consent and there is no compulsion to be a respondent.

## RESULT

The results of the study in table 1 show the characteristics of the respondents, which include age, gender, educational level, and employment status. Based on table 1 it is known that the age of most respondents is late adulthood (64.7%) with the most gender being female (86.3%). Meanwhile, the highest educational status was

undergraduate (56.3%), while the employment status most often encountered by elementary school teachers was ASN (66.3%).

Table 1. Characteristics of Elementary School Teachers in West Karawang District

Variable	Category	N	%
Age	Early adulthood	67	35,3
	Late adulthood	123	64,7
Gender	Man	26	13,7
	Woman	164	86,3
Level of education	Bachelor	107	56,3
	Postgraduate	83	43,7
Employment status	ASN	126	66,3
	Non ASN	64	33,7

The results of the study in table 2 show the working conditions of the respondents, namely workload and work-related stress levels for elementary school teachers in West Karawang District.

Based on table 2 shows that most of the respondents have a workload of  $\geq 40$  hours per week (57.9%). Meanwhile, more than half of the respondents experienced high stress levels due to work (53.2%).

Table 2. Working Conditions for Elementary School Teachers in West Karawang District

Variable	Category	N	%
Workload	< 40 hour	80	42,1
	$\geq 40$ hour	110	57,9
	risky	101	53,2
Work Stress Levels	Low	89	48,8
	Tall	101	53,2

The results of the study in table 3 show that more than half of the respondents experienced high work fatigue (51.1%).

Meanwhile, less than half (48.9%) of elementary school teachers experienced low fatigue.

Table 3. Levels of Work Fatigue in Elementary School Teachers in West Karawang District

Variable	Category	N	%
Work Fatigue Level	Low	93	48,9
	Tall	97	51,1

Table 4. Relationship between workload and work fatigue for elementary school teachers in West Karawang District

Independent Variable	Work Fatigue						OR (95% CI)	P value
	Low		High		Total			
	N	%	N	%	N	%		
	93	48,9	97	51,1	190	100		
<b>Workload</b>								
<b>Low</b>	58	72,5	22	27,5	80	100	5,649 (2,997 ~ 10,649)	0,000
<b>Tall</b>	35	31,8	75	68,2	110	100		

The relationship between workload and fatigue level is  $p: 0.000 < 0.05$  alpha, meaning that there is a difference or there is a significant relationship between workload and work fatigue. OR value 5.649 (95% CI: 2.997 ~

10.649). This means that teachers who have a high workload have a 5.649 times chance of experiencing work burnout when compared to teachers who have a light workload.

Table 5. The relationship between work stress and job burnout in elementary school teachers in West Karawang District

Independent Variable	Work Fatigue						OR (95% CI)	P value
	Low		High		Total			
	N	%	N	%	N	%		
	93	48,9	97	51,1	190	100		
<b>Work Stress</b>								
<b>Low</b>	65	73,0	24	27,0	89	100	7,061 (3,725 ~ 13,385)	0,000
<b>Tall</b>	28	27,7	73	72,3	101	100		

The relationship between the level of stress due to work with the level of work fatigue obtained  $p: 0.001 < 0.05$  alpha, meaning that there is a difference or there is a significant relationship between the level of stress due to work and the level of work fatigue. OR value 7.061 (95% CI: 3.725 ~ 13.385). This means that teachers who have stress levels due to heavy work have a 7.061 times chance of experiencing work burnout when compared to teachers who have light levels of work stress.

**DISCUSSION**

This study shows that the average age of elementary school teachers is between 37-60 years or late adulthood (64.7%). The average gender is female (86.3%), the average education level is undergraduate (56.3%) and the average teacher employment status is ASN (66.3%).

The results showed that most of the respondents had a workload of  $\geq 40$  hours per week (57.9%). Meanwhile, the respondents of this study experienced a high level of stress

due to work (53.2%) on average. The results also showed that more than half of the respondents experienced high work fatigue (51.1%).

**CONCLUSION**

Based on the results of this study, it can be concluded that workload and work-related stress levels have a significant relationship with work fatigue. The results of this study can be used as input for health workers, teachers, schools and institutions that oversee primary and secondary education.

**RECOMENDATIONS**

Work fatigue experienced by 51.1% of elementary school teachers is an actual health hazard for workers. Work fatigue needs to be handled comprehensively in the work environment. Collaboration between health workers, schools and related agencies is needed by carrying out various preventive and promotive efforts as well as routine health screening so that the problem of work fatigue



in elementary school teachers can be optimally resolved.

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