

# The Correlation between Gender and Work Stress with the Fatigue of Lecturers

## *Hubungan antara Jenis Kelamin dan Stres Kerja with Kelelahan pada Dosen*

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### ABSTRACT

**Introduction:** Lecturers are workers who are actively involved in educational, research and community service activities at a college. Many duties and responsibilities of lecturers in their work can cause fatigue which is the body's response as a defense mechanism when the work exceeds its capacity. Different capacities can be assessed based on gender which also allows differences in response to the problem. The inability to cope with a problem or job produces a feeling of depression which can also be called as stress. The purpose of this study was to analyze the correlation between gender and work stress with fatigue at a faculty lecturers at a university in Surabaya. **Method:** This research was an analytical descriptive study in a faculty lecturers at a university in Surabaya. The study design was cross-sectional. Data were obtained through the results of a questionnaire distributed to lecturers who have met the criteria, as many as 43 respondents. **Results:** The study showed that 16 female respondents (57.2%) experienced moderate fatigue. About 19 respondents (63.3%) had mild stress and experienced mild fatigue. The correlation value between gender and fatigue was 0.816 and the strong correlation between work stress and fatigue was 0.000. This value indicated that there was no correlation between gender and fatigue, but there was a strong and direct correlation between work stress and fatigue. **Conclusion:** The occurrence of fatigue is not influenced by gender and high fatigue can be influenced by the high work stress felt by them.

**Keywords:** fatigue, gender, lecturer, work stress

### ABSTRAK

**Pendahuluan:** Dosen merupakan pekerja yang terlibat aktif dalam kegiatan pendidikan, penelitian dan pengabdian masyarakat di sebuah perguruan tinggi. Banyaknya tugas dan tanggung jawab dosen dalam pekerjaannya dapat menimbulkan kelelahan yang merupakan respons tubuh sebagai mekanisme pertahanan ketika pekerjaan melebihi kapasitasnya. Kapasitas yang berbeda salah satunya dapat dinilai berdasarkan gender yang juga memungkinkan adanya perbedaan respons dalam menghadapi masalah. Ketidakmampuan untuk mengatasi masalah atau pekerjaan menghasilkan perasaan depresi yang juga bisa disebut stres. Tujuan dari penelitian ini adalah untuk menganalisis hubungan antara jenis kelamin dan stres kerja dengan kelelahan pada satu dosen fakultas di Universitas di Surabaya. **Metode:** Penelitian ini merupakan penelitian deskriptif analitik pada salah satu fakultas suatu universitas di Surabaya. Desain penelitian adalah cross sectional. Data diperoleh melalui hasil kuesioner yang dibagikan kepada dosen yang telah memenuhi kriteria 43 responden. **Hasil:** Penelitian menunjukkan bahwa 16 (57,2%) responden wanita mengalami kelelahan sedang. Sekitar 19 (63,3%) responden dengan stres ringan mengalami kelelahan ringan. Nilai korelasi gender dengan kelelahan adalah 0,811 dan korelasi kuat antara stres kerja dan kelelahan adalah 0,000. Nilai ini menunjukkan bahwa tidak ada korelasi antara jenis kelamin dengan kelelahan, tetapi ada korelasi kuat dan searah antara stres kerja dan kelelahan. **Simpulan:** Terjadinya kelelahan tidak dipengaruhi oleh gender dan kelelahan tinggi dapat dipengaruhi oleh tingginya stres kerja yang dirasakan oleh mereka.

**Kata kunci:** , jenis kelamin, kelelahan, stres kerja

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### INTRODUCTION

College is an educational unit that includes a higher education diploma, undergraduate, master's program, doctoral and professional programs, as well as specialist programs, organized by the Indonesian culture (President of the Republic of Indonesia,

2012). The education provided in colleges is further education obtained after a person studies the primary and secondary levels of education to improve the academic quality of someone. Some parties have a role in the implementation of the educational process at a university, as stated by Mutia (2018), including faculty, staff and students. According to the Presiden Republik Indonesia (2005), lecturers are professional educators and scientists with the main task of transforming, developing and disseminating science, technology, and arts through education, research and community service. Lecturers and students play an active role in teaching and learning activities to improve the academic quality of each graduate. It aims to meet the Tri Dharma, which is the duty of the College to provide education, research, and community service, according to the rules contained in the Presiden Republik Indonesia (2012). Based on these obligations, each lecturer has a dominant role in implementing activities in tertiary institutions.

There are similarities in the role of lecturers in carrying out their work between females and males. They have the opportunity to be actively involved in Tri Dharma activities with students. The involvement of lecturers in carrying out their duties and responsibilities can cause a problem because there are differences in the capacities and abilities possessed by each lecturer. One's capacity can be judged based on several indicators, one of them is by gender which is the nature of God and cannot be changed. The different abilities possessed by male and female are physical abilities and muscle strength that can be seen from differences in body size, hormonal cycles and metabolic processes (Ramayanti, 2015). Differences in muscle strength and body size in male and females usually affect work which tends to involve physical activities such as carrying books, moving chairs and so on because females' physical strength in general is 2/3 compared to the physical strength of men, but females have more accuracy in certain aspects (Tarwaka, 2013). Syamsuri (2018) stated that the hormonal cycle in females is in the form of menstruation that occurs every month, pregnancy, breastfeeding, and menopause. These are usually some reasons of why females feel tired faster. Darmawan, Silviandari and Susilawati (2015) stated that the dual role of females can also affect the fatigue felt because current phenomenon is not only concerning single female but also those who is married and has children who decides to continue working and starting a career. In

general, the role of male in the family is as the head of the family who does not do much activity at home and tends to spend more time by working.

Work demands both at work and in the family can cause complaints felt by someone. The number of task demands that exceeds the capacity or self ability can cause a sense of stress. This is consistent with the statement by Darmawan, Silviandari and Susilawati (2015) that stress will arise if the tasks and responsibilities carried are too heavy or exceed their abilities. A similar opinion was expressed by Pertiwi, Denny and Widjasena (2017) that stress is a reaction of emotions, thought processes and conditions that are influenced by a person's inability to adapt to the pressure or tension because of the demands of the duties and responsibilities that must be implemented in addition to the environmental conditions and the other precipitating factors. The results of other studies contained in Pertiwi, Denny and Widjasena (2017) report concluded that work stress occurs more in males than females who are affected by the presence of an uncomfortable climate. In contrast to this opinion, Akbar (2017) argued that female workers who have the status of mothers feel stressed and tend to feel tired because they force themselves to stay at work for the whole day in addition to the demands of their roles in the family.

Regus's research results in Habibi and Jefri (2018) report stated that the level of work stress in Indonesia reached 73% which was influenced by individual and occupational factors. Around 22.3% of lecturers at China University and 47% of lecturers at United Kingdom University experienced work stress (Pertiwi, Denny and Widjasena, 2017). Stress is a normal thing which happens to a person in response to confronting all kinds of daily activities that are accompanied by the progress of time (Akbar, 2017). As a normal matter, these problems are often not given enough attention either by the company or by the individual workers. The longer it is ignored, the more stress will accumulate and can affect physical, psychological conditions and can even affect one's performance and productivity. This can occur because stress can accelerate the emergence of fatigue (Yani and Dwiyantri, 2016).

Fatigue is a response of the body after carrying out several activities whose quality and quantity exceeds one's ability. Maurits (2010) stated that fatigue cannot be interpreted clearly, but can be felt and observed based on symptoms or subjective complaints from workers. Uncomfortable working

environment conditions coupled with short working time limits can make a person tends to force himself and cause fatigue (Widyastuti, 2018). When workers feel tired, they tend to be reluctant to do work or other activities fully. This is because fatigue can reduce motivation, concentration and cause errors that can lead to work accidents. Maurits (2010) argued that about 60% of work accidents were caused by fatigue. It occurs not only in jobs that rely on physical ability, but fatigue can also occur in jobs that rely on thinking and decision-making abilities such as lecturers. Fatigue that occurs in lecturers can also reduce their work performance in carrying out their duties in educational, research and community service activities.

The purpose of this research was to analyze the correlation between gender and work stress with lecturers at a faculty at a university in Surabaya.

## METHOD

The type of this research was analytical descriptive study. The research design used was cross sectional, in which the researcher identified the correlation between gender and work stress with fatigue at a faculty lecturers at a university in Surabaya over a certain period. This research has been through a research ethics test with number 333/HRECC.FODM/VI/2019.

Data analysis technique in this study used the Spearman correlation test to analyze the correlation between gender and work stress with fatigue.

This research was conducted at a university in Surabaya. Data retrieval up to data processing was carried out for approximately three months starting from August to November 2019. The population in this study was all lecturers from one of the universities in Surabaya who were actively teaching at the time the research took place. The population was around 74 lecturers. The sampling was done using a simple random sampling technique by drawing lottery. The calculation was done to get some samples. Based on the results of the samples calculation, there were around 43 lecturers involved in this research.

The inclusion criteria set in this study included lecturers who were teaching staff in designated places, had active teaching status, willing to become respondents in this study by signing a letter of willingness to be a respondent, and being in a good condition and not taking drugs.

**Table 1.** Work Stress Questionnaire Validity Test Result

Stress Rection	Correlation	P e r s o n Correlation	Result
Physiological Reactions	F1 with total	0.841**	Valid
	F2 with total	0.767**	Valid
	F3 with total	0.713*	Valid
	F4 with total	0.721*	Valid
	F5 with total	0.747*	Valid
	F6 with total	0.565	Valid
	F7 with total	0.422	Valid
	F8 with total	0.349	Valid
	F9 with total	0.319	Valid
	F10 with total	0.271	Not Valid
Psychological Reactions	P1 with total	0.702*	Valid
	P2 with total	0.544	Valid
	P3 with total	0.579	Valid
	P4 with total	0.836**	Valid
	P5 with total	0.695*	Valid
Habitual Reactions	K1 with total	0.845**	Valid
	K2 with total	0.031	Not Valid
	K3 with total	0.831**	Valid
	K4 with total	0.765**	Valid
	K5 with total	0.143	Not Valid
Organizational Relations	O1 with total	0.683*	Valid
	O2 with total	0.538	Valid
	O3 with total	0.777**	Valid
	O4 with total	0.645*	Valid
	O5 with total	0.451	Valid

The variables used in this study consisted of independent variables that are influential and dependent variables that are influenced. The independent variables in this study were gender and work stress, while the dependent variable was fatigue.

The research data consisted of primary data and secondary data. Primary data in this study were obtained from the use of questionnaires as research instrument. The primary data used included gender, work stress, and fatigue. Gender data were obtained from respondents' identities, while data related to stress and fatigue were obtained by using stress questionnaires that had been tested for its eligibility (validity and reliability) and the Industrial Fatigue Research Committee (IFRC) questionnaire. The result of the validity test of the work stress questionnaire is shown in table 1. The Cronbach's Alpha value of the reability test result was 0.916.

Both the results stated that the questionnaire was suitable to be used. Meanwhile, the secondary data was obtained from the faculty website and archives related to the description of the research location, the number of lecturers, and so on.

## RESULTS

### Location Overview

University X is a well-known educational institution in Surabaya. This university has a long history since its first establishment. The faculty used as a research location has officially become part of the university since 1995. Until now, the faculty has approximately 7 study programs and 7 specialization departments. The lecture activities and active working hours begin on Monday to Friday at 8 a.m to 17 p.m, but the lecture activities sometimes still active until 8 a.m. Lecturers who work are not only required to teach but must also conduct research and be involved in community activities. Some of them also have certain positions that also require attention and must be resolved immediately.

### Lecturer Gender Distribution

Table 2 shows that most of the lecturers in a faculty at the universities in Surabaya were female. A total of 28 lecturers (65.1%) were female and the remaining 15 lecturers (34.9%) were male.

### Lecturer Work Stress Distribution

Table 3 shows the results of research related to the level of stress felt by the lecturers. The table states that most of the lecturers in one faculty at a university in Surabaya had mild work stress category. The statement was marked by the presence of 30 lecturers (69.8%) with mild stress, 12 lecturers (27.9%) with moderate stress and 1 lecturer with severe stress.

**Table 2.** The Frequency Distribution of Lecturers' Characteristics by Gender at a university in Surabaya in 2019

Gender	The Calculation Result	
	n	%
Male	15	34.9
Female	28	65.1
<b>Total</b>	<b>43</b>	<b>100.0</b>

### Lecturer Fatigue Distribution

The table 4 states that most of the lecturers in one faculty at a university in Surabaya experienced fatigue that was classified in the moderate category. The results showed that there were 24 lecturers (55.8%) with moderate fatigue and 19 lecturers (44.2%) with mild fatigue.

### The Correlation between Gender and Work Stress

Table 5 shows the results of cross-tabulation between gender and work stress so that the distribution of work stress and gender can be known and can find out whether there was a correlation between the gender and work stress.

Based on Table 5, we can see that both male and female lecturers have the opportunity to experience work stress. Most female lecturers in one faculty

**Table 3.** The Frequency Distribution of Lecturers' Characteristics Based on Work Stress at a university in Surabaya in 2019

Work Stress Category	Calculation Result	
	n	%
Mild	30	69.8
Moderate	12	27.9
Severe	1	2.3
<b>Total</b>	<b>43</b>	<b>100.0</b>

**Table 4.** The Frequency Distribution of Lecturers' Characteristics Based on Fatigue at a university in Surabaya in 2019

Fatigue Category	Calculation Result	
	n	%
Mild	19	44.2
Moderate	24	55.8
<b>Total</b>	<b>43</b>	<b>100.0</b>

**Table 5.** The Cross-Tabulation of Gender and Work Stress of Lecturers at a university in Surabaya in 2019

Gender	Work Stress Category						Σ	Sig.
	Mild		Moderate		Severe			
	n	%	n	%	n	%		
Male	9	60	5	33.3	1	6.7	15	0.270
Female	21	75	7	25	0	0	28	

at a university in Surabaya experienced mild stress, which was marked by 21 female lecturers experiencing mild stress and 7 others experiencing moderate stress. There were no female lecturers who experienced severe stress. The results of the study also showed that there were 9 male lecturers with mild stress, 5 male lecturers with moderate stress and 1 male lecturer with severe stress. Statistical test results stated that the significance value of the results of cross-tabulation between gender and work stress was 0.270 which is greater than 0.05 ( $\alpha$ ). It means that there was no correlation between gender and the level of stress experienced by the lecturers in one faculty at a university in Surabaya.

### The Correlation between Gender and Fatigue

Table 6 shows the results of cross-tabulation between gender and fatigue so that the distribution of fatigue and gender can be known and to find out whether there was a correlation between gender variables and fatigue.

Table 6 states that both male and female lecturers in one faculty at a university in Surabaya also had the opportunity to experience fatigue. Most female lecturers experienced a moderate category of fatigue marked by 16 female lecturers experiencing moderate fatigue and 12 others experiencing mild fatigue. The results of the study also showed that there were 8 male lecturers with moderate fatigue and 7 with mild fatigue. The significance value obtained from the cross-tabulation between gender and fatigue was 0.816. This value is greater than 0.05 ( $\alpha$ ) which means that there was no correlation between gender and fatigue felt by lecturers in one faculty at a university in Surabaya.

### The Correlation between Work Stress and Fatigue

Table 7 shows the results of cross-tabulation between work stress and fatigue so that the distribution of work stress and fatigue levels can be seen and to find out whether there was a correlation between work stress variables and fatigue.

The information presented on Table 7 was that most lecturers with mild stress experienced mild fatigue, which was also marked by 19 people experiencing mild fatigue. The table also shows that there were 11 lecturers with mild stress experiencing moderate fatigue, 12 lecturers with moderate stress experiencing moderate fatigue, and 1 lecturer with severe stress experiencing moderate fatigue. The

**Table 6.** The Cross-Tabulation of Gender and Fatigue of Lecturers at a university in Surabaya in 2019

Gender	Fatigue Category				$\Sigma$	Sig.
	Mild		Moderate			
	n	%	n	%		
Male	7	46.7	8	53.3	15	0.816
Female	12	42.8	16	57.2	28	

**Table 7.** The Cross Tabulation of Work Stress and Fatigue of Lecturers at a university in Surabaya in 2019

Work Stress	Fatigue Category				$\Sigma$	Sig.
	Mild		Moderate			
	n	%	n	%		
Mild	19	63.3	11	36.7	30	0.000
Moderate	0	0	12	100	12	
Severe	0	0	1	100	1	

significance value obtained from the cross-tabulation between work stress and fatigue was 0.000. This value is smaller than 0.05 ( $\alpha$ ) which means that there was a correlation between work stress and fatigue felt by lecturers in one faculty at a university in Surabaya. The correlation coefficient value obtained was 0.583 which means that the correlation between the two variables was strong and positive. The strong and positive correlation between work stress and fatigue means that the heavier the level of work stress, the more severe the fatigue felt by the lecturer.

## DISCUSSION

### Lecturer Gender

Based on the results of the research presented in table 2, it shows that the majority of lecturers at one of the universities in Surabaya were females. There were more female lecturers than male lecturers. This means that when judged by gender, the university has more female lecturers than male lecturers because most of the work do not require physical muscle strength but rather prioritize accuracy and caution. Not that a lecturer does not need physical strength, but the existence of mental demands to produce maximum performance with a certain work time makes them have to work more closely in

educational activities, research and community service. Arini and Dwiyantri (2017) research on toll road officers stated that most of them were female because they were considered to be more diligent, conscientious, cautious, and do not like to argue.

Gender is one of the characteristics of individuals which becomes one of the factors causing fatigue that comes from within the worker or what is called as an internal factor. Gender is an individual character in the form of a label that has been established by God and cannot be changed by humans. The gender of lecturers is divided into two namely male and female. Many differences between male and female can be seen physically such as body shape, muscle strength, hormones, and so forth. This is in accordance with the statement by Tarwaka (2013) that female muscle strength is 2/3 of male muscle strength.

Physically, males have a larger body size and heart volume so that their strength, endurance, and motor skills are higher than females (Sukadiyanto, 2013). The difference in muscle strength will affect their ability or capacity to complete work that requires physical strength such as construction workers, technicians, mechanics and so on.

In addition to physical differences, there are also psychological differences that can be assessed by emotional level. Sukadiyanto (2013) research on emotional reactions to athletes stated that female was more likely to have passive, resigned, dependent, prioritizing feelings, and are not aggressive. This is because they use feelings rather than ratio in acting, so they act more subtly with caution. In accordance with the statement by Tarwaka (2013), in certain cases, female has a better level of accuracy compared to men. This makes females are more needed in jobs that require high accuracy such as secretaries, tailors, accountants, and so on.

Differences in roles between male and female can also affect perceived fatigue. The role of male in a family, in general, is as a head who tends to be more active at home and tends to spend his time to work. Meanwhile, the main role of female is as a wife and mother who spends more time at home with all household activities. The number of females who work makes them have a dual role which will ultimately affect the onset of fatigue (Darmawan, Silviandari and Susilawati, 2015). Akbar (2017) argued that the dual role of females requires them to remain responsible for taking care of the family and also to give a good performance at work. These demands often trigger stress on female.

## **Lecturer Work Stress**

Based on the information presented in table 3, it is stated that most of the lecturers at one of the universities in Surabaya felt that stress was classified as mild. The statement was marked by the number of lecturers with mild stress which was more than the number of lecturers with moderate and severe stress. The recapitulation results from the questionnaire also stated that the average score with the lowest value was on the effect of stress on psychological reactions. It means that stress problems on lecturers have a lot of influence on psychological reactions such as decreased ability to remember, difficult to concentrate, easily mad/irritable, easily tired, and less satisfied with work that has been completed.

Work stress is a response that arises due to a person's inability to adapt and resolve work demands. Apart from these reasons, stress can also arise due to mismatches in reality and expectations of workers. Expectations such as career advancement or performance appraisal that are not achieved can also trigger work stress (Fitri, 2013). Pertiwi, Denny and Widjasena (2017) stated that stress on lecturers arises due to pressures or tensions that affect emotions, thought processes and conditions due to their inability to adjust to the many demands of the task, environmental conditions, and other factors. An almost similar opinion was delivered by Nadialis and Dwiarko (2014) who stated that work comfort can minimize the occurrence of work stress on employees. Stress measurement was carried out with a questionnaire that contained several stress statements related to physiological, psychological, habitual and related reactions in an organization (Tarwaka, 2013).

Physiological reactions when a person experiences stress, physical conditions such as endurance usually tend to decrease. Work stress can have a positive impact (eustress) for individuals if there is stress spurred someone to work and complete tasks properly so that stress is constructive. Furthermore, work stress can also have a negative impact (distress) when someone is unable to overcome it so that it is destructive and results in decreased performance, high absenteeism, the emergence of disease and so on (Zahra and Hidayat, 2015). However, stress is more often considered as negative value and harm. As stated by (Ibrahim, Amansyah and Yahya, 2016) who argued that stress that is not immediately handled will increasingly accumulate and can affect a person's ability to carry out their work and deal with their environment.

### Lecturers' Fatigue

The results of research on fatigue presented in table 4 above state that the majority of lecturers at one of the universities in Surabaya experienced fatigue that was classified in the medium category. The results show that the number of lecturers with moderate fatigue was greater than lecturers with mild fatigue. If the results of the study were associated with some theories of fatigue, it can be concluded that both lecturers had moderate fatigue.

The recapitulation results state that the average value of the three attenuation types was almost the same. That means that the fatigue that experienced by the lecturer had the same impact both on the weakening of activities with decreased activity, weakening motivation with decreased work interest and also physical impairment in the form of health complaints. Mild fatigue have decreased physical condition, alertness, concentration, accuracy and so forth.

Work stress can lead to fatigue if it is not immediately treated correctly (Dewi, 2018). Discharge is something that can be felt and observed based on symptoms or subjective complaints from workers and usually occurs after a person does a particular job that exceeds his ability. Just like teachers, lecturers are educators whose work activities cause more psychological fatigue than physical fatigue (Yogisutanti, 2016). Tamaela (2011) stated the routine work of a lecturer causes a lot of direct contact with other individuals and can cause emotional exhaustion such as reduced love, empathy, and attention. In addition, fatigue also makes a person to be tend to look down and underestimate, being cynical and rude to others, considering himself as incompetent and ineffective, and being less satisfied with what has been achieved at work.

Yogisutanti (2016) also added that fatigue can result in a decrease of alertness, concentration, and accuracy. The decline occurs because the body has a protective mechanism to avoid further damage, so the recovery process occurs after a break (Tarwaka, 2013). If the worker experiences some signs and symptoms of fatigue as mentioned above but continues to force himself to work, then the worst thing that might happen is a work accident that not only harms the workplace institution but also the worker himself. This can occur because workers who experience fatigue will tend to be slow in remembering, responding to things and having difficulty making the right decision due to decreased concentration (Jauhari, 2019). Measurement of

fatigue was done by using the Industrial Fatigue Research Committee (IFRC) questionnaire which contained statements about the decrease of activities, motivation, and physicality.

### The Correlation between Gender and Work Stress

One of the factors that can cause work stress is the individual characteristics, one of them is the gender. Table 5 shows the results of cross-tabulation between gender variables and work stress. Based on the table, both male and female lecturers had the opportunity to experience work stress. Most of the lecturers at one of the universities in Surabaya experienced a mild stress. Most female lecturers and male lecturers experienced mild stress and a few others experienced moderate to severe stress.

The significance value of the statistical test results of the two variables namely gender and work stress stated that there was no correlation between gender and the level of stress experienced by lecturers at one University faculty in Surabaya. The results of this study are similar to the results of the study conducted by Kurniasari and Hidayat (2017) which stated that there was no correlation between individual characteristics, one of them is gender and work stress.

Pertiwi, Denny and Widjasena (2017) argued that female tend to be more willing to obey authority compared to male who tend to be aggressive and has hopes for success. This opinion is supported by the arguments of Arini and Dwiyaniti (2017) that have been conveyed in the previous sub-chapter that female are judged to be more diligent, conscientious, careful, and not happy to protest. Compliance of female workers with work regulations or demands can have positive and negative impacts on these female workers. One side of the rules can protect workers from the possibility of mistakes or dangerous things, but on the other hand, the rules can also be binding so that workers cannot develop their ideas and creativity and ultimately leads to stress.

Pertiwi, Denny and Widjasena (2017) also argued that male tends to experience work stress because they interact more with an uncomfortable environment compared to females who spend more time at home caring for the household and children. In the current era, advances in time and technology provide a positive impact, one of them is an opportunity for female to actualize themselves in their work/career (Wayanti, Suryaningsih and Eisyuananik, 2016).

Opportunities for females to work do not always get a positive response from the people around them. The main role of a female especially for those who is married is to be a housewife who is responsible for her husband, children, and all household matters. If the female works, she will automatically have a dual role, namely as a wife/mother and also as an employee. The existence of multiple roles requires greater effort so that both can run well without causing problems. If the female worker is unable to fulfill both roles properly, then conflicts arise that can originate from the family or the workplace. The existence of this conflict can trigger stress.

Judging from accuracy, female is considered as superior to male (Tarwaka, 2013). This statement is supported by the opinion of Sukadiyanto (2013) stating that female tends to act more cautiously, added with statements from Arini and Dwiyantri (2017) who judged that female is more diligent, conscientious, and careful. According to Dewi, Hartanti and Sujoso (2016), the work demands of a lecturer are more on work related to psychology and non-physical aspects. The work of a lecturer prioritizes the existence of thought processes, decision making, teaching performance, and so forth. To carry out its responsibilities, it requires great concentration. This will trigger the onset of work stress.

### **The Correlation between Gender and Fatigue**

The results of the study in table 6 state that both male and female lecturers at one of the universities in Surabaya also have the opportunity to experience fatigue. Most of the lecturers in one of the universities in Surabaya, both male and female lecturers moderate fatigue. The other small part experienced mild fatigue. The results illustrate that the number of female lecturers is higher than the male lecturers and this results in the majority of tasks and responsibilities being carried out by female lecturers and demanding their activities to complete on time. The dual role of married female lecturers can also lead to fatigue due to the presence of a role model that does not only come from the workplace but also demands from the family. Based on the results of research conducted by Syamsuri (2018), work fatigue is more felt by males than females.

Judging from the gender perspective, males have greater muscle strength compared to females, but the level of accuracy of females is greater than men. As stated in the previous sub-chapter, female muscle strength is around 2/3 of the male muscle

strength and females have more accuracy in certain matters (Tarwaka, 2013). When assessed in terms of work demands, lecturers' assignments are more likely to be related to psychological factors and do not prioritize physical strength (Dewi, Hartanti and Sujoso, 2016). The physical task demands of lecturers are usually in the form of high mobilization, one of them is the activity of going up and down stairs when going to teach, carrying bags and books, tidying up the desk, or others. Not only gender can affect one's muscular strength and endurance, but also age (Mallapiang, Alam and Suyuti, 2016).

Meanwhile, the psychological demands of lecturers can be in the form of thought processes, taking appropriate and careful decisions, assisting students in education, activeness in conducting research and community service and so forth. The demands that exceed the capacity of the lecturer will cause work stress which will eventually make the lecturer feels tired quickly.

The significance value obtained from the cross-tabulation between gender and fatigue stated that there was no correlation between gender and fatigue felt by lecturers at a university in Surabaya. Agreeing with the results of this study, the results of the research conducted by Kusgiyanto, Suroto and Ekawati (2017) on lumpia skin-making workers also concluded that there was no correlation between gender and fatigue felt by workers. Fatigue can be caused by several factors, but gender is not included. Meanwhile, different conclusion is provided from the study conducted by Arini and Dwiyantri (2017) that there is a weak correlation between gender and fatigue felt by toll road officers.

### **The Correlation between Work Stress and Fatigue**

Based on the information presented in table 7, it is stated that most lecturers with mild stress also experienced mild fatigue. The significance value obtained from the cross-tabulation between gender and fatigue stated that there was a correlation between gender and fatigue felt by lecturers at a university in Surabaya. The correlation between the two variables was strong and positive correlation. The results of this study are the same as the results obtained by Widyastuti (2018) who argued that a strong and positive correlation between work stress and fatigue has the meaning that the heavier the work stress level of the lecturer, the more severe the fatigue felt by the lecturer.



During the data collection process, several lecturers stated that they rarely brought work home because when they got home they would use their time for family or rest. Some of them also said that the fatigue they felt was more likely to be psychological fatigue, where some lecturers had forgotten the appointments that had been agreed with the researchers, returning the research questionnaire beyond the set amount of time. This is supported by the recapitulation results of the questionnaire answers which show that the average score between the three effects of attenuation due to fatigue is the same. The three effects were decrease activities, decrease motivation, and physical weakness in the questionnaire used (Tarwaka, 2013).

Fatigue is a body's defense mechanism to avoid more severe and dangerous damage. Fatigue can arise in workers with all kinds of professions after they have done several activities that exceed their capacity. Fatigue is often only associated with the physical condition of a person which is usually characterized by discharge, shortness of breath, and complaints of pain in some parts of the body. Fatigue can also occur in a person's psychology which is characterized by dissatisfaction with self, work, or all aspects of his life which ultimately makes the individual feel saturated, frustrated, depressed, helpless, has decreased physical performance, decreased motivation, and decreased work productivity to be able to influences his daily habits (Widyastuti, 2018). Several researchers at the same source stated that fatigue can reduce the level of concentration of workers so that they tend not to be maximal at work, easily forget, and so forth (Widyastuti, 2018).

## CONCLUSION

Based on the results of the study, it can be concluded that the majority of lecturers in one faculty at a university in Surabaya are females, most of them both male and female lecturers feel mild stress, and a small number of others feel moderate fatigue. There is no correlation between gender with work stress and fatigue in lecturers. However, there is a strong and direct correlation between work stress and fatigue felt by the lecturers. So the levels of stress that felt by the lecturers will affect the level of fatigue.

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