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Job Stress and Its Influence on University Staff's Quality of Life: The Importance of Work-Life Balance and Coworker Support

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ABSTRACT

Quality of life plays a crucial role in enhancing employee productivity. This study aimed to assess the relationship between job stress and quality of life among university staff, identifying types of stress that positively or negatively impact well-being. A total of 88 university employees participated, with data collected using the New Job Stress Scale and WHOQOL, both adapted into Indonesian. Analyses included one-predictor regression, product moment correlation, independent t-test, and one-way ANOVA to evaluate job stress and quality of life. The results indicated that job stress predicts quality of life and is correlated with all its domains. Specific components of job stress, such as working time, work-related anxiety, role conflict, work-life balance, and coworker support, were significantly related to overall quality of life. No significant differences in job stress were observed based on gender, age, type of work, length of service, education level, or marital status. Similarly, quality of life did not vary by gender, age, type of work, education level, or marital status. However, significant differences in quality of life were found based on service length, with employees working more than five years reporting better quality of life than those with one to three years of service. The findings suggest universities should implement stress management programs and improve work-life balance policies to enhance staff well-being, particularly for long-serving employees.

INTRODUCTION

Quality of life is a crucial factor in supporting employee productivity. Employees with a good quality of life tend to exhibit better mental, physical, and social health, enabling them to function optimally in the workplace. Quality of life is commonly defined as an individual's overall assessment of how well their life is going, ranging from good to bad (Veenhoven, 1999). The measurement of quality of life can help identify individuals at risk of health issues, facilitating preventive measures (Frisch, 2006).

Quality of life is a multidimensional construct that involves an individual's perception of various life domains, including physical, environmental, psychological, independence, and spiritual aspects (Galloway et al., 2006). Schalock et al. (2010) described quality of life as a multi-dimensional phenomenon shaped by personal and environmental factors, encompassing domains such as emotional well-being, interpersonal relationships, material well-being, personal development, physical well-being, self-determination, social rights, and inclusion. These factors interact and influence one another, meaning that an individual's quality of life can fluctuate depending on how they perceive life events.

Work plays a significant role in shaping an employee's quality of life (Eurostat, 2022). Based on the explanation, quality of life can be assessed from the physical, psychological, social, and environmental conditions experienced by an individual (Larasati, 2009), especially in the workplace. Jobs provide financial stability, a sense of identity, opportunities for social contact, and avenues for personal development. However, prolonged working hours, discrimination, violence, insecurity, and underpayment can negatively impact an employee's quality of life (Eurostat, 2022). Among the many factors that influence quality of life, job stress is particularly notable. WHO (2020b) defines job stress as the stress related to excessive workloads, a common experience for employees across various sectors. Excessive job stress can result in anxiety, mood swings, and

health problems, which subsequently affect both mental and physical well-being (Ahmad et al., 2018).

The cognitive stress appraisal theory suggests that individuals evaluate stress as either a threat or a challenge (Tohmiya et al., 2018). Job stress can have both positive and negative effects. Moderate job stress may enhance enthusiasm and work efficiency (Li et al., 2019), while long-term job stress tends to have a detrimental impact on physical and mental health, reducing quality of life. Studies consistently show that job stress affects the quality of life (Ahmad et al., 2018; Bolhari et al., 2012; Lu et al., 2019; Nanci & Velmurugan, 2018). Job stress factors such as overload role or work (Lan et al., 2018; Purkait, 2016), psychological safety (Grailey et al., 2021), role conflict (Bolhari et al., 2012; Purkait, 2016), job pressure (Bolhari et al., 2012; Lan et al., 2018; Purkait, 2016), job responsibilities (Purkait, 2016), work speed, and repetitive work (Bolhari et al., 2012) have influences on the employees' quality of life. In addition, job stress caused by low performance control and low performance rewards also affects a decrease in quality of life (Ahmad et al., 2018; Lu et al., 2019).

Job stress not only affects individuals but also has broader organizational consequences. High levels of job stress are associated with various health issues, including cardiovascular and metabolic diseases, psychological disorders, musculoskeletal pain, and work-related injuries (American Psychological, 2018; Edimansyah et al., 2008; Hirokawa et al., 2016; Lee et al., 2015). These health problems can increase absenteeism, staff turnover, and reduce motivation, thereby negatively impacting organizational productivity and raising healthcare costs (Brattig et al., 2014; International Labour, 2016; Momsen et al., 2014).

Sociodemographic factors also play a role in job stress and quality of life. Research has found differences in job stress based on age, marital status (Mosadeghrad et al., 2011), gender (Bech et al., 2005), level of education (Purkait, 2016), work experience (Mosadeghrad et al., 2011; Purkait, 2016), and working hours (Chen et al., 2014). Quality of life is similarly influenced by sociodemographic variables, including gender and education level (Lu et al., 2019), and employment status (Chen et al., 2014). However, some studies suggest that job stress and quality of life are not correlated with factors like age, gender, or work experience (Kent et al., 2019). This study aims to further explore how sociodemographic factors, such as gender, age, education level, tenure, type of work, and marital status, impact job stress and quality of life, particularly among university staff, as tenure and type of work are under-researched in this area.

Previous research has primarily focused on the relationship between job stress and quality of work life (Giarelli et al., 2016; Hans et al., 2015; Mohammadi et al., 2022; Molazem et al., 2022; Poku et al., 2022). However, there is limited research on the correlation between job stress and general quality of life, particularly among university staff. Therefore, this study seeks to contribute to the existing knowledge by exploring the relationship between job stress and quality of life in higher education institutions. It uses the recently developed Job Stress Scale by Shukla and Srivastava (2016), which includes components such as role conflict, time-related stress, work-related anxiety, coworker support, and work-life balance. Given that this scale is relatively new and underutilized, this study will provide valuable insights into its application and contribute to the broader understanding of job stress and quality of life in university settings.

RESEARCH METHODS

Research Design and Data Collection

The variables of this study are quality of life as a dependent variable and job stress as an independent variable. This study used a cross-sectional, descriptive, correlational, comparative design with a survey methodology. The data were collected from 14 to 16 December 2020. Before filling out the research scale, the participants were asked to fill out informed consent to participate in the study and to maintain the anonymity and confidentiality of their data.

Research Population and Sample

The study was conducted with employees from Aisyah Pringsewu University. The total population consisted of 130 employees. A purposive sampling technique was used to select the respondents based on specific inclusion and exclusion criteria to ensure the relevance of the sample to the study's objectives. The inclusion criteria were: (a) employees aged 18 years or older, (b) full-time employees with at least one year of service, and (c) respondents who completed all sections of the questionnaire. The exclusion criteria included: (a) part-time or temporary employees, and (b) incomplete responses to the questionnaire.

Out of the 130 employees, 88 respondents met the inclusion criteria and participated in the study. The purposive sampling method ensured that the sample represented various departments within the university while focusing on employees who had sufficient experience to assess their job stress and quality of life accurately. The response rate was 67%, which is considered acceptable for survey-based research in organizational settings (Fowler, 2014).

Research Instruments

The research instruments were designed to measure the employees' job-stress level and quality of life. The scale instrument was divided into three sections.

Section 1: Demographics. The demographic scale instrument collected data related to the respondents, namely (a) age, (b) gender, (c) education level, (d) length of service at university, (e) work placement, and (f) marital status.

Section 2: Quality-of-Life Scale. This scale used the WHOQOL-BREF scale previously adapted by several experts (WHO, 2020a). The WHOQOL-BREF scale used in this study is an adapted version in Indonesian by (Mardiati et al., 2004). The quality-of-life scale consists of 26 items covering physical, environmental, social, and psychological relationship domains. The measuring tool of quality of life can be accessed and downloaded on the official website of WHO Indonesia. The responses on the scale were expressed on a 5-point scale from "very low" (rated 1) to "very high" (rated 5) for each item.

Section 3: Job-Stress Scale. This instrument used the New Job Stress Scale (Shukla & Srivastava, 2016) consisting of 22 items covering some components such as role conflict, time-related stress, work-related anxiety, co-worker support, and work-life balance. The New Job Stress Scale was adapted and translated to Indonesian through a forward-backward translation process. After the adaptation process was carried out, the scale was then tested. Based on the trial results of 22 items, there were 5 failed items, so this study used 17 valid items. The responses on the scale were expressed on a 5-

point scale, namely strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5).

The New Job Stress Scale (Shukla & Srivastava, 2016) was adapted into Indonesian using a forward-backward translation method to ensure linguistic and cultural equivalence (Beaton et al., 2000). This process involved translating the original English version into Indonesian by bilingual experts, followed by back-translation to English by a separate group of bilingual translators. Any discrepancies between the original and back-translated versions were resolved through discussion, ensuring that the meaning of the items was preserved. After translation, the adapted version underwent a pilot test with a sample of university staff to evaluate its reliability and validity in the Indonesian context. Cronbach's alpha for the adapted scale demonstrated adequate internal consistency (α = 0.785), indicating that the instrument was reliable for measuring job stress in this population.

Similarly, the WHOQOL-BREF, a widely used measure of quality of life, was adapted to the Indonesian language by experts following a rigorous translation and validation process (Mardiati et al., 2004). This adaptation ensured that the scale's psychometric properties remained intact, allowing for accurate assessment of quality of life among Indonesian university staff. The Indonesian version of the WHOQOL-BREF has been validated in several studies and demonstrated good reliability (α = 0.922), making it a suitable tool for this research. The number of items and the reliability of the three scales used in the study can be seen in table 1.

Data analysis

All analytical calculations were performed by using SPSS 20 for Windows. The statistical technique used to test the correlation between job stress and quality of life is one-predictor regression analysis and product moment. The rejection of the null hypothesis was carried out at the 95% confidence interval. Additional analysis was done by using the independent t-test and one-way ANOVA to see job stress and quality of life-based on sociodemographic data. In the one-way ANOVA test, significant test results were followed up or post hoc test with Bonferroni correction.

Table 1
Estimation of reliability of instruments

Construct	Item	Corrected item-total correlation	Cronbach's alpha
Overall Quality of Life	26	.335 - .713	.922
Physical Domain	7	.425 - .706	
Psychological Domain	6	.335 - .692	
Environmental Domain	8	.364 - .667	
Social Domain	3	.360 - .713	
Overall Work Stress	17	.309 - .545	.785
Role Conflict	4	.311 - .475	
Time Stress	2	.247 - .387	
Anxiety	4	.427 - .586	
Co-workers Support	3	.249 - .377	
Work-Life Balance	4	.430 - .563	

Tabel 2
Percentage of participants and the mean score of their work stress and QOL (N= 88)

Demographic Parameters	Percent of sample	Work Stress		Quality of Life	
		Mean	SD	Mean	SD
Gender					
Male	38.6	42.147	9.646	100.706	11.134
Female	61.4	42.926	7.883	98.519	11.398
Age (years)					
18 – 30	56.8	41.580	8.347	100.120	10.598
31 – 45	43.2	44.000	8.755	98.368	12.200
Education					
High School	13.6	44.500	11.237	96.00	9.964
Diploma	3.4	42.667	7.095	108.000	5.568
Bachelor's Degree Graduate	31.8	41.214	6.574	99.464	10.358
Postgraduate	51.2	43.000	9.065	99.622	12.305
Tenure (years)					
< 1 year	26.1	42.043	7.986	101.783	9.667
1 – 3 years	26.1	43.304	8.210	93.609	11.200
3 – 5 years	13.7	38.833	4.529	99.583	8.039
>5 years	34.2	44.067	10.191	101.833	12.415
Type of Employment					
Lecturers	53.4	42.894	9.135	100.106	12.271
Staff	46.6	42.317	7.954	98.512	10.117
Marital Status					
Single	38.6	42.962	8.796	99.382	10.739
Married	59.1	42.962	8.582	98.923	11.417
Widowed	2.3	39.000	5.657	110.500	19.092

RESEARCH RESULTS

Characteristics of Respondents

The characteristics of the respondents can be seen in table 2. More than half of the respondents are women (61.4%), and the majority of respondents had at least postgraduate level of education (51.2%). The employees at university were 18-45 years old and dominated by young people (56.8%). The majority of respondents have worked more than five years at university (34.2%), are lecturers (53.4%), and are married (59.1%).

Correlation between Job Stress and Quality of Life (QoL)

The results of one-predictor regression analysis showed that there was a significant effect of job stress on QoL (F = 26.468; p<0.01). Job stress can predict quality of life with a predictor contribution of 23.5%. Based on the direction of the correlation, there was a negative relationship between job stress and quality of life (r = -0.485; p<0.01), indicating that the employees experiencing high job stress had a low QOL. Conversely, the employees experiencing low job stress had a high QOL. These results support the hypothesis of this study.

As expected, the results of the correlation analysis revealed a significant correlation between stress-related factors and QOL domains. Of the 30 correlations between stress-related factors and QOL domains in this study, 19 had a significant correlation at the level of 0.01, and 9 had a significant correlation at the level of 0.05.The correlation results revealed that the components of job stress such as working time (r = -0.281; p<0.01), work-related anxiety (r = -0.357; p<0.01), and role conflict (r = -0.291; p<0.01) had negative correlation on QOL, meanwhile work-life balance (r = 0.388; p<0.01) and co-worker support (r = 0.389; p<0.01) correlated positively on employee's QOL.

For the correlation of job stress and its components on QOL, it was found that overall job stress (r = -0.460; p<0.01), working time (r = -0.315; p<0.01), work-related anxiety (r = -0.377; p<0.01), role conflict (r = -0.286; p<0.01) had negative relationship with physical domain of QOL, whereas, work-life balance (r = 0.283; p<0.01) and co-worker support (r = 0.379; p<0.01) correlated positively on physical domain of QOL. In the psychological domain, overall job stress (r = -0.383; p<0.01), working time (r = -0.215; p<0.05), work-related anxiety (r = - 0.211; p<0.05), role conflict (r = -0.236; p<0.05) correlated negatively on psychological domain of QOL, meanwhile work-life balance (r = 0.304; p<0.01), and co-worker support (r = 0.335; p<0.01) had positive relationship with psychological domain of QOL. Then, in the social domain, only overall job stress (r = -0.292; p<0.01) had negative correlation on QOL, while work-life balance (r = 0.242; p<0.05) and co-worker support (r = 0.300; p<0.01) positively related on QOL. Lastly, in the environmental domain, overall job stress (r =-0.445; p<0.01), working time (r = -0.220; p<0.05), work-related anxiety (r = -0.327; p < 0.01), and role conflict (r = -0.233; p<0.05) had negative relationship with QOL, whereas work-life balance (r = 0.445, p<0.01) and co-worker support (r = 0.337; p<0.01) had positive correlation on QOL.

Job stress

The results of the independent t-test of the job stress variable on the demographics presented in Table 4 and 5 showed that there was no significant difference in job stress in terms of gender (t = -0.414; p>0.05), age (t = -1.319; p> 0.05), type of work (t = 0.313; p> 0.05), length of service (F = 1.158; p> 0.05), education level (F = 0.948; p> 0.05), and marital status (F = 0.236; p>0.05).

Table 3
Product Moment Correlation between Domains of Work Stress and Quality of Life Variables (N=88)

	1	2	3	4	5	6	7	8	9	10	11
1. Overall QOL	-										
2. Physical Domain	.882**	-									
3. Psychological Domain	.852**	.718**	-								
4. Social Domain	.770**	.595**	.618**	-							
5. Environmental Domain	.884**	.658**	.640**	.610**	-						
6. Overall Work Stress	-.485**	-.460**	-.383**	-.292**	-.445**	-					
7. Role Conflict	-.291*	-.286**	-.236*	-.199	-.233*	.738**	-				
8. Time Stress	-.281**	-.315**	-.215*	-.123	-.220*	.547**	.311**	-			
9. Anxiety	-.357*	-.377**	-.211*	-.206	-.327**	.790**	.469**	.400**	-		
10. Work-Life Balance	.388**	.283**	.304**	.242*	.445**	-.546**	-.185	-.164	-.285**	-	
11. Coworker Support	.389**	.379**	.335**	.300**	.337**	-.475**	-.231*	-.126	-.177	.283**	-

Note:
* p < 0.05 (significant at 5% level)
** p < 0.01 (significant at 1% level)

Table 4
Independent t-test for Job Stress and Quality of Life Based on Gender, Age and Type of Employment (N=88)

Variable	Distribution	F	Job Stress				Quality of Life			
			Mean	SD	t	p	Mean	SD	t	p
Gender	Men	34	42.15	9.646	-.414	.680	100.71	11.134	.884	.379
	Women	54	42.93	7.883			98.52	11.398		
Age	18 – 30	50	41.58	8.347	-1.319	.191	100.12	10.598	.719	.474
	31 – 45	38	44.00	8.755			98.37	12.200		
Type of Employment	Lecturers	47	42.89	9.135	.313	.755	100.11	12.271	.659	.512
	Staff	41	42.32	7.954			98.51	10.117		

Table 5
One-Way Anova for Stress and Quality of Life Based on Education, Tenure and Marital Status (N=88)

Variable/ Distribution	F	Job Stress				Quality of Life			
		Mean	SD	F	p	Mean	SD	F	p
Tenure									
< 1 year	23	42.04	7.986	1.158	.331	101.78	9.667	3.025	**.034**
1 – 3 years	23	43.30	8.210			93.61	11.200		
3 – 5 years	12	38.83	4.529			99.58	8.039		
>5 years	30	44.07	10.191			101.83	12.425		
Education									
High School	12	96.00	9.964	.948	.421	96.00	9.964	.948	.421
Diploma	3	108.00	5.568			108.00	5.568		
Bachelor's Degree	28	99.46	10.358			99.46	10.358		
Graduate									
Postgraduate	45	99.36	12.305			99.62	12.305		
Marital Status									
Single	34	42.32	8.796	.236	.790	99.38	10.739	1.014	.367
Married	52	42.96	8.582			98.92	11.417		
Widowed	2	39.00	5.657			110.50	19.092		

Table 6
Bonferroni Test of Quality of Life on Length of Service

(I) Tenure	(J) Tenure	Mean Difference (I-J)	P
<1 year	1-3 years	8.174	.077
	3-5 years	2.199	1.000
	>5 years	-.051	1.000
1-3 years	<1 year	-8.174	.077
	3-5 years	-5.975	.767
	>5 years	-8.225	**.048**
3-5 years	< 1 year	-2.199	1.000
	1-3 years	5.975	.767
	>5 years	-2.250	1.000
>5 years	< 1 year	.051	1.000
	1-3 years	8.225	**.048**
	3-5 years	2.250	1.000

Quality of Life

The results of the independent t-test of the quality-of-life variable on the demographics presented in Table 4 and 5 showed that there was no significant difference in quality of life in terms of gender ($t = 0.884$; $p>0.05$), age ($t = 0.719$; $p>0.05$), type of work ($t = 0.512$; $p>0.05$), education level ($F = 0.948$; $p>0.05$), and marital status ($F = 1.014$; $p>0.05$).

Quality of life only had a significant difference in terms of length of service ($F = 3.025$; $p<0.05$). To see which length of service had a higher quality of life, a post hoc test with Bonferroni correction was performed (Table 6). There was a difference in quality of life in the group of employees who have worked for one to three years and employees who have worked for more than five years (Mean = 8.225; $p<0.05$). The employees who have worked for more than five years had a higher quality of life than those who have worked for one to three years.

DISCUSSION

This study found a negative relationship between job stress and quality of life, meaning that the employees with low job stress tend to have a good quality of life. On the other hand, the employees with high job stress tend to have a low quality of life. This study is in line with several previous researches that job stress had a negative relationship with the employees' quality of life (Ahmad et

al., 2018; Bolhari et al., 2012; Li et al., 2019; Lu et al., 2019; Nanci & Velmurugan, 2018).

Stress is an unpleasant psychological process to respond to environmental pressures. Job stress is an unpleasant emotional situation experienced by an individual when demands of job are not balanced with their ability (Naqvi et al., 2013). Job stress occurs due to work demands that are not in accordance with an individual's abilities, and these excessive demands lead to physical and psychological problems to the employees. Job stress can be one of the factors that have an impact on the employees' quality of life (Hardani, 2016). This study found that the components of job stress such as working time, work-related anxiety, role conflict, work-life balance, and co-worker support correlated with the employees' quality of life.

Working time had a negative correlation with quality of life. It means that the employees with higher working time tend to have lower quality of life. Several previous studies had shown that working under heavy workload pressure or long-time working conditions caused physical and mental discomfort and fatigue (Chen et al., 2014; Taris et al., 2001), thus leading to poor quality of life. The study conducted by Woo et al. (2020) had shown that there was a significant correlation between working hours with health-related quality of life. Physical problems due to long-time working are mostly caused by lack of physical activities and self care which affect quality of life. In the institution in this study, full-time employees will work for 40 hours a week. However, if there are activities such as carrying out accreditation or other important activities, some employees will generally work overtime for a certain period so that some might experience fatigue both physically and mentally.

Work-related anxiety had a negative relation with quality of life. Therefore, anxiety management in the workplace is crucial because it has a negative impact on productivity and organizational growth. In addition, a bad work environment will cause employees to risk factors related to stress that will lead to the development of depression and anxiety disorders (Plaisier et al., 2012). Studies show that several conditions in the workplace can trigger anxiety, including experiencing or imagining failure in carrying out tasks, control function and sanctions from superiors, and obtaining intimidation and discrimination in the workplace (Muschalla, 2016). In addition, lack of information, and changing work assignments without warning (Leach et al., 2013), can trigger anxiety and tension. This condition will affect quality of life. Quality of life is one of the indicators used in assessing and evaluating health and well-being (Uddin et al., 2017).

Role conflict had a significantly negative relationship with quality of life. Job stress including excessive workload, role conflict, heavy-workload pressure conditions, and responsibilities had an impact on quality of life (Purkait, 2016). In addition, the other study also showed that role conflict was significantly negative correlated to quality of life (Ismail, 2006). For example, a lecturer who gets additional work as head of department, dean, or head of research institutions not only do work as a lecturer who provides teaching and conducts research but also does administrative work related to institutional management according to their main tasks and functions so that it creates role conflict. Role conflict occurs when empoyees are incapable to face the demands placed upon them relating to their job or position so that it affects on quality of life.

Work-life balance had recently relation to quality of life. Work-life balance has been interpreted as a set of flexible work patterns, including part-time work, job sharing, alternate breaks and working hours that can help people balance their work and home commitments (Department of & Industry). This is part of a broader trend where homework is presented as an answer to the pressures of work life; that being at home, by themselves, can counteract work-life stress and positively affect work-life balance. Lewis et al. (2003) argue that work-life balance has been constructed as a personal matter in which an individual must coordinate various aspects of their personal life.

Co-worker support had positive correlation with quality of life. Research conducted by Bech et al. (2005) found that work-related stressors included excessive workload, lack of team vigor, and lack of social support affect quality of life. Job stress caused by the lack or absence of social support from co-workers can reduce the quality of life. Social support plays important role as the stress-buffering (Helgeson, 2003). When there are a lot of work demands, co-worker support could strengthen individual to cope with stress so that it could increase quality of life.

Lastly, job stress correlated with quality of life in the environmental domain. Factors affecting job stress are the physical demands of work and distress caused by the environment such as noise, vibration, extreme temperatures, workload, and working hours (Ahmad et al., 2018). Most employees experience stress due to a noisy environment at work, affecting their concentration in completing tasks and indirectly making them go home late, causing them to lack of sleep (Schabracq & Cooper, 2000), which eventually can reduce an individual's quality of life. A work environment which is more meaningful, more independent, and increases feedback can reduce stress on the employees because these factors can provide greater control over work activities and reduce dependence on others (Robbins & Judge, 2017).

This study found that there were significant differences in terms of length of service. The employees who have worked for more than five years have a higher quality of life than those who have worked for one to three years. Previous study by Setiawan and Febriyanto (2020) showed that there was a relationship between length of service and quality of life i.e., the longer the employee works, the more experience the employee has in carrying out his/her work activities. The improvement in the quality of life for the employees who work for longer work period is due to higher salary allowances than those who have just begun working at the institution. The lack of reward and recognition was related to the causes of stress and affected the employees' concentration and confidence (Ahmad et al., 2018). In this study, both the length of service and the job stress affect an individual's quality of life.

Job Stress and Quality of Life Based on Sociodemographic Factors

The independent t-test and one-way ANOVA results revealed no significant differences in job stress when examined by gender, age, education level, marital status, or type of work. This finding aligns with previous research that suggests certain sociodemographic variables, such as gender and age, may not universally predict differences in job stress across different working environments (Kent et al., 2019). One explanation could be that both male and female employees experience similar work demands and pressures in the university setting, leading to comparable levels of job stress. Additionally, younger and older employees might be equally exposed to stress-inducing factors, such as workload and role conflict, which could neutralize any potential age-related differences (Bech et al., 2005).

Moreover, it is possible that in the university environment, shared job characteristics, such as academic responsibilities and institutional policies, create a uniform experience of job stress across different demographic groups (Mosadeghrad et al., 2011). This homogeneity in stressors could explain why age and gender do not significantly affect stress levels, as seen in other professions where these factors are more pronounced (Chen et al., 2014). Although these results indicate no significant differences, they do not diminish the potential impact of other job-related variables that might contribute to individual differences in stress. Future research could explore additional factors such as coping mechanisms, social support, or work-life balance strategies that might vary more substantially across demographic groups (Lu et al., 2019).

This study confirms the significant negative relationship between job stress and quality of life among university staff, which aligns with previous research (Ahmad et al., 2018; Lu et al., 2019). Employees with higher levels of job stress tend to report lower overall quality of life, particularly in the physical, psychological, and social domains. The findings highlight the importance of effective stress management strategies in maintaining or improving employee well-being.

Practical Implications for University Policies

To summarize, job stress played an important role in the employees' quality of life. High job stress can affect physical, psychological, behavioral, and social conditions, thereby reducing the quality of life. Institutions must take some actions to reduce the job-stress level of their employees by providing counseling services (Isaksson Ro et al., 2010), PsyCap interventions (PCI) (Dello Russo & Stoykova, 2015; Luthans et al., 2013; Luthans et al., 2006; Luthans et al., 2010; Luthans et al., 2008), and stress management training (Feuerstein et al., 2004; Ravari et al., 2020). Mindfulness-based interventions were also found to reduce work stress levels (Fiore, 2021; García-Magariño et al., 2019; Lee et al., 2020; Pflügner et al., 2021).

Given the findings, it is crucial for universities to develop comprehensive stress management programs that address the key components of job stress identified in this study, such as role conflict, work-related anxiety, and work-life balance. Universities should consider implementing policies that foster a healthier work environment, such as flexible working hours, support for work-life balance, and mental health resources. For instance, providing access to counseling services or creating peer support groups could help mitigate the negative impact of work-related anxiety (Plaisier et al., 2012).

Moreover, promoting a culture of open communication and team support can enhance coworker relationships, which the study found to be positively correlated with higher quality of life. Establishing regular feedback mechanisms where employees can discuss their workload and any role conflicts could reduce stress caused by excessive or unclear job responsibilities (Bech et al., 2005).

In addition, the study's finding that employees with longer tenure experience higher quality of life suggests that universities should focus on retention strategies that reward long-serving employees. This could include offering career development opportunities, mentoring programs, and incentives for long-term service, which not only enhance employees' job satisfaction but also contribute to their overall well-being (Setiawan & Febriyanto, 2020).

LIMITATIONS OF THE STUDY

This study has several limitations. First, the data collection using a self-report scale to assess job stress and quality of life may have a bias effect in filling out the scale. Second, the subjects of this study come from the same university which may have a bias in the data. Third, the demographics of the respondents are uneven and dominated by certain groups such as women and higher education, and the small number of sample size. For the future study, it is suggested to pay attention to other variables that can contribute to job stress and quality of life, such as tenure that has been found in this study. For future research, it is expected to explore the dynamics of tenure related to stress management and quality of life, whether the longer the working period, the better stress management and higher quality of life.

CONCLUSION

This study shows that job stress is negatively related to quality of life. Components of job stress including working time, work-related anxiety, role conflict, work-life balance, and co-worker support affect the employees' quality of life. Employees who have worked for more than five years have a higher quality of life than those who have worked for one to three years. Several programs including counseling services, meditation programs, and stress management training for the employees are required to reduce job stress. These programs aim to help the employees be productive and perform well in their job to obtain a high quality of life.

DECLARATIONS

Ethics approval and consent to participate

All procedures performed in studies involving human participants were in accordance with the ethical standards of the health research ethics committee, Faculty of health, University of Aisyah Pringsewu with number 221/UAP/11/EA/2020 and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. "Informed consent was obtained from all individual participants included in the study". Informed consent was obtained from all individual participants included in the study.

Consent for publication

Not applicable

Availability of data and materials

The dataset(s) supporting the conclusions of this article is(are) available in the Open Science Framework (OSF) repository, in https://osf.io/xnyr4/

Conflict of Interest Statement

The authors have no conflicts of interest to declare that are relevant to the content of this article. All authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-

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Authors' contributions

All authors have made substantial contributions to all of the following: (a) the conception and design of the study, or acquisition of data, or analysis and interpretation of data, (b) drafting the article or revising it critically for important intellectual content, and (c) final approval of the version to be submitted.

REFERENCES

Ahmad, M., Maon, S. N., & Aziz, N. I. S. A. (2018). The Relationship Between Job Stress and Quality of Life Among Working Adults. In *Proceedings of the 2nd Advances in Business Research International Conference* (pp. 261-270). Springer Singapore. https://doi.org/10.1007/978-981-10-6053-3_25

American Psychological, A. (2018). Stress effects on the body. https://www.apa.org/topics/stress/body

Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the Process of Cross-Cultural Adaptation of Self-Report Measures. *Spine*, *25*(24), 3186-3191. https://journals.lww.com/spinejournal/fulltext/12150/guidelines_for_the_process_of_cross_cultural.14.aspx

Bech, P., Andersen, M. B., Bech-Andersen, G., Tønnesen, S., Agnarsdottir, E., & Borg, V. (2005). Work-related stressors, depression and quality of life in Danish managers. *European Psychiatry*, *20*(S3), S318-S325. https://doi.org/10.1016/S0924-9338(05)80183-X

Bolhari, A., Rezaeean, A., Bolhari, J., & Zare, F. (2012). The Impact of Occupational Stress on Quality of Work Life among the Staff of e-Workspace. *International Journal of Psychological and Behavioral Sciences*, *6*(7). https://doi.org/10.5281/ZENODO.1083047

Brattig, B., Schablon, A., Nienhaus, A., & Peters, C. (2014). Occupational accident and disease claims, work-related stress and job satisfaction of physiotherapists. *Journal of Occupational Medicine and Toxicology 2014 9:1*, *9*(1), 1-13. https://doi.org/10.1186/S12995-014-0036-3

Chen, M.-C., Huang, Y.-W., Hou, W.-L., Sun, C.-A., Chou, Y.-C., Chu, S.-F., & Yang, T. (2014). The Correlations between Work Stress, Job Satisfaction and Quality of Life among Nurse Anesthetists Working in Medical Centers in Southern Taiwan. *Nursing and Health*, *2*(2), 35-47. https://doi.org/10.13189/NH.2014.020203

Dello Russo, S., & Stoykova, P. (2015). Psychological Capital Intervention (PCI): A Replication and Extension. *Human Resource Development Quarterly*, *26*(3), 329-347. https://doi.org/10.1002/HRDQ.21212

Edimansyah, B. A., Rusli, B. N., Naing, L., Mohamed Rusli, B. A., Winn, T., & Tengku Mohamed Ariff, B. R. H. (2008). Self-perceived Depression, Anxiety, Stress and Their Relationships with Psychosocial Job Factors in Male Automotive Assembly Workers. *Industrial Health*, *46*(1), 90-100. https://doi.org/10.2486/INDHEALTH.46.90

Eurostat. (2022). Statistics | Eurostat. In.

Feuerstein, M., Nicholas, R. A., Huang, G. D., Dimberg, L., Ali, D., & Rogers, H. (2004). Job stress management and ergonomic intervention for work-related upper extremity symptoms. *Applied Ergonomics*, *35*(6), 565-574. https://doi.org/10.1016/J.APERGO.2004.05.003

Fiore, J. (2021). Randomized pilot study exploring an online pre-composed receptive music experience and a mindfulness-based intervention for hospice workers' stress and professional quality of life. *The Arts in Psychotherapy*, *74*, 101797-101797. https://doi.org/10.1016/J.AIP.2021.101797

Fowler, F. J. (2014). *Survey research methods*. Sage publications.

Frisch, M. B. (2006). *Quality of life therapy : applying a life satisfaction approach to positive psychology and cognitive therapy*. John Wiley & Sons. https://www.wiley.com/en-us/Quality+of+Life+Therapy%3A+Applying+a+Life+Satisfaction+Approach+to+Positive+Psychology+and+Cognitive+Therapy-p-9780471213512

Galloway, S., Bell, D., Hamilton, C., & Scullion, A. C. (2006). *Well-Being and Quality of Life: Measuring the Benefits of Culture and Sport - A Literature Review and Thinkpiece*. Scottish Government. http://www.scotland.gov.uk/Resource/Doc/89281/0021350.pdf

García-Magariño, I., Plaza, I., & Neri, F. (2019). ABS-MindBurnout: An agent-based simulator of the effects of mindfulness-based interventions on job burnout. *Journal of Computational Science*, *36*, 101012-101012. https://doi.org/10.1016/J.JOCS.2019.06.009

Giarelli, E., Denigris, J., Fisher, K., Maley, M., & Nolan, E. (2016). Perceived Quality of Work Life and Risk for Compassion Fatigue Among Oncology Nurses: A Mixed-Methods Study. *Oncology Nursing Forum*, *43*(3), 121-131. https://doi.org/10.1188/16.ONF.E121-E131

Grailey, K. E., Murray, E., Reader, T., & Brett, S. J. (2021). The presence and potential impact of psychological safety in the healthcare setting: an evidence synthesis. *BMC Health Services Research*, *21*(1), 773-773. https://doi.org/10.1186/s12913-021-06740-6

Hans, A., Mubeen, S. A., Mishra, N., & Al-Badi, A. H. H. (2015). A Study on Occupational Stress and Quality of Work Life (QWL) in Private Co...: EBSCOhost. *Global Business and Management Research*, *7*(3), 55-68. http://www.gbmrjournal.com/pdf/vol.%207%20no.%203/V7N3-5.pdf

Hardani, H. H. (2016). Stres Kerja, Kepuasan Kerja Dengan Kualitas Hidup Perawat ICU Di RS Tipe B. *Jurnal*

Endurance : Kajian Ilmiah Problema Kesehatan, *1*(3), 113-120. https://doi.org/10.22216/JEN.V1I3.863

Helgeson, V. S. (2003). Social support and quality of life. *Quality of Life Research 2003 12:1*, *12*(1), 25-31. https://doi.org/10.1023/A:1023509117524

Hirokawa, K., Ohira, T., Nagayoshi, M., Kajiura, M., Imano, H., Kitamura, A., Kiyama, M., Okada, T., & Iso, H. (2016). Occupational status and job stress in relation to cardiovascular stress reactivity in Japanese workers. *Preventive Medicine Reports*, *4*, 61-67. https://doi.org/10.1016/J.PMEDR.2016.05.010

International Labour, O. (2016). *Workplace stress, a collective challenge*. ILO Publications. https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/publication/wcms_473267.pdf

Isaksson Ro, K. E., Tyssen, R., Hoffart, A., Sexton, H., Aasland, O. G., & Gude, T. (2010). A three-year cohort study of the relationships between coping, job stress and burnout after a counselling intervention for help-seeking physicians. *BMC Public Health*, *10*(1), 1-13. https://doi.org/10.1186/1471-2458-10-213/TABLES/2

Ismail, I. (2006). Work and non-work dichotomy: The influence of inter-role conflict on quality of life of managers in Klang Valley, Malaysia. *The Journal of Global Business Management*, *2*(2), 57-66. http://jgbm.org

Kent, W., Hochard, K. D., & Hulbert-Williams, N. J. (2019). Perceived stress and professional quality of life in nursing staff: How important is psychological flexibility? *Journal of Contextual Behavioral Science*, *14*, 11-19. https://doi.org/https://doi.org/10.1016/j.jcbs.2019.08.004

Lan, Y.-L., Lin, Y.-C., Yan, Y.-H., & Tang, Y.-P. (2018). *Relationship Between Work Stress, Workload, and Quality of Life Among Rehabilitation Professionals* (International Journal of Healthcare and Medical Sciences ISSN, Issue.

Larasati, T. (2009). Kualitas hidup pada wanita yang sudah memasuki masa menopause. In (pp. 1-19).

Leach, D., Hagger-Johnson, G., Doerner, N., Wall, T., Turner, N., Dawson, J., & Grote, G. (2013). Developing a measure of work uncertainty. *Journal of Occupational and Organizational Psychology*, *86*(1), 85-99. https://doi.org/10.1111/JOOP.12000

Lee, J.-H., Lee, J., & Lee, K.-S. (2020). Moderated Mediation Effect of Mindfulness on the Relationship Between Muscular Skeletal Disease, Job Stress, and Turnover Among Korean Firefighters. *Safety and Health at Work*, *11*(2), 222-227. https://doi.org/https://doi.org/10.1016/j.shaw.2020.03.006

Lee, K. H., Chae, C. H., Kim, Y. O., Son, J. S., Kim, J. H., Kim, C. W., Park, H. O., Lee, J. H., & Jung, Y. S. (2015). Anxiety symptoms and occupational stress among young Korean female manufacturing workers. *Annals of Occupational and Environmental Medicine*, *27*(1). https://doi.org/10.1186/S40557-015-0075-Y

Lewis, S., Rapoport, R., & Gambles, R. (2003). Reflections on the integration of paid work and the rest of life. *Journal of Managerial Psychology*, *18*(7-8), 824-841. https://doi.org/10.1108/02683940310511908/FULL/XML

Li, Y., Sun, X., Ge, H., Liu, J., & Chen, L. (2019). The Status of Occupational Stress and Its Influence the Quality of Life of Copper-Nickel Miners in Xinjiang, China. *International Journal of Environmental Research and Public Health 2019, Vol. 16, Page 353*, *16*(3), 353-353. https://doi.org/10.3390/IJERPH16030353

Lu, Y. K., Qiao, Y. M., Liang, X., Yao, W., Yan, Z., Wang, H. X., & Pei, J. J. (2019). Reciprocal relationship between psychosocial work stress and quality of life: The role of gender and education from the longitudinal study of the Survey of Health, Ageing and Retirement in Europe. In *BMJ Open* (Vol. 9): BMJ Publishing Group.

Luthans, B. C., Luthans, K. W., & Avey, J. B. (2013). Building the Leaders of Tomorrow: The Development of Academic Psychological Capital. *Journal of Leadership & Organizational Studies*, *21*(2), 191-199. https://doi.org/10.1177/1548051813517003

Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological capital development: toward a micro-intervention. *Journal of Organizational Behavior*, *27*(3), 387-393. https://doi.org/https://doi.org/10.1002/job.373

Luthans, F., Avey, J. B., Avolio, B. J., & Peterson, S. J. (2010). The development and resulting performance impact of positive psychological capital. *Human Resource Development Quarterly*, *21*(1), 41-67. https://doi.org/https://doi.org/10.1002/hrdq.20034

Luthans, F., Avey, J. B., & Patera, J. L. (2008). Experimental Analysis of a Web-Based Training Intervention to Develop Positive Psychological Capital. *Academy of Management Learning & Education*, *7*(2), 209-221. https://doi.org/10.5465/amle.2008.32712618

Mardiati, R., Joewana, S., Kurniadi, H., Isfandari, Sarasvita, R., & Purba, F. D. (2004). *The World Health Organization Quality of Life (WHOQOL)-BREF: Indonesian Version*. World Health Organization.

Mohammadi, S., Bavarsad, B., & Hendighomashi, A. (2022). Analysis the effect of job strain on nurses' quality of work-life: A mediating and moderating model. *Iranian Journal of Nursing and Midwifery Research*, *27*(5), 420-420. https://doi.org/10.4103/IJNMR.IJNMR_237_20

Molazem, Z., Bagheri, L., & Najafi Kalyani, M. (2022). Evaluation of the Moral Distress Intensity and Its Relationship with the Quality of Work Life among Nurses Working in Oncology Wards in Shiraz, Southwest of Iran. *BioMed Research International*, *2022*, 1-8. https://doi.org/10.1155/2022/7977039

Momsen, A. M. H., Jensen, O. K., Nielsen, C. V., & Jensen, C. (2014). Multiple somatic symptoms in employees participating in a randomized controlled trial associated with sickness absence because of nonspecific low back

pain. *Spine Journal*, *14*(12), 2868-2876. https://doi.org/10.1016/j.spinee.2014.01.062

Mosadeghrad, A. M., Ferlie, E., & Rosenberg, D. (2011). A study of relationship between job stress, quality of working life and turnover intention among hospital employees. *Health Services Management Research*, *24*(4), 170-181. https://doi.org/10.1258/hsmr.2011.011009

Muschalla, B. (2016). Work-related anxieties and work-place phobia: A topical phenomenon at the interface of clinical and organizational research and practice. In M. Wiencke, M. Cacace, & S. Fischer (Eds.), *Healthy at Work: Interdisciplinary Perspectives* (pp. 53-68). Springer International Publishing. https://doi.org/10.1007/978-3-319-32331-2_5

Nanci, J. R. A., & Velmurugan, V. P. (2018). Role of Social Support in Quality Work Life of an Individual–A Review. *Journal of Management*, *5*(4), 255-258. https://www.academia.edu/download/68848596/JOM_05_04_038.pdf

Naqvi, S. M. H., Khan, M. A., Kant, A. Q., & Khan, S. N. (2013). Job Stress and Employees ' Productivity : Case of Azad Kashmir Public Health Sector. *Interdisciplinary Journal of Contemporary Research in Business*, *5*(3), 525-542.

Pflügner, K., Maier, C., & Weitzel, T. (2021). The direct and indirect influence of mindfulness on techno-stressors and job burnout: A quantitative study of white-collar workers. *Computers in Human Behavior*, *115*, 106566-106566. https://doi.org/10.1016/J.CHB.2020.106566

Plaisier, I., de Graaf, R., de Bruijn, J., Smit, J., van Dyck, R., Beekman, A., & Penninx, B. (2012). Depressive and anxiety disorders on-the-job: The importance of job characteristics for good work functioning in persons with depressive and anxiety disorders. *Psychiatry Research*, *200*(2-3), 382-388. https://doi.org/10.1016/J.PSYCHRES.2012.07.016

Poku, C. A., Alem, J. N., Poku, R. O., Osei, S. A., Amoah, E. O., & Ofei, A. M. A. (2022). Quality of work-life and turnover intentions among the Ghanaian nursing workforce: A multicentre study. *PLoS ONE*, *17*(9 September). https://doi.org/10.1371/JOURNAL.PONE.0272597

Purkait, S. (2016). Impact of Occupational Stress on Quality Work Life among Employees in Banking Sector: A Study in West Bengal Region. *International Journal of Advanced Research*, *4*(7), 1215-1222. https://doi.org/10.21474/IJAR01/1026

Ravari, A. K., Farokhzadian, J., Nematollahi, M., Miri, S., & Foroughameri, G. (2020). The Effectiveness of a Time Management Workshop on Job Stress of Nurses Working in Emergency Departments: An Experimental Study. *Journal of Emergency Nursing*, *46*(4), 548.e541-548.e511. https://doi.org/https://doi.org/10.1016/j.jen.2020.03.013

Robbins, S. P., & Judge, T. A. (2017). *Organizational Behavior* (17th Edition ed.). Pearson Education Limited.

Schabracq, M. J., & Cooper, C. L. (2000). The changing nature of work and stress. *Journal of Managerial Psychology*, *15*(3), 227-241. https://doi.org/10.1108/02683940010320589/FULL/XML

Schalock, R. L., Keith, K. D., Verdugo, M. Á., & Gómez, L. E. (2010). Quality of Life Model Development and Use in the Field of Intellectual Disability. In R. Kober (Ed.), *Enhancing the Quality of Life of People with Intellectual Disabilities* (Vol. 41, pp. 17-32). Springer, Dordrecht. https://doi.org/10.1007/978-90-481-9650-0_2

Setiawan, A., & Febriyanto, K. (2020). Hubungan Masa Kerja dengan Kepatuhan Penggunaan APD pada Pekerja di Galangan Kapal Samarinda. *Borneo Student Research (BSR)*, *2*(1), 433-439. https://journals.umkt.ac.id/index.php/bsr/article/view/1711

Shukla, A., & Srivastava, R. (2016). Development of short questionnaire to measure an extended set of role expectation conflict, coworker support and work-life balance: The new job stress scale. *Cogent Business & Management*, *3*(1). https://doi.org/10.1080/23311975.2015.1134034

Taris, T. W., Peeters, M. C., Le Blanc, P. M., Schreurs, P. J., & Schaufeli, W. B. (2001). From inequity to burnout: the role of job stress. *Journal of occupational health psychology*, *6*(4), 303-323. https://doi.org/10.1037/1076-8998.6.4.303

Tohmiya, N., Tadaka, E., & Arimoto, A. (2018). Cross-sectional study of cognitive stress appraisal and related factors among workers in metropolitan areas of Japan. *BMJ Open*, *8*(6), e019404-e019404. https://doi.org/10.1136/BMJOPEN-2017-019404

Uddin, M. A., Soivong, P., Lasuka, D., & Juntasopeepun, P. (2017). Factors related to quality of life among older adults in Bangladesh: A cross sectional survey. *Nursing & Health Sciences*, *19*(4), 518-524. https://doi.org/10.1111/NHS.12385

Veenhoven, R. (1999). Quality-of-Life in Individualistic Society. *Social Indicators Research 1999 48:2*, *48*(2), 159-188. https://doi.org/10.1023/A:1006923418502

WHO. (2020a). *Indonesian WHOQOL-BREF* https://www.who.int/tools/whoqol/whoqol-bref/docs/default-source/publishing-policies/whoqol-bref/indonesian-whoqol-bref

WHO. (2020b). Occupational health: Stress at the workplace. In *World Health Organization*.

Woo, D., Lee, Y., & Park, S. (2020). Associations among working hours, sleep duration, self-rated health, and health-related quality of life in Korean men. *Health and Quality of Life Outcomes*, *18*(1), 1-6. https://doi.org/10.1186/S12955-020-01538-2/TABLES/3