



# The Emotional Intelligent and Social Support as Predictor of Stress at Work Among Nurses During Post Pandemic

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**Abstract.** This study investigates the influence relationship between emotional intelligence and social support on work stress in nurses during the post-pandemic situation. This study uses Multidimensional Instrument of Perceived Social Support ( $\alpha = 0,870$ ), Work Stress ( $\alpha = 0,904$ ), and Wong and Law Emotional Intelligence Scale (WLEIS) ( $\alpha = 0,910$ ). Hypothesis testing using multiple linear regression analysis.

The total sample of the research are 41 nurses (78% female) age from 24–54 who filled out an online questionnaire. The results of the regression test showed that emotional intelligence and social support was found to be unable to predict work stress of nurses. We found that all three dimensions of emotional intelligence did not predict nurse work stress, henceforth, the fourth dimension of emotional intelligence (regulation of emotion) (sig.  $0.015 < 0.05$ ) significantly predicted work stress on nurses in a negative direction.

This shows that the higher the emotional management ability of nurses, the lower their work stress. Social support was found to be unable to predict the work stress of nurses maybe because of the different source of social support and source of work stress. In post-pandemic conditions and the increasing pressure felt by nurses, health service providers need to provide training to improve emotional regulation which will ultimately reduce nurses' work stress.

**Keywords:** emotional intelligence · social support · work stress · nurses · post pandemic

## 1 Introduction

The COVID-19 pandemic has put a heavy burden on health workers, especially is nurses. Compared to various other employment sectors, health workers are the most vulnerable sector, because they have a greater risk of being infected and have longer working hours (Valenti et al., 2021). As the front line treating covid-19 patients, nurses get a lot of pressure that causes work stress. Research on the work stress of nurses in a private hospital in Pekanbaru showed that 23.9% or 27 nurses from 113 participants experienced severe work stress; 49.6% or 56 nurses experienced moderate level of work stress; and 26.5% or 30 nurses experienced mild work stress. Another study on the work stress of

emergency room nurses during the Covid-19 pandemic at the Brayat Minulya Hospital in Surakarta, showed that 75% of participants experienced severe stress (Sekolah Tinggi Ilmu Kesehatan Kendal et al., 2021).

Job stress is the result of ineffective skills to cope with pressure from work, so that pressure from work is perceived negatively and has a negative impact on mental and physical health. Individuals perceive work pressure negatively and show poor coping skills (Valenti et al., 2021). Job stress has an impact on individual well-being, both cognitive, psychological, physiological, and behavioral (Park & Kim, 2013). High levels of work stress affect cognitive by inhibiting the brain's memory of a task that will reduce concentration. Acute stress can damage cerebral structures such as the hippocampus followed by difficulty in cognitive function. All of these things will increase errors in doing tasks that can cause accidents (Park & Kim, 2013).

The impact of high levels of stress on physiology is: chronic fatigue disorders, eating disorders, increased blood pressure, and risk of heart disease. While the impact of high levels of work stress on psychological conditions is: depression, anxiety, mood disorders, and emotional exhaustion, as well as decreased ability to focus and concentrate. While the impact of a high level of stress on job-related work stress has a positive relation to the desire to leave work or absenteeism, job satisfaction, job performance, work motivation, and commitment to the organization (Valenti et al., 2021).

Knowing the effects of high work stress, research to find out the factors related to nurse work stress is important. So intervening in these factors, will improve the mental health and welfare of nurses. Work stress is influenced by work factors and individual factors. The individual factors are gender, age, education level, and coping style. One of the individual factors that are quite influential is emotional intelligence. Emotional intelligence is the ability to feel emotions, access and produce emotions so that it can help think, understand emotions and emotional knowledge, and regulate emotions reflectively to encourage emotional and intellectual growth (Salovey & Mayer, 1997, in (Valenti et al., 2021)).

Understanding emotions is important to help individuals become aware of their own and other's behavior and motivations so that they can direct their feelings constructively at work. Emotional intelligence increases the ability to cope with pressure so that it will give positive results. Emotional intelligence is more important in predicting positive outcomes at work. Individuals with high emotional intelligence can cope with pressure more effectively (Valenti et al., 2021).

The environmental factor that affect work stress is social support. Social support is defined as the degree to which a person perceives others as caring and responsive to their needs. Social support directly reduces tension, perhaps by calming the person, social support weakens the relationship between stressor and tension (Beehr et al., 2003).

Social support is an important factor in maintaining well-being and overcoming various challenges. Individuals who understand their feelings and the other's feelings, will tend to seek help from others when in challenging situations. Several studies have shown that individuals with high emotional intelligence show higher social support, as well as higher satisfaction and lower psychological distress (Valenti et al., 2021).

In this study, researchers wanted to see the influence of emotional intelligence and social support on work stress among nurses during post-pandemic situation. Researchers

also want to see the influence of each dimension of emotional intelligence and social support on the work stress of nurses. According to Salovey & Mayer (1997, in (Valenti et al., 2021)) emotional intelligence has four dimensions, namely self-emotional appraisal, other's emotional appraisal, use of emotion, and regulation of emotion. Meanwhile, according to Zimet, Dahlem, Zimet, & Farley (1988, (Nabila, 2022)) social support has three dimensions, namely, perceived social support from family, perceived social support from friends, and perceived social support from significant other.

**The objective of this research are:**

1. To see if there is influence relationship of emotional intelligent and social support on work stress among nurses during post-pandemic situation
2. To see if there is influence relationship of each dimension of emotional intelligent on work stress among nurses during post-pandemic situation
3. To see if there is influence relationship of each dimension of social support on work stress among nurses during post-pandemic situation

## **2 Methods**

### **2.1 Sample**

This research was done September, 17, 2022 until September, 27, 2022. We use online questionnaire and utilize the network of friends owned by researchers. Our participants comes from health service from Semarang, Purbalingga, Jakarta, Depok, and Surakarta. The sampling technique in this study is accidental sampling, Participants were selected based on their desire and willingness to become participants. Participants must have the following characteristics: nurses and work in hospitals or health services that treat Covid-19 patients. The researcher used an online questionnaire and distributed it to nurses colleagues. Participants filled out online questionnaires and researchers selected if there were participants who did not meet the criteria. From 44 participants who filled out the questionnaire, the researcher removed 3 participants because they do not meet the participant required characteristics. Sample collected with a composition of 9 male and 32 female nurses.

Our participants consist of nurses from different age, salary, city origin of workplace, and health services. For age, 7 participants aged 17–25 years old, 3 participants aged 46–55 years old, 6 participants aged 56–65 years old, and dominant of participants, a number of 25 nurses aged 26–35 years old. This division is based on the age categorization of the Indonesian Ministry of Health in 2009 (muamala.net, n.d.).

For salary, 1 participant earn salary of 7–10 millions rupiah, 2 participants earn salary of over 10 millions rupiah, 10 participants earn salary of under 4 millions rupiah, and dominant of participants, a number of 28 nurses earn salary of 4–7 millions rupiah. For city origin of workplace, 11 participants work in the Jakarta City, 5 participants work in Depok City, 2 participants work in Purbalingga City, 4 participants work in Surakarta City, and dominant of participants, a number of 19 nurses work in Semarang City. For health services, 1 participant work in homecare health service, 6 participants work in public health center (Puskemas), and dominant of participants, a number of 34 nurses work in hospital health service.

## 2.2 Research Design

This research is a quantitative research and correlational design. Independent variables are emotional intelligence, social support, dimensions of emotional intelligence (self emotional appraisal, other's emotional appraisal, use of emotion, and regulation of emotion), and dimensions of social support (perceived social support from family, perceived social support from friends, and perceived social support from significant others) and the dependent variable is work stress on nurses.

## 2.3 Instrument and Measurement

### *Multidimensional Scale of Perceived Social Support (MSPSS)*

This study uses an instrument to measure perceived social support from family, friends, and significant other using the Multidimensional scale of perceived social support created by Zimet, Dahlem, Zimet, and Farley (1988) and adapted by (Nabila, 2022) which has validity value for all item moving from 0.421 to 0.798 and has a Cronbach alpha reliability value of 0.901.

## 2.4 Wong and Law Emotional Intelligence Scale (WLEIS)

To measure emotional intelligence, this study uses the Wong and Law Emotional Intelligence Scale instrument compiled by Salovey and Mayer (1990) and adapted by (Utami, 2019) with a validity value of 0.348–0.809 for all items and a Cronbach alpha reliability value of 0.910.

## 2.5 Work Stress Questionnaire

To measure the work stress of nurses we use a job stress questionnaire from the undergraduate research Jusminar (2012) with the validity value of all items 0.539–0.810 and the reliability of the Cronbach alpha value of 0.904.

## 2.6 Procedure

Data retrieval procedure using online questionnaire. It started with the researchers distributing posters inviting to participate. The researcher distributed it to research colleague who worked as nurses and asked to share it with fellow nurses. After obtaining 44 questionnaires, the researcher selected participants who did not meet the criteria. We found 3 participants who filled out the professional column were not nurses so researcher take out 3 participant, then we have 41 questionnaires were obtained to be processed.

## 2.7 Data Analysis Technique

This study uses multiple linear regression analysis with SPSS to measure the influence of independent variable (EI, Perceived Social Support) to dependent variable (Work Stress). The measurement is processed using SPSS statistical software analysis.

### 3 Result

The first analysis is the relation between emotional intelligence and perceived social support on works stress. Multiple regression analysis is used to measure the relationship between variables and processed with SPSS statistical software analysis. As shown in the Table 1,  $p$  value of WLEIS predict Work Stress result 0.572 and MSPSS result 0.074. The statistical results showed that WLEIS ( $p < 0.05$ ,  $B = -0.236$ ) and MSPSS ( $p < 0.05$ ,  $B = 0.098$ ) do not predict work stress significantly (Fig. 1). In this research, there is no influence relationship of emotional intelligent and social support on work stress among nurses during post-pandemic situation.

The second analysis is the relation between each emotional intelligence and perceived social support dimensions on works stress. Multiple regression analysis is used to measure the relationship between variables and processed with SPSS statistical software analysis. As shown in the Table 2, only  $p$  value of WLEIS Regulation of Emotion that predict Work Stress. The direction of the relationship is negative, the increase in regulation of emotion's score predict lower work stress. The dimensions of MSPSS has no influence relationship on works stress. The direction of relationship of each dimensions measured could be seen in Fig. 2. As conclusion, only regulation of emotion that has influence relationship on work stress.

**Table 1.** The influence of emotional intelligence and perceived social support on work stress

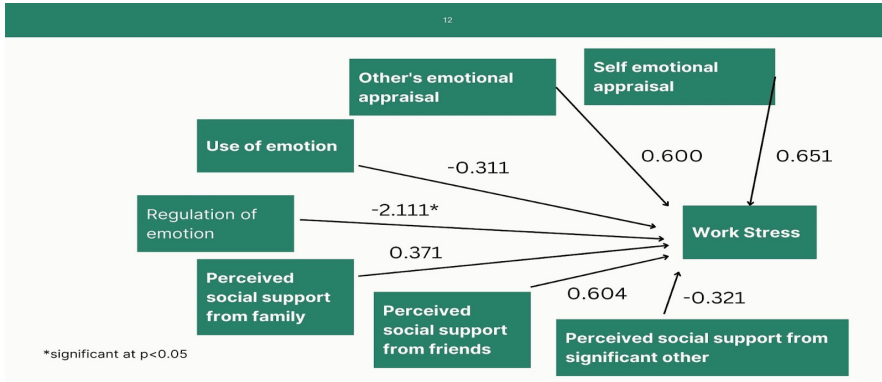
	B	Sign.
WLEIS	0.098	0.572
MSPSS	-0.236	0.074

Note: WLEIS: Wong and Law Emotional Intelligence Scale; MPSS: Multidimensional Scale of Perceived Social Support; \* $p < 0.05$ ; \*\* $p < 0.01$

**Table 2.** The influence of emotional intelligence and perceived social support dimensions on work stress

	B	Sign.
WLEIS Self emotional appraisal	0.651	
WLEIS Other's emotional appraisal	0.600	
WLEIS Use of emotion	-0.311	
WLEIS Regulation of Emotion	-2.111*	
MPSS from family	0.571	
MPSS from friend	0.604	
MPSS from significant other	-0.321	

Note: WLEIS: Wong and Law Emotional Intelligence Scale; MPSS: Multidimensional Scale of Perceived Social Support; \* $p < 0.05$ ; \*\* $p < 0.01$



### 4 Discussion

The results showed that perceived social support and emotional intelligence had no effect on work stress among nurses in post-pandemic conditions. Meanwhile, the results for each dimension of perceived social support show that none of the dimensions of perceived social support has an influence on nurses' work stress. This result can be explained because the source of perceived social support is not the same as the source of stress. Research by Beehr et al., (2003) showed that social support will have a beneficial impact (inhibit stress) if the source of stress matches the source of social support. Because the source of stress is the one who best understands the problem (stressor) and can ease the individual's response to stress.

Meanwhile, the results of the influence of the emotional intelligent dimension on work stress among nurses show that the only dimension of emotional intelligent that affects work stress nurses is emotional regulation. These results can be explained by research by Cejudo et al., (2018). Cejudo et al. examined emotional intelligence and its relationship with the level of social anxiety and stress in adolescents found that the emotional regulation dimension had the greatest contribution to the trait emotional intelligent variable. This is because emotion regulation plays a role in helping people adapt to the demands of the social environment. Emotion regulation strategies help cope with stressful situations, improve interpersonal relationships, and grow emotionally.

### 5 Limitations and Future Research

This study had some limitations, which should be addressed by future studies. First, the measurement of perceived social support resources are limited from family, friends, and significant other. Future research could explore for another social support resources that potentially influence on work stress. Especially, source of social support from workplace, like supervisor, coworkers, etc. Second, when researchers do the research it already more stable at hospital and health service, so maybe the nurses no longer feel as much work pressure as when the Covid case was high. We choose EI because it is a personal modal

that already attach within a person. And social support is modal that comes from the environment. The strength of this research comes from its novelty. The influence of each dimensions of EI and perceived social support has not been researched yet. The second is this research be held during the post-pandemic, hence it expected to bring beneficial contribution for this significant condition. The third is on the research participants. We use sample that different from the previous research. The sample is native workers, in this context are some nurses that works in various Indonesian's local health services.

## 6 Conclusion

The COVID-19 pandemic brought difficulties for nurses' work conditions, hence it became necessary to research what factors that reduce stressors in work environment and promote nurses' life satisfaction.

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**Availability of Data and Materials.** The datasets during or analyzed during the current study are available from the open-online journal resources and the corresponding author on reasonable request.

## References

- Valenti, G. D., Faraci, P. & Magnano, P. Emotional intelligence and social support: Two key factors in preventing occupational stress during COVID-19. *Int. J. Environ. Res. Public Health* **18**, (2021).
- Oktari, T., Nauli, F. A. & Deli, H. Gambaran Tingkat Stres Kerja Perawat Rumah Sakit pada Era New Normal. *Heal. CARE J. Kesehat.* **10**, 115–124 (2021).
- Sekolah Tinggi Ilmu Kesehatan Kendal, L. *et al.* GAMBARAN STRES KERJA PERAWAT IGD DI MASA PANDEMI COVID-19 DI RUMAH SAKIT SURAKARTA. *J. Gawat Darurat* **3**, 1–10 (2021).
- Park, Y. M. & Kim, S. Y. Impacts of job stress and cognitive failure on patient safety incidents among hospital nurses. *Saf. Health Work* **4**, 210–215 (2013).

Beehr, T. A., Farmer, S. J., Glazer, S., Gudanowski, D. M. & Nair, V. N. The Enigma of Social Support and Occupational Stress: Source Congruence and Gender Role Effects. *J. Occup. Health Psychol.* **8**, 220–231 (2003).

muamala.net. Kategori Umur Menurut WHO. <https://muamala.net/kategori-umur-menurut-who/>. Nabila, N. N. DUKUNGAN SOSIAL DAN STRES PADA TENAGAKESEHATAN DI MASA PANDEMI COVID-19. (2022).

Utami, S. P. The role of emotional intelligence dimentions on career decision self-efficacy in senior year under graduates. <http://152.118.24.168/detail?id=20481671&lokasi=lokal#parentHorizontalTab1> (2019).

Jusnimar. *UNIVERSITAS INDONESIA*.

Cejudo, J., Rodrigo-Ruiz, D., López-Delgado, M. L. & Losada, L. Emotional intelligence and its relationship with levels of social anxiety and stress in adolescents. *Int. J. Environ. Res. Public Health* **15**, (2018).

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