

Analysis of the Adaptability of Nurses during the Covid-19 Pandemic

Ainul Mufarichah¹, Pardiman², Siti Asiyah³

¹Master Management, Postgraduate Program, Islamic University of Malang, Indonesia

^{2,3}Faculty of Economics and Business, Islamic University of Malang, Indonesia

ainul.unisma@gmail.com

Abstract

Health workers in Indonesia who carry out medical service duties at the forefront during the COVID-19 pandemic have twice the risk of experiencing burnout syndrome. Furthermore, doctors who treat COVID-19 patients, both general practitioners and specialists, are twice as likely to experience emotional exhaustion and loss of empathy as those who do not treat COVID-19 patients. This study aims to examine the effect of the pandemic situation on adaptive performance and burnout syndrome. Furthermore, to determine the moderating role of management support between the influence of the pandemic situation on adaptive performance and burnout syndrome on adaptive performance. The data was obtained by purposive sampling on nurses working in the COVID-19 pandemic situation at Prasetya Husada Hospital in Malang Regency as many as 84 people out of 104 total population. Hypothesis testing using Warppls 7.0 path analysis. The results showed that there was a positive and significant effect of the COVID-19 pandemic situation on burnout syndrome. There was a positive and significant effect of the COVID-19 pandemic situation on adaptive performance. There is a positive and significant effect of burnout syndrome on adaptive performance. There is a significant influence from the COVID-19 pandemic situation which is moderated by the perception of management support (moderation 1) on adaptive performance. There is a significant effect of burnout syndrome moderated by perceived management support (moderation 2) on adaptive performance.

Keywords

adaptive performance; burnout syndrome, management support; Covid-19 pandemic situation



I. Introduction

The COVID-19 pandemic is the greatest challenge to health systems worldwide today. The Covid-19 pandemic caused everyone to behave beyond normal limits as usual (Sihombing and Nasib, 2020). The world health agency (WHO) has also announced that the corona virus, also called COVID-19, is a global threat worldwide (Ningrum et al., 2020). Hospitals in Indonesia, East Java, Malang Regency, Karangploso District, are faced with developing surge capacity so that the increasing need for medical services can be properly met. The rapidly growing Covid-19 outbreak in Indonesia requires all hospitals to adapt quickly and ensure safe services for patients and health workers. However, in a tough situation and a less than optimal work environment, the risk to the safety of patients and health workers during this pandemic increases. For this reason, it is important to conduct this research in order to analyze the adaptability of nurses and find out several factors that influence it.

Teams must be prepared to handle various emergency conditions immediately, although in this pandemic situation, several emergency settings require adjustments, one

example of which is the practice of resuscitation. The challenge is how to ensure that patients with or without COVID-19 who experience cardiac arrest have the opportunity to survive without compromising the safety of the rescuers who will of course be needed to care for the next patients. Coupled with the highly contagious COVID-19, this certainly poses its own challenges in terms of emergency response and may affect morbidity and mortality rates. Around 12% - 19% of patients who are positive for COVID-19 require hospitalization, and 3% - 6% are in critical condition (Association of Cardiovascular Specialists, 2020).

The results of the research from the medical faculty team at the University of Indonesia found the fact that general practitioners in Indonesia who carry out medical service duties at the forefront during the COVID-19 pandemic have twice the risk of experiencing burnout syndrome. The Research Team from the Master of Occupational Medicine Study Program consisting of Dr. dr. Ray W Basrowi, MKK, dr. Levina Chandra Khoe, MPH and dr. Marsen Isbayuputra, SpOK, found another worrying fact, such as: 83% of health workers have moderate and severe burnout syndrome. 41% of health workers experienced moderate and severe emotional exhaustion, 22% experienced moderate and severe loss of empathy, and 52% experienced moderate and severe lack of confidence. Doctors who treat COVID-19 patients, both general practitioners and specialists, are twice as likely to experience emotional exhaustion and loss of empathy as those who do not treat COVID-19 patients. There are still 2% of health workers who do not receive personal protective equipment (PPE) of health facilities. Around 75% of health facilities do not carry out routine swabs and 59% do not carry out routine rapid test checks for their health workers (Humas FK UI, 2020).

The process of maintaining the mental health of nurses is important in order to increase their retention of the profession. COVID-19 is a challenge for hospitals and health care centers that employ nurses. Even in the pre-pandemic period, this profession was a profession full of emotional challenges. Meanwhile, in the era of the COVID-19 pandemic, it brought unprecedented changes so that work patterns changed, there was anxiety and stressors related to morbidity and mortality. Good stress management begins with looking at the factors that can influence it (Kim et al., 2020).

Nurses on duty during the COVID-19 pandemic are on the battlefield with an invisible enemy. So continuous intervention is needed to maintain the mental toughness of nurses. There are seven categories of support needed by nurses to provide quality care performance during this pandemic. The seven categories are PPE, communication, financing, industrial issues, workplace, self-care and professional colleagues and leadership (Halcomb et al., 2020).

Organizational and social support of the community is an important factor in the mental resilience of nurses (Kılınç & Sis Çelik, 2020). There are various kinds of public perception regarding this pandemic. This perception affects their support for health workers. The ability of nurses to survive in carrying out their duties even in the midst of low social support is a challenge. This low social support may be due to the stigma that exists in society. Stigma is also formed as a result of online social media which is sometimes wild, causing hoaxes (Santoso & Setyowati, 2020).

Real events in Indonesia due to stigma and discrimination against health workers in the form of expulsion from their homes, the bodies of nurses who are rejected, ostracized, bans on public transportation and so on. Stigma can be a barrier to success as a universal mental health effort. Mental health must be an integrated part of general health efforts. Considering the psychosocial impact caused by COVID-19, WHO has determined mental health as an integrated part of efforts to overcome COVID-19. These efforts need to be

carried out with a community-based approach. Increasing participation by empowering the community and bottom-up policies are needed to stop stigma. The resilience of nurses in dealing with the COVID-19 outbreak is strongly influenced by their internal factors, namely the spiritual intelligence factor, the ability to adapt to the work environment.

The COVID-19 pandemic caused Prasetya Husada Hospital to experience difficulties both in management and infrastructure in providing services because the number of patients increased in a short time, while the interest of medical personnel in treating COVID-19 patients was very low. It is proven by the very minimal number of applicants. This also affects the performance of health facilities employees. In addition to declining morale, conditions are now more limited to move, making every health facility rearrange the existing work system. This needs to be done, to be able to adapt to the current pandemic conditions. Demotivation during this pandemic in particular is a new challenge for all parties, both management and HR. Even though it is difficult, HR must still be able to maintain conducive working conditions for all parties. Based on the above background, the authors are interested in researching further and describing the Analysis of Nurse Adaptability in the Era of the COVID-19 Pandemic. This study will produce a model for strengthening the adaptability of nurses in hospitals.

1. Based on the explanation above, we build the following hypothesis:
2. The pandemic situation has a significant effect on burnout syndrome
3. The pandemic situation has a significant effect on adaptive performance
4. Burnout syndrome mediates the effect of the pandemic situation having a significant effect on adaptive performance
5. Perceptions of management support moderate the effect of the pandemic situation on adaptive performance
6. Perception of management support moderates the effect of burnout syndrome on adaptive performance

II. Research Methods

This study uses quantitative methods, focusing on examining the causal relationship between the COVID-19 pandemic situation directly on burnout syndrome and adaptive performance, burnout syndrome directly on adaptive performance, and indirectly moderated by perceived management support. The sample selection used a purposive sampling technique on the population of nurses working in a COVID-19 pandemic situation at Prasetya Husada Hospital in Malang Regency using the slovin formula and resulted in a sample of 84 people from 105 total population. The data collection technique used a questionnaire with a Likert scale from 1 (strongly disagree) to 5 (strongly agree). Questionnaires were distributed via google form in February 2021 and 84 completed and valid questionnaires have been returned. After the data is collected, it is analyzed using the Warppls 7.0 application. This study uses moderating variables as a comparison with previous studies. The data analysis used is structural equation modeling partial least square (SEM-PLS) which is a data analysis used to analyze research hypotheses with small data and not normally distributed. Measurement of pandemic situation variables using an instrument developed by (Liu et al., 2020; Purba, 2015; Wowiling, 2019) which consists of 3 indicators, namely physical workload, mental load and risk factors and there are 8 statement items. While the burnout syndrome consists of 10 statement items developed by (Asih & Trisni, 2015) which uses 3 indicators in the form of physical condition, performance and mental condition. Furthermore, adaptive performance uses 6 items developed by (Papu, 2002) with 3 indicators of openness, flexibility and toughness.

Management support using 8 items developed by (Eisenberger et al., 1986) with 3 indicators, namely personal protective equipment, awards and occupational health and safety.

III. Results and Discussion

The distribution of respondents' responses explained that nurses at Prasetya Husada Hospital Malang on average admitted that they were able to deal with the Covid-19 pandemic situation with a mean value of 3.85. The highest average is 4.62, namely questions with the code "SP_2" and the lowest average score is 3.64 and is included in the fairly good category, namely questions with the code "SP_7". Meanwhile, the average obtained from the COVID-19 pandemic situation is 3.85 and is included in the good category. Burnout syndrome can be seen that the highest average score is 2.93 and is included in the fairly good category, namely questions with the code "BS_1 and BS_10" and the lowest average score is 2.45 and is included in the fairly good category. , namely the question with the code "BS_8". While the average obtained from the burnout syndrome variable is 2.69 and is included in the fairly good category. These results illustrate that the respondent's physical condition, performance, mental condition in a pandemic situation looks quite good. Adaptive performance can be seen that the highest average score is 3.21 and is included in the fairly good category, namely questions with the code "AP_1" and the lowest average score is 2.24 and is included in the fairly good category, namely questions with the code "AP_5". While the average obtained from the adaptive performance variable is 2.82 and is included in the good category. These results indicate that the majority of respondents considered adaptive performance quite good. This shows that the nurse's ability to handle COVID-19 patients is quite good. Perception of management support, it can be seen that the highest average score is 4.21 and is included in the good category, namely questions with the code "PDM_2" and the lowest average score is 3.60 and is included in the fairly good category, namely question with code "PDM_5". Meanwhile, the average obtained from the perception variable of management support is 3.87 and is included in the good category. These results indicate that the majority of respondents assess the perception of management support as good for the COVID-19 pandemic.

Testing the quality of the data is done by testing the validity with the value of loading factor and average variance extracted and reliability testing using the value of composite reliability. In table 1 it can be explained that each variable already has an AVE value above 0.50 and a composite reliability value above 0.70 (Hair et al., 2015). So it can be concluded that all the items used in this study are valid and reliable.

Table 1. Model Evaluation

Variables	AVE	Composite Reliability
Pandemic Situation	0,748	0,960
Burnout Sindrome	0,670	0,953
Adaptif Performance	0,587	0,895
Management Support Perception	0,748	0,960

Source: Primary data processed, 2021

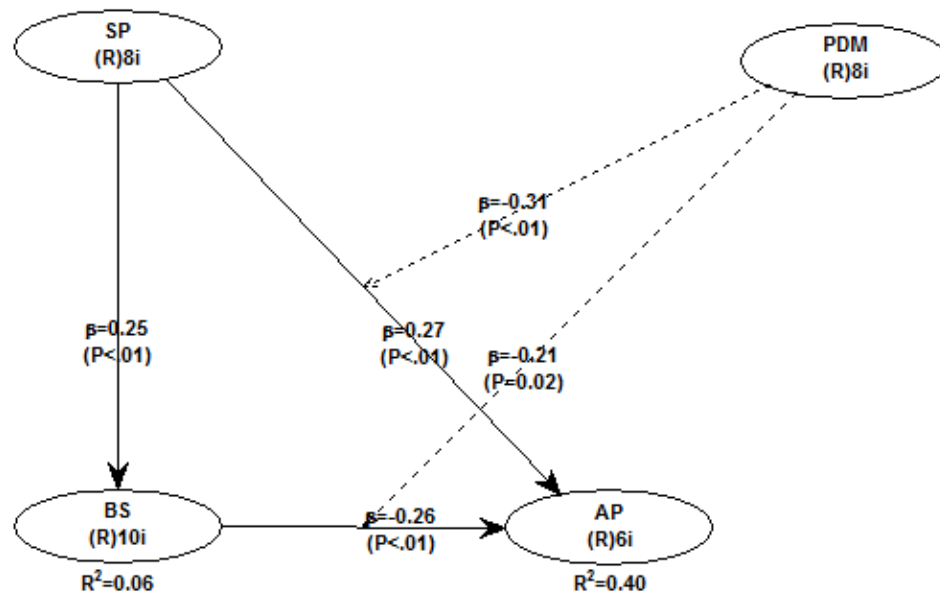


Figure 1. Final Model

(Source: Primary data processed, 2021)

In the evaluation stage, the structural model aims to predict the relationship between latent constructs. The test results on the structural model can be used to see whether the empirical data in the study supports the relationship from the development of the hypothesis made. The existence of a hypothetical relationship in research can be seen from the relationship between exogenous latent constructs and endogenous latent constructs and from exogenous latent constructs with other exogenous latent constructs, so that by testing the structural model, researchers can see whether based on empirical data the hypothesis made in this study is accepted or rejected. Therefore, it is very important to first carry out an overall evaluation of the goodness of fit (GoF) inner model by looking at the parameters of the percentage value. Burnout syndrome R2 value of 0.061 < 0.25 is classified as weak (Hair et al., 2017), These results explain that 6.1% of burnout syndrome is influenced by the COVID-19 pandemic situation, while the remaining 93.9% is influenced by other factors not observed in this study. While the second R2 value of adaptive performance, which is 0.403 < 0.45, is moderate, these results explain that 40.3% of adaptive performance is influenced by the COVID-19 pandemic situation, burnout syndrome, and the perception of management support as a moderating variable, while the remaining 59.7 % is influenced by other factors not examined in this study.

The effect size (f2) for the COVID-19 pandemic situation variable on burnout syndrome is 0.061, the value is included in the small category, the COVID-19 pandemic situation for adaptive performance is 0.126, the value is included in the small category, burnout syndrome for adaptive performance is of 0.092, the value is included in the small category, PDM*SP (moderation 1) for adaptive performance is 0.131, the value is included in the small category, and PDM*BS (moderation 2) for adaptive performance is 0.054, the value is included in the small category.

(Ghozali & Latan, 2015) Q-square value greater than 0 (zero) indicates that the model has predictive relevance, while a Q-square value less than 0 (zero) indicates that the model lacks predictive relevance. The Q-square value for the burnout syndrome variable is 0.071 which shows the Q-square value is more than 0 (zero), and the adaptive performance variable has a Q-square value of 0.303, so in this study the model deserves to be said to

have a relevant predictive value. Furthermore, the overall suitability of the model shows the values that have been met. That is, the value of APC, ARS and AARS has a p value < 0.05, the value of AVIF and AFVIF has an ideal value that is below 3.3, the value of Tenenhaus GoF (GoF) which is large $0.429 > 0.36$ which is included in the large category, the value of SPR, RSCR, and SSR have an ideal value of 1,000 each, and the NLBCDR value has a value of $0.800 > 0.7$. This shows that the model formed in this study as a whole has strong predictive power or in other words that the model meets the goodness of fit criteria.

(Ghozali & Latan, 2015) also said the hypothesis was accepted if the p-value was below the level of significance which in this study was 5% or 0.05. The following is a summary of the results of testing the research hypothesis.

Table 2. Hypothesis Testing Results

Hypothesis	Coefficient Value	P Value	Result
SP -> BS	0,248	0,008	Positive and Significant
SP -> AP	0,268	0,004	Positive and Significant
BS -> AP	-0,263	0,005	Positive and Significant
PDM*SP -> AP	-0,310	0,001	Positive and Significant
PDM*BS -> AP	-0,210	0,021	Positive and Significant

Source: Primary data processed, 2021

The results of data analysis show that there is a positive and significant effect of the COVID-19 pandemic situation on burnout syndrome. The results of this study are consistent with those carried out by (Kang et al., 2020) explained the results of research during the COVID-19 pandemic, in 994 nurses and doctors it was found that exposure risk factors affect mental health and subjectively affect perceptions of physical health. (Wang et al., 2020) in 202 medical staff, the results of research on factors that influence post-traumatic stress disorder (PTSD) in the COVID-19 pandemic were obtained. Burnout syndrome is a syndrome of emotional exhaustion and cynicism that often occurs in people who work (Maslach & Jackson, 1981). Burnout syndrome that occurs is a response to interpersonal stressors related to work (Leiter & Maslach, 1988). *Burnout syndrome* consists of three dimensions, namely emotional exhaustion (emotional exhaustion), depersonalization (personalization), and personal accomplishment (self-achievement). The results of this study indicate that the pandemic situation has a direct effect on burnout syndrome.

In hypothesis 2 it is stated that there is a positive and significant effect of the COVID-19 pandemic situation on adaptive performance. The results of this study are consistent with research (Diyono, 2016) Nurses must have good abilities for patients and themselves in dealing with ethical issues. One must think rationally, not emotionally in making ethical decisions. Such decisions require the conscious thinking skills necessary to save patient decisions and provide care. The ability to make ethical decisions is one of the requirements for nurses to carry out professional nursing practice. During the COVID-19 pandemic, nurses face complex situations that they have never met before so they may experience various problems/pressures. One of the reasons is the very limited hospital visit policy that prevents nurses from involving families in treatment decisions, isolation measures that can result in patients dying without the physical presence of family members, experiencing fatigue due to workload and changes in work schedules, there are

concerns about their own health, lack of provision of personal protective equipment and other medical equipment (AACN Position Statement, 2015). The results of this study indicate that the COVID-19 pandemic situation has a direct effect on adaptive performance.

There is a positive and significant effect of burnout syndrome on adaptive performance. These results indicate that the hypothesis is accepted. The results of this study are consistent with research (Brooks et al., 2020). Anxiety and distress are normal reactions to threatening and unexpected situations such as the coronavirus pandemic which can include changes in concentration, irritability, anxiety, insomnia, reduced productivity and interpersonal conflict, but are particularly true for groups directly affected such as health professionals. Apart from the threat posed by the virus itself, there is no doubt that the quarantine measures implemented in many countries, have a negative psychological effect, further increasing the symptoms of stress. The severity of symptoms depends in part on the duration and extent of quarantine, feelings of loneliness, fear of infection, inadequate information and stigma, in more vulnerable groups including psychiatric disorders, health workers and people of low socioeconomic status. The results of this study indicate that burnout syndrome has a direct effect on adaptive performance.

The COVID-19 pandemic situation has a significant effect on adaptive performance with moderated (1) management support. That is, the path coefficient value is -0.310 and has a P-value of $0.001 < 0.05$ level of significance. Thus the hypothesis which states that there is a significant effect of the COVID-19 pandemic situation moderated by the perception of management support (moderation 1) on adaptive performance is acceptable, or in other words there is a significant influence of the COVID-19 pandemic situation on adaptive performance. These results indicate that the hypothesis is accepted. The results of this study are consistent with the study of Talk Changes (Hackney & City IAPT) (Cole et al., 2020) The COVID -19 pandemic is putting pressure on the provision of Health and Social Care, with hospital frontline staff from a variety of roles and teams in the face of broad practical and emotional challenges. Academics and health professionals provide psychological support for frontline staff, to overcome difficulties during the early phases of the outbreak but also for months, to years into the future. The mental health services and professional bodies of psychology in the UK have issued guidelines to meet this need. An attempt has been made to translate this set of guidelines into clinical practice through the Homerton Coviid Psychological Support (HCPS) pathway. The results of this study indicate that management support moderates the COVID-19 pandemic situation.

Burnout syndrome, adaptive performance have a significant effect on management support as a moderator (2) which is indicated by the path coefficient value of -0.210 and has a P-value of $0.021 < 0.05$ significance level. Thus the hypothesis which states that there is a significant effect of burnout syndrome moderated by perceived management support (moderation 2) on adaptive performance is acceptable, or in other words there is a significant effect of burnout syndrome moderated by perceived management support (moderation 2) on adaptive performance. These results indicate that the hypothesis is accepted. The results of this study are consistent with research (Billings et al., 2020). In general, support from colleagues and managers will protect the mental health of health workers. Staff members who constantly avoid meetings or are extremely stressed need discussion and support from experienced people such as their team leader, trained peers, or spiritual support. There is regular support (such as a support program) available to health care staff including morale briefing, awareness about the causes of mental illness and what to look out for. The results of this study indicate that the perception of management support moderates the burnout syndrome of medical staff.

IV. Conclusion

Based on the results of hypothesis testing, it can be concluded that (1) There is a positive and significant effect of the COVID 19 pandemic situation on burnout syndrome (2) There is a positive and significant influence of the COVID 19 pandemic situation on adaptive performance (3) There is a positive and significant effect of burnout syndrome on adaptive performance (4) There is a significant effect of the COVID-19 pandemic situation which is moderated by the perception of management support (moderation 1) on adaptive performance (5) There is a significant effect of burnout syndrome which is moderated by the perception of management support (moderation 2) on adaptive performance.

Based on the research that has been done, the theoretical concepts that support previous research are obtained. The pandemic situation has a significant effect on burnout syndrome, as well as adaptive performance either directly or indirectly (with moderated management support). In the pandemic situation variable, the indicator "required to use PPE when in contact with COVID-19 patients" occupies the highest position. The burnout syndrome variable, the indicator "feeling tired when working in a pandemic situation, experiencing stress, dizziness, fatigue" and the adaptive performance indicator variable "accepting service policy changes in a pandemic situation" are the dominant variables. While the indicator management support variable "providing COVID vaccines to officers" is the strongest indicator. So it can be concluded that the four interrelated variables indicate that the Prasetya Husada Hospital nurse has a fairly good ability to deal with the COVID-19 pandemic situation.

From the results of the research data above, it can be described how the ability of hospital nurses in dealing with the COVID-19 pandemic situation. The variables of the pandemic situation, burnout syndrome on adaptive performance and management support are related to each other, in this case influencing and moderating. All of them are mutually influential and significant which indicates the nurse's response at Prasetya Husada Hospital Malang has a good perspective to adjust while working in a COVID-19 pandemic situation. By looking at the results of this research response, Prasetya Husada Hospital has a fairly heavy task where 85 nurses perform care for patients exposed to COVID-19. For this reason, nurses are expected to have a fairly good ability in handling the pandemic. In addition, Prasetya Husada Hospital needs to immediately balance the needs of nursing personnel with the number of treatments for patients exposed to COVID-19 patients.

This research was conducted using SEM-PLS with data processing software tool WarpPLS Version 7.0 whose purpose was to determine the direct and indirect effect of the independent variable on the dependent variable. To be more in-depth in analyzing it, it is recommended in further research to add more supportive variables. And for the research location, it is recommended that the COVID-19 Referral Hospital Type A or B have a larger number of respondents.

References

- Asih, F., & Trisni, L. (2015). Hubungan antara kepribadian hardiness dengan burnout pada perawat gawat darurat di Rumah Sakit Pantiwilasa Citarum. *Psikodimensia*, 14(1), 11–23.
- Billings, J., Greene, T., Kember, T., Grey, N., El-Leithy, S., Lee, D., Kennerley, H., Albert, I., Robertson, M., & Brewin, C. R. (2020). *Supporting hospital staff during COVID-19: Early interventions*. Oxford University Press UK.
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395(10227), 912–920.
- Cole, M. A., Ozgen, C., & Strobl, E. (2020). Air pollution exposure and Covid-19 in Dutch municipalities. *Environmental and Resource Economics*, 76(4), 581–610.
- Diyono, S. K. (2016). *Keperawatan Medikal Bedah: Buku Ajar*. Prenada Media.
- Eisenberger, R., Huntington, R., & Sava, D. (1986). *Perceived Organisational Support*. *Journal of Applied Psychology*.
- Ghozali, I., & Latan, H. (2015). Partial least squares konsep, teknik dan aplikasi menggunakan program smartpls 3.0 untuk penelitian empiris. *Semarang: Badan Penerbit UNDIP*.
- Hair, J., Celsi, M., Money, A., Samouel, P., & Page, M. (2015). *Business research methods*. Armonk, NY: ME Sharpe.
- Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management & Data Systems*.
- Halcomb, E., McInnes, S., Williams, A., Ashley, C., James, S., Fernandez, R., Stephen, C., & Calma, K. (2020). The experiences of primary healthcare nurses during the COVID-19 pandemic in Australia. *Journal of Nursing Scholarship*, 52(5), 553–563.
- Kang, L., Ma, S., Chen, M., Yang, J., Wang, Y., Li, R., Yao, L., Bai, H., Cai, Z., & Yang, B. X. (2020). Impact on mental health and perceptions of psychological care among medical and nursing staff in Wuhan during the 2019 novel coronavirus disease outbreak: A cross-sectional study. *Brain, Behavior, and Immunity*, 87, 11–17.
- Kim, Y.-J., Lee, S.-Y., & Cho, J.-H. (2020). A study on the job retention intention of nurses based on social support in the COVID-19 situation. *Sustainability*, 12(18), 7276.
- Kılınc, T., & Sis Çelik, A. (2020). Relationship between the social support and psychological resilience levels perceived by nurses during the COVID-19 pandemic: A study from Turkey. *Perspectives in Psychiatric Care*.
- Leiter, M. P., & Maslach, C. (1988). The impact of interpersonal environment on burnout and organizational commitment. *Journal of Organizational Behavior*, 9(4), 297–308.
- Liu, T., Hu, J., Kang, M., Lin, L., Zhong, H., Xiao, J., He, G., Song, T., Huang, Q., & Rong, Z. (2020). *Transmission dynamics of 2019 novel coronavirus (2019-nCoV)*.
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior*, 2(2), 99–113.
- Ningrum, et al. (2020). The Potential of Poverty in the City of Palangka Raya: Study SMIs Affected Pandemic Covid 19. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 1626-1634.
- Papu, J. (2002). Pengungkapan diri. Retrieved September, 24, 2013.
- Purba, Y. S. (2015). Hubungan Beban Kerja Mental Dan Peerilaku Perawat Pelaksana Dengan Keselamatan Pasien. *Jurnal Impuls Universitas Binawan*, 1(2), 59–65.

- Santoso, P., & Setyowati, N. (2020). Knowledge Relationships on Covid-19 Preventive Actions. *Jurnal Keperawatan Jiwa (JKJ): Persatuan Perawat Nasional Indonesia*, 8(4), 365–370.
- Sihombing, E. H., Nasib. (2020). The Decision of Choosing Course in the Era of Covid 19 through the Telemarketing Program, Personal Selling and College Image. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 2843-2850.
- Wang, W., Xu, Y., Gao, R., Lu, R., Han, K., Wu, G., & Tan, W. (2020). Detection of SARS-CoV-2 in different types of clinical specimens. *Jama*, 323(18), 1843–1844.
- Wowiling, T. (2019). Analisis Pengaruh Service Quality Dan Brand Image Terhadap Customer Loyalty Dengan Customer Satisfaction Sebagai Variabel Intervening. *Jurnal Riset Bisnis Dan Manajemen*, 7(4).