

## Research Article

# Health Workers Need More Than Emotional Intelligence to Regulate Stress During Health Crises

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## Abstract.

The covid-19 pandemic is a recent health crisis worldwide. Stress in health workers concerns their crucial role in providing health care in the referral hospital for Covid-19. The stressors were sourced from work settings but also combined with a higher risk of infecting others in daily interactions. One of the effective buffers for stress is understanding emotions in oneself and others, formulated as emotional intelligence. However, little to no evidence of emotional intelligence prevents stress among health workers in health crisis settings. This study examined the association between emotional intelligence and stress among health workers working in referral hospitals for Covid-19. A quantitative design using simple random sampling to select six hospitals participated in this study. Ninety-two health workers completed two questionnaires between December 2021 and March 2022, including Schutte Emotional Intelligence (SEIS) and Depression Anxiety Stress Scale 21 (DASS-21). A simple linear regression analysis was applied, and the results showed no significant association of emotional intelligence toward general stress levels among health workers in the referral hospital for Covid-19. Health workers may have mediating or moderating socio-cognitive factors to cope with stress in health crises, such as self-esteem, self-compassion, and social support.

**Keywords:** Covid-19 pandemic, emotional intelligence, health crisis, health worker, stress

## 1. BACKGROUND

Stress is an unavoidable condition where the burden felt by a person is not commensurate with their ability to cope with the responsibility [1, 2]. Stress is a condition that requires individuals to achieve a certain goal through various limitations that they tend to suppress due to incompatibility in abilities with demands that must be met [3]. Since 2006, the Indonesian National Nurses Association (PPNI) has explained that as many as 50.9% of Indonesian nurses experience stress with symptoms of dizziness and fatigue due to a disproportionate burden of responsibility [4]. Meanwhile, in September 2020, researchers from the Master of Occupational Medicine Study

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Program, Faculty of Medicine, University of Indonesia (MKK FKUI) explained that as many as 83% of health workers in Indonesia experienced burnout syndrome due to heavy stress exposure during the pandemic. The stress experienced by health workers is not new but has increased due to the demands of the pandemic. Various literature has discussed the impact of the Covid-19 pandemic on health workers, which shows an increased prevalence of psychological impacts during the pandemic, especially acute stress accompanied by depressive symptoms and other psychological problems [5, 6, 7]. Failure to manage stress levels among health workers may interfere with the quality of health services and significantly affect their mental well-being in the long term [8], probably stemming from the quick demand to adapt to extreme conditions of health crises which require extra care and concentration preventing contamination between themselves and their families or personal environment [9]. Increased stress on health workers is a part that cannot be ignored, given their role as a vital part of the pandemic response.

The sudden and large-scale health emergency Covid 19 has created a change in structure and organization that threatens health workers' personal lives. Health workers are putting themselves at risk by mobilizing all health resources to provide care during the health crisis of Covid-19 [5]. Excessive workload, fear of contagion in self and the environment, feelings of pressure, lack of medicine, and isolation from family and society have added to their mental challenges [6,10], responding to the risk of the pandemic daily suggested as the stressor among nurses in Canada and Slovenia [11, 12]. Health emergencies such as Covid-19 present a sudden abundant number of patients imbalanced with the capacity of health facilities and the number of health workers, shifting the weight of care responsibilities to the health workers with additional shifts, new placements and treatments with a high level of difficulty to learn within a short time [13]. Consequently, the high intensity of stress in the working situation disrupts the balance of work and personal life of health workers, including physical, mental, and psychological well-being, potentially resulting in poorer quality of service [14]. In addition, excessive workload, feelings of inadequate support, concerns about personal and family health, uncertainty and social stigma in line with the intensity of the mental forcing them to experience intense stress in and out of working situations [5]. The disproportionate pandemic situations may impair physiological, cognitive, emotional and behavioral responses due to uncertain threats for health workers.

Daily conflicting situations between personal and family health and giving adequate care for a prolonged uncertain time added up to emotional turmoil in the form of guilt, sadness, anger, and emotional exhaustion is a natural reaction as health workers,

the primary responder to the Covid-19 pandemic [13]. Managing stressors is important for health workers during a pandemic, especially to understand and digest emotions that guide them in acting and channeling emotions appropriately amid responsibility pressure. The individual ability to understand emotions is formulated as emotional intelligence (EI) [15]. Emotional intelligence (EI) is an individual's skill to understand the emotions or feelings of self and others to guide thinking and acting effectively and appropriately for themselves and the environment. Emotional intelligence is the ability to monitor the feelings and emotions of self and others used to guide thinking and acting. Individuals with emotional intelligence have achieved a form of positive mental health due to being able to be aware of their feelings and others. They have become pens for various positive and negative experiences, thus being able to define emotions and channel them appropriately [16]. If individuals can identify, manage and utilize feelings or emotions of themselves and the environment, they will tend to be able to understand and control stress-causing factors [15].

Previous research showed the results of a negative correlation between emotional intelligence and stress in nurses, explaining that demands in delivering care for patients can be a stressor involving the emotional aspects of health workers [17]. The emotional demand is multiplied during the pandemic to understand critical situations, frustrations, and fears of themselves, patients, and families. Furthermore, emotional intelligence is closely related to stress in individuals, such as managing emotions that can suppress stress adaptively and appropriately [18]. Previous findings indicate the crucial role of emotional intelligence of stress in health workers as an effort to reduce the rate of stress levels by increasing resilience in facing pandemic conditions [19]. One of the effective buffers for stress is understanding emotions in oneself and others, formulated as emotional intelligence. However, little to no evidence of emotional intelligence prevents stress among health workers in health crisis settings which introduce different level of emergency, uncertainty, and unfamiliarity compared to normal situations. Therefore, this study investigates the role of emotional intelligence in preventing stress among health workers during the Covid-19 pandemic. We are testing the hypothesis of a significant association between emotional intelligence and high-stress levels among health workers during the COVID-19 pandemic.

## 2. RESEARCH METHODS

## 2.1. Variables studied

Two variables examined in this study were emotional intelligence as a predictor variable and stress as an outcome variable. The operationalization of emotional intelligence is an individual's skill in monitoring and understanding the emotions or feelings of self and others to guide in thinking and acting accordingly. Meanwhile, stress is a burdened condition of individuals that is not commensurate compared to their ability to cope, causing feelings of pressure, anxiety and high tension.

## 2.2. Sampling Method

A simple random sampling was utilized to select samples from a list of referral hospitals for Covid-19 in the Malang area. Six referral hospitals for Covid-19 were selected and agreed to participate in this study.

## 2.3. Research Subject

The research subjects are all health workers, including doctors, nurses, midwives, and pharmacists. As described in the following table, ninety-two health workers from six hospitals participated in this study.

Table 1 indicated that most participants were female (85.9%), married (72.8%) and worked as a nurse (94.6%). Only 9.9% of participants aged 43 – 49, while participants aged 22 – 28 dominated with 41.3%. Doctors and midwives were at the same amount of 2.2%, and those divorced were also 2.2%. Almost half of the participants worked in the Covid-19 ward at some point during the pandemic.

## 2.4. Research Instruments

Data collection was carried out using two Likert scale questionnaires for each variable. Firstly, the emotional intelligence variable was measured using *the Schutte Emotional Intelligence Scale* (SEIS) [20] and adapted to the Indonesian population. The SEIS measured three aspects based on the original model of stress [16], considered the most related and able to show individual emotional intelligence [20]. The Likert scale provided four choices: very appropriate [4] and very inappropriate [1]. The Cronbach's alpha is 0.90. Secondly, the Depression Anxiety Stress Scale-21 (DASS-21) was first developed [21] and later adapted to measure the level of depression, anxiety and stress

TABLE 1: Sample Demography.

| Demography                             | Frequency | Percentage |
|--|-----------|------------|
| <b>Gender</b>                          |           |            |
| Male                                   | 13        | 14.1%      |
| Female                                 | 79        | 85.9%      |
| <b>Age</b>                             |           |            |
| 22 – 28                                | 38        | 41.3%      |
| 29 – 35                                | 27        | 29.2%      |
| 36 – 42                                | 18        | 19.6%      |
| 43 – 49                                | 9         | 9.9%       |
| <b>Marital Status</b>                  |           |            |
| Not Married                            | 23        | 23.9%      |
| Married                                | 53        | 72.8%      |
| Divorced                               | 2         | 2.2%       |
| Widowed                                | 1         | 1.1%       |
| <b>Profession</b>                      |           |            |
| Doctor                                 | 2         | 2.2%       |
| Midwife                                | 2         | 2.2%       |
| Nurse                                  | 87        | 94.6%      |
| Pharmacist                             | 1         | 1 %        |
| <b>Work Shift in the Covid-19 Ward</b> |           |            |
| Yes                                    | 42        | 45.7%      |
| No                                     | 50        | 54.3%      |

in Indonesia [22]. DASS-21 used in this study measured general stress response due to the combination of stressors between work, social, personal and family settings and is commonly used with good psychometric attributes in the Indonesian population [22, 23]. DASS-21 was used for its excellent psychometric attributes in Indonesian context despite not specifically measured work stress in health workers. Stressor related to pandemic was also not only sourced from the work settings for the health workers, but also sourced from outside working environment. We collected data from three subscales of depression, anxiety, and stress, but only used stress subscale for this study.

## 2.5. Research design

A quantitative non-experimental design allowed us to cope with the limitation of high infection rates and work demand among hospital health workers. Many phases of this study were carried out online to conform with health measures requested by hospitals participating, including the information session and data collection stage.

## 2.6. Data Collection

This study was part of a research project examining personal and social factors determining mental health outcomes among health workers during the Covid-19 pandemic and conformed to the Helsinki Declaration. Before the data collection commences, representatives from the Department of Human Resources and Training from selected hospitals attended an online information session to understand the study and voluntary consent to participate in this study. All selected hospitals provided online and personal written consent for each health worker who agreed to participate. Data was collected using an online self-report of demographic data, an emotional intelligence scale and a general stress scale. We provide the link to access the research instruments through the hospital representatives or head nurses to distribute to the health workers as participating hospitals request. We offered a small token of appreciation for randomly selected participants.

## 2.7. Data Analysis

Data were analyzed using SPSS for Windows version 22 software by performing normality tests using the Kolmogorov-Smirnov residual normality and linearity tests. The hypothesis testing used simple linear regression to examine the role of emotional intelligence towards stress levels.

## 3. RESULT

Ninety-two health workers from six selected hospitals participated in this study. The data normality test was carried out with the Kolmogorov-Smirnov residual normality test and showed two variables with a significant value of 0.142 ( $p > 0.05$ ), indicating a normal distribution. The linearity test showed a significance value of linearity deviation 0.830 ( $p > 0.05$ ), indicating a linear relationship between the two variables. The following two tables present the research findings.

Table 1 showed that most participants had normal (44.6%) to moderate (30.4%) stress levels, and only 3.3% reported very high stress levels. Similarly, 75% of participants included a moderate level of emotional intelligence.

Table 2 shows the linear regression results from no significant contributions between emotional intelligence and stress among health workers in the referral hospitals for Covid-19 ( $F = 0.095$ ,  $p = 0.366$ ). Therefore, the hypothesis is rejected.

TABLE 2: Description of Variables.

| Category                      | Range   | N  | %     | M     | SD    |
|-------------------------------|---------|----|-------|-------|-------|
| <b>Stress</b>                 |         |    |       | 8.23  | 5.37  |
| Normal                        | 0 – 7   | 41 | 44.6% |       |       |
| Low                           | 8 – 9   | 13 | 14.1% |       |       |
| Moderate                      | 10 – 14 | 28 | 30.4% |       |       |
| High                          | 15 – 19 | 7  | 7.6%  |       |       |
| Very high                     | 20 – 22 | 3  | 3.3%  |       |       |
| <b>Emotional Intelligence</b> |         |    |       |       |       |
| Low                           | 0 – 55  | 10 | 10.9% | 66.69 | 10.68 |
| Moderate                      | 56 – 77 | 69 | 75%   |       |       |
| High                          | 78 – 88 | 13 | 14.1% |       |       |

TABLE 3: Regression of Emotional Intelligence and Stress Among Health Workers.

| Model                           | Unstandardized | R     | R <sup>2</sup> | β     | F     | Sig (p) |
|---------------------------------|----------------|-------|----------------|-------|-------|---------|
| Emotional Intelligence x Stress | 0.048          | 0.095 | 0.009          | 0.095 | 0.827 | 0.366   |

## 4. DISCUSSION

The findings of this study are different from past findings that explained the negative influence between emotional intelligence and stress in health professionals, which means that a lower level of emotional intelligence among health workers corresponds to less susceptibility to stress [24]. Conversely, a higher level of emotional intelligence corresponds to higher susceptibility to stress. Furthermore, emotional intelligence has a higher role when health professional students have lower stress levels than when stress levels are more acute [25]. This indicates that emotional intelligence will contribute to stress differently in certain conditions. The difference in stress intensity of non-pandemic compared to pandemic situations when both studies took place may contribute to the inconsistent findings. During the Covid-19 pandemic, the underlying mechanism of emotional intelligence buffering towards stress may be overwhelmed and go autopilot due to the prolonged high intensity of stress.

The country’s economic and development status is also identified as environmental situations hindering the correlation between emotional intelligence and stress. Employees in Iran explained that emotional intelligence tends to contribute more in developed countries with more advanced cultures, work environments, and organizational health, such as the United States, Canada, Australia, the United Kingdom, Spain and China than in developing countries [26]. The more advanced environment may help employees to focus more on understanding their emotions to reduce stress. Indonesia is included

in the developing country group and affects our resources during the health crisis response. The limited availability and access to health resources and facilities tend to force cognitive short-circuited to solving problems rather quickly than giving meaning to emotions was reported multiple times on the news across Indonesia. In addition, this study was conducted between December 2021 and March 2022, when the incidence of Covid-19 cases decreased and was more under control [27]. The sloping rate of Covid-19 cases shows that health workers have controlled various tensions during the pandemic [28]. Therefore, the emotional intelligence mechanism to cope with high-intensity stress may be less salient during the more manageable pandemic.

Other personal factors may offer a better explanation of preventing stress among health workers during a health crisis. The transactional stress model explains that stress response results from the interaction between the individual and the environment [29]. This view assumes that cognitive assessment is the primary process that determines the stress response to a given situation by evaluating conditions for the well-being of individuals [3]. Although this is in line with the process of the emotional intelligence mechanism [30], the cognitive role may be more dominant in health workers to understand the environment than giving meaning to emotions in response during the pandemic.

The relationship between self-esteem, emotional intelligence, and empathy in medical students explained that most participants with low self-esteem would be more likely to be exposed to high stress than those with low emotional intelligence and empathy [31]. A significant negative relationship also exists between self-esteem and stress among nurses [32]. Self-esteem may be a better predictor for effective coping with high-intensity stress during emergencies. Self-esteem is also identified as one of the important predictors of adjustment to stress [29] and as the centre of a person's personality to perceive, experience, and motivate themselves [33]. Consequently, health workers with high self-esteem may be more confident in dealing with various pressures of responsibility and avoid anxiety or fear of negative evaluations in emergencies [32]. There is a positive relationship between self-esteem and emotional intelligence found in several studies, where individuals with high emotional intelligence will also have high self-esteem to maximize the impact of both positive situations. Emotional intelligence and self-esteem co-exist to influence each other and help to reduce stress [30, 33]. Furthermore, the relationship between self-compassion and emotional intelligence in nurses who worked directly with patients in the acute care system showed a positive relationship between the two constructs [34], which means that compassion and emotional intelligence are essential elements in coping with work and personal



responsibilities among health workers [35]. Compassion is a predictor of cognitive and emotional reactions providing information for individuals to regulate and accept their negative emotions without forcefully rejecting or denying them, thus, protecting individuals from incongruence emotions in a stressful condition [36]. Previous findings on self-esteem and self-compassion explained that both play a role in stress levels in health workers [31, 32, 34]. The possibility of a more dominant role of self-esteem or a mediator role of emotional intelligence may better explain the underlying mechanism of stress levels among health workers during the pandemic. Analogous to research findings about compassion indicated the important influence on managing stress among health workers, perhaps the increased level of compassion in the second year of the pandemic helps them cope better with stress during the pandemic.

Social support may also moderate the relationship between emotional intelligence and stress among health workers. Low levels of emotional intelligence in individuals with low social support negatively affect individual's stress levels and well-being [37,38]. Similar findings in 385 individuals showed that emotional intelligence negatively influences work stress if mediated by social support during the Covid-19 pandemic [39]. Emotional intelligence is also a personal resource that facilitates individuals to seek or obtain social support and is negatively associated with stress [40]. Nonetheless, emotional intelligence remains a possible predictor of stress in health workers but is mediated or moderated by other cognitive buffers, such as self-esteem, self-compassion, and social support.

The limitation of this study is related to the time and pandemic situational constraints in obtaining a research permit in the hospital significantly delayed the schedule. The pandemic hampered clear communication and direct guidance during the online data collection that might introduce careless responses from the participants. Furthermore, the imbalance proportion of health workers able to participate in this study, with the majority of women and nurses compared to other characteristics potentially introduces bias to the results, which affects minority samples overpowered by the majority samples for less accurate results [41]. Moreover, this study used DASS-21 and SEIS scales adapted for the Indonesian general population rather than specifically targeting health workers may not be able to measure both variables precisely.

## 5. CONCLUSION

In conclusion, no significant contribution between emotional intelligence and stress levels in health workers during the Covid-19 pandemic. The implication of this study

is to consider different underlying psychological mechanisms to cope with stress between normal and crisis situations in healthcare settings. Socio-cognitive predictors may enhance or diminish the role of personal predictors towards stress levels in emergency situations. Future studies may want to include socio-cognitive predictors as mediators or moderators between emotional intelligence and stress, such as self-esteem, self-compassion, and social support. In addition, consider using instruments accommodating the characteristics and situations of research subjects and expand the scope of health workers participating in the study.

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## Ethics Policy

This study conformed to the Helsinki Declaration as described in the manuscript. All authors stated no conflict of interest.

## References

- [1] Fink G. Stress: Concepts definition, history. Reference Module in Neuroscience and Biobehavioral Psychology. 2017;(November):1–9.
- [2] Selye H. The stress concept. Canadian Medical Association Journal. 1976;114(8):700–704, 707.
- [3] Folkman S, Lazarus R, Dunkel-Schetter C, DeLongis A, Gruen R. Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. Journal of Personality and Social Psychology. 1977;17(6):863–866.
- [4] Lubis V, Sinaga R. Hubungan pengendalian diri dengan stres kerja perawat di ruang rawat inap RS IMC Bintaro tahun 2019. 2019;2(4):329–336.

- [5] El-Hage W, Hingray C, Lemogne C, Yroni A, Brunault P, Biennu T, et al. Health professionals facing the coronavirus disease 2019 (COVID-19) pandemic: What are the mental health risks? *Encephale*. 2020;46(3):S73–S80.
- [6] Lenzo V, Quattropani MC, Sardella A, Martino G, Bonanno GA. Depression, anxiety, and stress among healthcare workers during the covid-19 outbreak and relationships with expressive flexibility and context sensitivity. *Frontiers in Psychology*. 2021;12(February):1–9.
- [7] Pinggian B, Opod H, David L. Dampak psikologis tenaga kesehatan selama pandemi COVID-19. *Jurnal Biomedik*. 2021;13(2):144.
- [8] Salari N, Khazaie H, Hosseinian-Far A, Khaledi-Paveh B, Kazemina M, Mohammadi M, et al. The prevalence of stress, anxiety and depression within front-line healthcare workers caring for COVID-19 patients: A systematic review and meta-regression. *Human Resources for Health [Internet]*. 2020;18(1):1–14. Available from: <https://doi.org/10.1186/s12960-020-00544-1>
- [9] Schieman S, Badawy PJ, A. Milkie M, Bierman A. Work-life conflict during the COVID-19 pandemic. *Socius*. 2021;7.
- [10] Rosyanti L, Hadi I. Dampak psikologis dalam memberikan perawatan dan layanan kesehatan pasien COVID-19 pada tenaga profesional kesehatan. *Health Information: Jurnal Penelitian*. 2020;12(1):107–130.
- [11] Starc J. Stress factors among nurses at the primary and secondary level of public sector health care: The case of Slovenia. *Open Access Macedonian Journal of Medical Sciences*. 2018;6(2):416–422.
- [12] Stelnicki AM, Carleton RN. Mental disorder symptoms among nurses in Canada. *Canadian Journal of Nursing Research*. 2021;53(3):264–276.
- [13] Krystal JH, McNeil RL. Responding to the hidden pandemic for healthcare workers: Stress. *Nature Medicine [Internet]*. 2020;26(5):639. Available from: <http://dx.doi.org/10.1038/s41591-020-0878-4>
- [14] Blanco-Donoso LM, Garrosa E, Demerouti E, Moreno-Jiménez B. Job resources and recovery experiences to face difficulties in emotion regulation at work: A diary study among nurses. *International Journal of Stress Management*. 2016;24(2):107–134.
- [15] Abdillah MR, Rahmat A. Kecerdasan emosional dan dampaknya terhadap stres kerja dan kinerja karyawan. *Jurnal Ekonomi dan Bisnis Islam*. 2018;2(1).
- [16] Salovey P, Mayer J. Emotional intelligence. *Imagination, Cognition and Personality*. 1989;9(3):185–211.

- [17] Akbar SN. Hubungan antara kecerdasan emosi dengan kerja pada perawat. *J Ecopsy, Psikologi, Progr Stud Kedokteran, Fak Mangkurat, Univ Lambung*. 2013;42–46.
- [18] Nur Pratiwi Novianti. Stres kerja ditinjau dari kecerdasan emosi, modal psikologis, dan dukungan sosial. *Psikologika J Pemikir dan Penelit Psikol*. 2015;20(1).
- [19] Doñru C. A Meta-analysis of the relationships between emotional intelligence and employee outcomes. *Frontiers in Psychology*. 2022;13(April):1–12.
- [20] Schutte NS, Malouff JM, Hall LE, Haggerty DJ, Cooper JT, Golden CJ, et al. Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*. 1998;25(2):167–177.
- [21] Lovibond PF, Lovibond SH. The structure of negative emotional states: Comparison of the depression anxiety stress scales (DASS) with the beck depression and anxiety inventories. *Behaviour Research and Therapy*. 1995;33(3):335–343.
- [22] Muttaqin D, Ripa S. Psychometric properties of the Indonesian version of the Depression Anxiety Stress Scale: Factor structure, reliability, gender, and age measurement invariance. *Psikohumaniora*. 2021;6(1):61–76.
- [23] Onie S, Kirana AC, Adisya, Mustika NP, Adesla V, Ibrahim R. Assessing the predictive validity and reliability of the DASS-21, PHQ-9 and GAD-7 in an Indonesian sample [Internet]. *PsyArXiv [Preprint]*. 2020. Available from: <https://osf.io/preprints/psyarxiv/eqcm9>
- [24] Jurado M, Pérez M, Ruiz F, Márquez M, Linares J. Self-Efficacy and emotional intelligence as predictors of perceived stress in nursing professionals. *Medicina [Internet]*. 2019;55:237. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6630601/pdf/medicina-55-00237.pdf>
- [25] Birkhäuser J, Gaab J, Kossowsky J, Hasler S, Krummenacher P, Werner C, et al. Trust in the health care professional and health outcome: A meta-analysis. *PLoS One*. 2017;12(2):1–13.
- [26] Aghdasi S, Kiamanesh AR, Ebrahim AN. Emotional intelligence and organizational commitment: Testing the mediatory role of occupational stress and job satisfaction. *Procedia - Social and Behavioral Sciences*. 2011;29(2010):1965–1976.
- [27] Arifin HH, Milla MN. Adaptasi dan properti psikometrik skala kontrol diri ringkas versi Indonesia. *J Psikol Sos*. 2020;18(2):179–195.
- [28] Agustina TS, Rarastanti PD, Hidayat AF. Stress and job performance of healthcare workers amidst COVID-19 pandemic: The mediating role of burnout. *Shirkah: Journal of Economics and Business*. 2021;6(3):315–335.

- [29] Folman S. Stress, appraisal, and coping. *Social Science and Medicine*. 1997;45:1207–1221.
- [30] Newton C, Teo S, Pick D, Ho M, Thomas D. Emotional intelligence and the job-demands resources model. *Australia and New Zealand Academy of Management*. 2014;1–23.
- [31] Sa B, Ojeh N, Majumder MAA, Nunes P, Williams S, Rao SR, et al. The relationship between self-esteem, emotional intelligence, and empathy among students from six health professional programs. *Teaching and Learning in Medicine* [Internet]. 2019;31(5):536–543. Available from: <https://doi.org/10.1080/10401334.2019.1607741>
- [32] Edwards D, Burnard P, Bennett K, Hebden U. A longitudinal study of stress and self-esteem in student nurses. *Nurse Education Today* [Internet]. 2010;30(1):78–84. Available from: <http://dx.doi.org/10.1016/j.nedt.2009.06.008>
- [33] Epstein S. The self-concept, the traumatic neurosis, and the structure of personality. In Ozer DJ, Healy JM Jr, Stewart AJ, editors. *Perspectives in personality*, Vol. 3. Part A: Self and emotion; Part B: Approaches to understanding lives. Jessica Kingsley Publishers; 1991. 63–98 p.
- [34] Heffernan M, Quinn Griffin MT, McNulty SR, Fitzpatrick JJ. Self-compassion and emotional intelligence in nurses. *International Journal of Nursing Practice*. 2010;16(4):366–373.
- [35] Şenyuva E, Kaya H, İşik B, Bodur G. Relationship between self-compassion and emotional intelligence in nursing students. *International Journal of Nursing Practice*. 2014;20(6):588–596.
- [36] Neff KD, Hsieh Y-P, Dejitterat K. Self-compassion, achievement goals, and coping with academic failure. *Self Identity*. 2005;4(3):263–287.
- [37] Gallagher EN, Vella-Brodrick DA. Social support and emotional intelligence as predictors of subjective well-being. *Personality and Individual Differences*. 2008;44(7):1551–1561.
- [38] Arslan G, Allen KA. Exploring the association between coronavirus stress, meaning in life, psychological flexibility, and subjective well-being. *Psychology, Health & Medicine* [Internet]. 2022;27(4):803–814. Available from: <https://doi.org/10.1080/13548506.2021.1876892>
- [39] Valenti GD, Faraci P, Magnano P. Emotional intelligence and social support: Two key factors in preventing occupational stress during COVID-19. *International Journal of Environmental Research and Public Health*. 2021;18(13).

- [40] Zysberg L, Zisberg A. Days of worry: Emotional intelligence and social support mediate worry in the COVID-19 pandemic. *Journal of Health Psychology*. 2022;27(2):268–277.
- [41] Fitriani RD, Yasin H, Tarno T. Penanganan klasifikasi kelas data tidak seimbang dengan random oversampling pada naive bayes (Studi kasus: Status peserta KB IUD di Kabupaten Kendal). *J Gaussian*. 2021;10(1):11–20.