DAFTAR PUSTAKA

Ahmad, E. H., Maidin, A., Abdullah, T., & Naiem, F. (2018). Relationship of Work stres to the Performance of Intensive Care Unit Nurses in Makassar. *American Journal of Public Health Research*, *6*(1), 18–20. https://doi.org/10.12691/ajphr-6-1-4

Akbar, D. A. (2017). Konflik Peran Ganda Karyawan Wanita dan Stres Kerja. *An Nisa'a*, *12*(1), 33–48.

Aldalatony, M., Elbadry, A., Al-Batanony, M. A., & Khader, H. (2018). Serum Cortisol Level and Depression among Shift-Working Serum Cortisol Level and Depression among Shift-Working Nursing Staff in A University Hospital. *Egyptian Journal of Occupational Medicine*, *42*(2), 257–270. https://doi.org/10.21608/ejom.2018.6809

Alloy, L. B., Abramson, L. Y., Urosevic, S., Walshaw, P. D., Nusslock, R., & Neeren, A. M. (2005). The Psichosocial Context of Bipolar Disorder: Environmental, Cognitive, and Developmental Risk Factor. *Clin Psychol Rev*, *25*(8), 1043–1075.

Almatsier, S. (2003). *Prinsip Dasar Ilmu Gizi* (3rd ed.). PT. Gramedia Pustaka Utama.

Almatsier, Sunita. (2003). *Prinsip Dasar Ilmu Gizi*. Gramedia Pustaka Utama.

Aoki, R., Aoki-Yoshida, A., Suzuki, C., & Takayama, Y. (2015). Protective Effect of Indole-3-Pyruvate Against Ultraviolet B-Induced Damage to Cultured HaCaT Keratinocytes and the Skin of Hairless Mice. *Plos OneJournal Pone*, *10*(5).

Arendt, D. H., Smith, J. P., Bastida, C. C., Prasad, M. S., Kevin, D., Eyster, K. M., Summers, T. R., Delville, Y., & Summers, C. H. (2012). Contrasting hippocampal and amygdalar expression of genes related to neural plasticity during escape from social aggression. *Physiology & Behavior*, *107*(5), 670–679. https://doi.org/10.1016/j.physbeh.2012.03.005.Contrasting

Arnetz, J. E., Goetz, C. M., Arnetz, B. B., & Arble, E. (2020). Nurse reports of stresful situations during the COVID-19 pandemic: Qualitative analysis of survey responses. *International Journal of Environmental Research and Public Health*, *17*(21), 1–12. https://doi.org/10.3390/ijerph17218126

Baba, M., Ohkura, M., Koga, K., Nishiuchi, K., C, L. R. H., Matsuse, R., & Inoue, T. (2015). *Analysis of salivary cortisol levels to determine the association between depression level and differences in circadian rhythms of shift-working nurses*. 237–244.

Bailey, J., Steffen, S., & Grout, J. (1980). The stres Audit: Identifying the stresors of ICU Nursing. *Journal Nurs Educ*, *19*(6), 15–25.

Bani-Issa, W., Radwan, H., Marzooq, F. Al, Anwar, S. Al, Al-Shujairi, A. M., Samsudin, A. R., Khasawneh, W., & Albluwi, N. (2020). Salivary Cortisol , Subjective stres and Quality of Sleep Among Female Healthcare Professionals. *Journal of Mutidiciplinary Healthcare*, *13*, 125–140.

Barret, K. E., Barman, S. M., Boitano, S., & Brooks, H. (2012). *Ganong's Reviews of Medical Physiology* (24th ed.). McGraw-Hill professional.

Bemana, S., Moradi, H. G., Ghasemi, M., Taghavi, S. M., & Ghayoor, A. H. (2013). The Relationship among Job stres and Job Satisfaction in Municipality Personnel in Iran. *World Applied Sciences Journal*, *22*(2), 233–238.

Bronstein, M. (2011). *Physiology and Patophysiology of the HPA Axis in Cushing Syndrome* (1st ed.). Springer.

Budiyanto, M. A. K. (2002). *Dasar-dasar Ilmu Gizi*. UMM Pres.

Carlino, D., Leone, E., Di Cola, F., Baj, G., Marin, R., Dinelli, G., Tongiorgi, E., & De Vanna, M. (2011). Low serum truncated-BDNF isoform correlates with higher cognitive impairment in schizophrenia. *Journal of Psychiatric Research*, *45*(2), 273–279. https://doi.org/10.1016/j.jpsychires.2010.06.012

Carlson, S. M. (2005). Developmentally Sensitive Measures of Executive Fungtion in Prescholl Children. *Developmentally Neuropsychology*, *28*(2), 595–616.

Cattaneo, A., Gennarelli, M., Uher, R., Breen, G., Farmer, A., Aitchison, K. J., Craig, I. W., Anacker, C., Zunsztain, P. A., McGuffin, P., & Pariante, C. M. (2013). Candidate Genes Expression Profile Associated with Antidepressants Response in the GENDEP Study: Differentiating between Baseline 'Predictors' and Longitudinal 'Targets.' *Neuropsychopharmacology*, *38*(3), 377–385. https://doi.org/10.1038/npp.2012.191

Cohen, F., & Lazarus, R. S. (1979). Coping with the streses of Illness. *Health Psychology: A Handbook*, 217–254.

Copertaro, A., Bracci, M., Gesuita, R., Carle, F., Amati, M., Baldassari, M., Mocchegiani, E., & Santarelli, L. (2011). Influence of Shift-work on Selected Immune Variables in Nurses. *Industrial Health*, *49*, 597–604.

Couarraze S, Delamarre L, Marhar F, Quach B, Jiao J, Avile´s Dorlhiac R, et al. (2021) The major worldwide stres of healthcare professionals during the first wave of the COVID-19 pandemic –the international COVIstres

survey. PLoS ONE 16(10): e0257840. https://doi.org/10.1371/journal. pone.0257840

Cox, T., Griffiths, A., & Rial-Gonzales, E. (2000). *Work-Related Stres in Nursing*. International Labour Office.

Cui, S., Jiang, Y., Shi, Q., Zhang, L., Kong, D., Qian, M., & Chu, J. (2020). Impact of COVID-19 on psychology of nurses working in the emergency and fever outpatient:A cross-sectional survey. *Research Square*, *April*, 1–19. https://doi.org/10.21203/rs.3.rs-20777/v1

Dahlgren, A. (2006). *Work stres and overtime work - effects on cortisol, sleep, sleepiness and health*. Sweden by Universitetsservice US-AB.

Dieni, S., Matsumoto, T., Dekkers, M., Rauskolb, S., Ionescu, M. S., Deogracias, R., GundelFinger, E. D., Kojima, M., Nestel, S., Frotscher, M., & Barde, Y.-A. (2012). BDNF and Its Pro-Peptide are Stored in Presynaptic Dense Core Vesicles in Brain Neurons. *J Cell Biol*, *196*(6), 775–788.

Doi, Y. (2005). An Epidemiologic Review on Occupational Sleep Research among Japanese Workers. *Industrial Health*, *43*, 3–10.

Duman, R. S., & Monteggia, L. M. (2006). A Neurotrophic Model for stres-Related Mood Disorder. *Biol Psychiatry*, *59*(12), 1116–1127.

Editor, D., & Range, M. (2016). *Perceived stres and coping strategies among the married staff nurses working in ward setting of selected hospitals in Mangalore , India*. *7*(1), 7–9.

Elbay, R. Y., Kurtulmuş, A., Arpacıoğlu, S., & Karadere, E. (2020). Depression, anxiety, stres levels of physicians and associated factors in Covid-19 pandemics. *Psychiatry Research*, *290*, 113–130.

https://doi.org/10.1016/j.psychres.2020.113130

Firdaus, H. (2005). *Pengaruh Shift Kerja terhadap Kejadian Stres Kerja pada Tenaga Kerja di Bagian Produksi Pabrik Kelapa Sawit PTPN 4 Kebun Pebatu Tebing Tinggi*. Universitas Sumatra Utara.

Fitri, A. M. (2013). Analisis faktor-faktor yang berhubungan dengan kejadian stres kerjapada karyawan bank (studi pada karyawan bank BMT). *Jurnal Kesehatan Masyarakat*, *2*(April), 1–9.

French, S., Lenton, R., Waltes, V., & Eyles, J. (2000). An Empirical Evaluation of an Expanded Nursing stres Scale. *Journal Nurs Meas*, *8*(2), 161–178.

Ganong, W. F. (2003). *Review of Medical Physiology* (21st ed.). McGraw-Hill.

Giese, M., Unternaehrer, E., Brand, S., Calabrese, P., Holsboer-Trachsler, E., & Eckert, A. (2013). The Interplay of stres and Sleep Impacts BDNF Level. *PLoS ONE*, *8*(10). https://doi.org/10.1371/journal.pone.0076050

Gray-Toft, P., & Anderson, J. G. (1981a). stres among Hospital Nursing Staff: Its Causes and Effects. *Medical Psychology & Medical Sociology*, *15*(5), 639–647.

Gray-Toft, P., & Anderson, J. G. (1981b). The Nursing stres Scale: Development of an Instrument. *Journal of Behavioral Assessment*, *3*, 11–23.

Gronli, J., Bramham, C., Murison, R., Kanhema, T., Fiske, E., Bjorvatn, B., Ursin, R., & Portas, C. M. (2006). Chronic Mild stres Inhibits BDNF Protein Expression and CREB Aktivation in the Dentate Gyrus but Not in the Hippocampus Proper. *Pharmacol Biochem Behav*, *85*(4), 842–849.

Gunawan, B., & Sumardjono. (2007). *Stres dan Sistem Imun Tubuh*. Cermin Dunia Kedokteran.

Haile, K. K., Asnakew, S., Waja, T., & Kerbih, H. B. (2019). Shift work sleep disorders and associated factors among nurses at federal government hospitals in Ethiopia: A cross-sectional study. *BMJ Open*, *9*(8), 1–8. https://doi.org/10.1136/bmjopen-2019-029802

Handayani, R. T., Kuntari, S., Darmayanti, A. T., Widiyanto, A., & Atmojo, J. T. (2020). Faktor Penyebab Stres Pada Tenaga Kesehatan Dan Masyarakat Saat Pandemi Covid-19. *Jurnal Keperawatan Jiwa*, *8*(3), 353.

Handoko, T. H. (2008). *Manajemen Personalia & Sumberdaya Manusia* (2nd ed.). BPFE.

Harsono, H. (2017). *Uji Validitas dan Realibilitas Expanded Nursing stres Scale (ENSS) Versi Bahasa Indonesia sebagai Instrumen Penilaian Stres Kerja pada Perawat di Indonesia*. Universitas Indonesia.

Haryanti, Aini, F., & Purwaningsih, P. (2013). Hubungan antara Beban Kerja dengan Stres Kerja Perawat di Instalasi Gawat Darurat RSUD Kabupaten Semarang. *Jurnal Manajemen Keperawatan*, *1*(1), 48–56.

Hastono, S. P. (2017). *Analisis Data pada Bidang Kesehatan* (1st ed.). Rajawali Pers.

Hendy, A., Abozeid, A., Sallam, G., Abboud Abdel Fattah, H., & Ahmed Abdelkader Reshia, F. (2021). Predictive factors affecting stres among nurses providing care at COVID-19 isolation hospitals at Egypt. *Nursing Open*, *8*(1), 498–505. https://doi.org/10.1002/nop2.652

Herqutanto, Harsono, H., Damayanti, M., & Setiawati, E. P. (2017). Stres Kerja pada Perawat di Rumah Sakit dan Fasilitas Pelayanan Kesehatan Primer. *EJournal Kedokteran Indonesia*, *5*(1), 12–17. https://doi.org/10.23886/ejki.5.7444.12-7

Ihara, K., Yoshida, H., Jones, P. B., Hashizume, M., Suzuki, Y., Ishijima, H., Kim, H. K., Suzuki, T., & Hachisu, M. (2016). Serum BDNF levels before and after the development of mood disorders: A case–control study in a population cohort. *Translational Psychiatry*, *6*(4), e782-7. https://doi.org/10.1038/tp.2016.47

International Labour Office. (1983). Encyclopedia of Occaputional Health and Safety. In *Volume II*. International Labour Office.

International Labour Office. (2012). *stres Prevention at Work Checkpoints: Practical Improvements for stres Prevention in the Workplace*. International Labour Office.

Irianto, D. P. (2007). *Panduan Gizi Lengkap Keluarga dan Olahragawan*. ANDI.

Janah, F. E., Zelfino, Angeliana, D., & Situngkir, D. (2017). Hubungan Shift Kerja Perawat dengan Stres Kerja di Instalasi Rawat Inap Pada RS Kanker DHarmais. *Universitas Esa Unggul*, 1–17.

Juananda, D., Ratna Sari, D. C., Prakosa2, D., Arfian, N., & Romi, M. (2017). Pengaruh Stres Kronik terhadap Otak: Kajian Biomolekuler Hormon Glukokortikoid dan Regulasi Brain-Derived Neurotrophic Factor (BDNF) Pascastres di Cerebellum. *Jurnal Ilmu Kedokteran*, *9*(2), 65–70. https://doi.org/10.26891/jik.v9i2.2015.65-70

Kemenkes RI. (2020). Panduan teknis pelayanan rumah sakit. In *Direktorat Pelayanan Kesehatan Rujukan. Ditjen Pelayanan Kesehatan*. https://arxiv.org/pdf/1707.06526.pdf%0Ahttps://www.yrpri.org%0Ahttp://weekly.cnbnews.com/news/article.html?no=124000%0Ahttps://www.fordfoundation.org/%0Ahttp://bibliotecavirtual.clacso.org.ar/Republica_Dominicana/ccp/20120731051903/prep%0Ahttp://webpc.cia

Kementerian Dalam Negeri. (2020). *Pedoman Umum Menghadapi Pandemi Covid-19 Bagi Pemerintah Daerah: Pencegahan, Pengendalian, Diagnosis, dan Manajemen*.

Kementrian Kesehatan RI. (2011). *Rencana Pengembangan Tenaga Kesehatan Tahun 2011-2025*.

Kementrian Kesehatan RI. (2017). *Pusat Data dan Informasi Kementrian Kesehatan RI (Infodatin RI)*.

Kementrian Kesehatan RI. (2018). *Profil Kesehatan Indonesia Tahun 2017*. Kementerian Kesehatan RI.

Kementrian Kesehatan RI. (2019). *Profil Kesehatan Indonesia 2018*.

Khubchandani, J., Kandiah, J., & Saiki, D. (2020). The COVID-19 Pandemic, stres, and Eating Practices in the United States. *European Journal of Investigation in Health, Psychology and Education*, *10*(4), 950–956. https://doi.org/10.3390/ejihpe10040067

Kim, J. J., & Diamond, D. M. (2002). The stresed hippocampus, synaptic plasticity and lost memories. *Nature Reviews Neuroscience*, *3*(6), 453–462. https://doi.org/10.1038/nrn849

Konoralma, K., Moningka, L., & Palamani, S. (2011). *Hubungan Shift Kerja Perawat dengan Stres Kerja di Ruang IRDM BLU RSUP Prof. DR. R. D. Kandou Manado*.

Kuswadji, S. (1997). *Pengaturan Tidur Pekerja Shift*. Cermin Dunia Kedokteran.

Lazarus, R. S. (1976). *Petterns of Adjustment*. McGraw-Hill.

Lazarus, R. S. (1982). Thoughts on the Relations between Emotion and Cognition. *American Psychologist*, *37*(9), 1019–1024.

Lazarus, R. S., & Folkman, S. (1984). *stres, Apraisal, and Coping.* Springer Publishing Company.

Lazarus, R. S., & Launier, R. (1978). *stres: Related Transactions between Person and Environment* (pp. 287–327). Plenum Press.

Lee, I., & Wang, H. H. (2002). Perceived Occupational stres and Related Factors in Public Health Nurses. *Journal of Nursing Research*, *10*(4), 253–260.

Lee, K., & Kim, J. (2015). Relating Factors for Depression in Korean Working Women : Secondary Analysis of the Fifth Korean National Health and Nutrition Examination Survey (KNHANES V). *Asian Nursing Research*, *9*(3), 265–270. https://doi.org/10.1016/j.anr.2015.07.002

Lee, I. Te, Sheu, W. H. H., Lee, W. J., & Chen, D. Y. (2018). Serum brain-derived neurotrophic factor predicting reduction in pulse pressure after a one-hour rest in nurses working night shifts. *Scientific Reports*, *8*(1), 1–10. https://doi.org/10.1038/s41598-018-23791-8

Lestarianita, P., & Fakhrurrozi, M. (2007). Pengatasan Stres pada Perawat Pria dan Wanita. *Jurnal Psikologi, 1*(1), 47–51.

Li, J., Bidlingmaier, M., Petru, R., Gil, F. P., Loerbroks, A., & Angerer, P. (2018). Impact of shift work on the diurnal cortisol rhythm : a one-year longitudinal study in junior physicians. *Journal of Occupational Medicine and Toxicology*, *13*(23), 1–9.

Linda, S. E. (2017). Hubungan antara Beban Kerja dan Pendidikan Perawat dengan Kualitas Dokumentasi Keperawatan di Ruang Rawat Inap RS Pelabuhan Jakarta Tahun 2001. *Jurnal Kesehatan*, *1*(2), 22–40.

Luoni, A., Macchi, F., Papp, M., Molteni, R., & Riva, M. A. (2015). Lurasidone

Exerts Antidepressant Properties in the Chronic Mild stres Model through the Regulation of Synaptic and Neuroplastic Mechanisms in the Rat Prefrontal Cortex. *International Journal of Neuropsychopharmacology*, *18*(4). https://doi.org/10.1093/ijnp/pyu061

Martono, N. (2014). *Metode Penelitian Kuantitaif, Analisis dan Analisis Data Sekunder* (2nd ed.). Rajawali Pers.

Melmed, S., Koeing, R., Rosen, C., Auchus, R., & Goldfine, A. (2019). *Williams Texbook of Endocrinology*. Elsevier.

Mitchelmore, C., & Gede, L. (2014). Brain Derived Neurotrophic Factor: Epigenetic Regulation in Psychiatric Disorder. *Brain Res*, *1586*, 162–172.

Mondelli, V., Cattaneo, A., Murri, M. B., Papadopoulos, A. S., & Aitchison, K. J. (2011). stres and inflammation reduce BDNF expression in first-episode psychosis : a pathway to smaller hippocampal volume. *Journal of Clinical Psychiatry*, *72*(12), 1677–1684. https://doi.org/10.4088/JCP.10m06745.stres

Moustaka, E. (2011). Sources and effects of work-related stres in nursing. *Health Science Journal*, *4*, 210–216.

Muller, M. (2016). Brain-derived Neurotrophic Factor (BDNF): A New Marker to Estimate stres Effects on Neuronal Plasticity. *MVZ Labor Ravensburg*, 1–2.

National Assosiation of School Psychologist. (2011). *stres Management Resources and Adaptive Coping Strategies*. National Assosiation of School Psychologist.

National Safety Council. (2004). *Manajemen Stres*. Penerbit Buku Kedokteran EGC.

Nowacka, M., & Obuchowicz, E. (2013). BDNF and VEGF in the pathogenesis of stres-induced affective diseases: An insight from experimental studies. *Pharmacological Reports*, *65*(3), 535–546. https://doi.org/10.1016/S1734-1140(13)71031-4

Pandey, G. N., Ren, X., Rizavi, H. S., Conley, R. R., Roberts, R. C., & Dwivedi, Y. (2008). Brain-derived neurotrophic factor and tyrosine kinase B receptor signalling in post-mortem brain of teenage suicide victims. *International Journal of Neuropsychopharmacology*, *11*(8), 1047–1061. https://doi.org/10.1017/S1461145708009000

Persatuan Perawat Nasional Indonesia. (2006).

Pezet, S., & Malcangio, M. (2005). Brain-Derived Neurotrophic Factor as a Drug Target for CNS Disorders. *Journal Expert Opinion on Therapeutic Target*, *8*(5), 391–399.

Phillips, C. (2017). Brain-Derived Neurotrophic Factor, Depression, and Physical Activity: Making the Neuroplastic Connection. *Neural Plasticity*, 1–17. https://doi.org/10.1155/2017/7260130

Pinel, J. P. J. (2009). *Biopsikologi* (7th ed.). Pustaka Pelajar.

Potter, P. A., & Perry, A. G. (2010). *Fundamentals of Nursing: Fundamental Keperawatan Buku 2*. Salemba Medika.

Pratama, F. A. (2014). Beban Kerja dan Masa Kerja terhadap Tingkat stres Kerja pada Perawat Intersive Care Unit. *THE SUN*, *1*(3), 11–16.

Pratama, Y. D., Fitriani, A. D., & Harahap, J. (2020). Faktor yang berhubungan dengan Kejadian Stres Kerja pada Perawat ICU di RSUD Dr.R.M.Djoelham Binjai Tahun 2020. *Journal of Healthcare Technology and Medicine*, *6*(2), 1236–1249.

Pruunsild, P., Kazantseva, A., Aid, T., Palm, K., & Timmusk, T. (2007). Dissecting the Human BDNF Locus: Bidirectional Transcription, Complex Splicing, and Multiple Promoters. *Genomics*, *90*(3), 397–406.

Pulat, B. M. (1997). *Fundamental of Industrial Ergonomics* (2nd ed.). Prospect Heights.

Rahman, T. B. (2007). *Perbedaan Tingkat Kelelahan Kerja Perawat pada Shift Pagi, Siang, dan Malam di RSUD Pandan Arang Boyolali*. Universitas Muhammadiyah Surakarta.

Rasmun. (2004). *Stres, Koping, dan Adaptasi Teori Pohon Masalah Keperawatan*. Sagung Seto.

Rehman, U., Shahnawaz, M. G., Khan, N. H., Kharshiing, K. D., Khursheed, M., Gupta, K., Kashyap, D., & Uniyal, R. (2021). Depression, Anxiety and stres Among Indians in Times of Covid-19 Lockdown. *Community Mental Health Journal*, *57*(1), 42–48. https://doi.org/10.1007/s10597-020-00664-x

Revalicha, N. S., & Sami'an. (2013). Perbedaan Stres Kerja Ditinjau dari Shift Kerja pada Perawat di RSUD Dr. Soetomo Surabaya. *Jurnal Psikologi Industri Dan Organisasi*, *2*(1), 16–24.

Riggio, R. E. (2017). *Introduction to Industrial/Organizational Psychology*. Taylor & Francis/Routledge.

Robbins, S., & Judge, T. A. (2018). *Essentials of organizational behavior* (14th ed.). Pearson Education.

Roceri, M., Cirulli, F., Pessina, C., Peretto, P., Racagni, G., & Riva, M. A. (2004). Postnatal repeated maternal deprivation produces age-dependent changes of brain-derived neurotrophic factor expression in

selected rat brain regions. *Biological Psychiatry*, *55*(7), 708–714. https://doi.org/10.1016/j.biopsych.2003.12.011

Romadhoni, R. D., & Pudjirahardjo, W. J. (2016). Beban kerja obyektif tenaga perawat di pelayanan rawat inap rumah sakit. *Jurnal Administrasi Kesehatan Indonesia*, *4*(Januari-Juni), 57–66.

Safira, T., & Saputra, N. E. (2012). *Manajemen Emosi*. PT Bumi Aksara.

Sanlier, N., & Unusan, N. (2007). The relationship between body weight and stres and nutritional status in Turkish women. *Pakistan Journal of Nutrition*, *6*(4), 339–344. https://doi.org/10.3923/pjn.2007.339.344

Sapolsky, R. M. (1999). Glucocorticoids, stres, and their adverse neurological effects: relevance to aging. *Experimental Gerontology*, *34*(6), 721–732. https://doi.org/10.1016/s0531-5565(99)00047-9

Sari, R. K. (2015). Hubungan Emosional dan Spritual terhadap Kadar Kortisol Perawat di Rumah Sakit Sultan Agung Semarang. *Nurscope. Jurnal Keperawatan Dan Pemikiran Ilmiah*, *1*(7), 1–7.

Schmitt, K., Holsboer-Trachsler, E., & Eckert, A. (2016). BDNF in sleep, insomnia, and sleep deprivation. *Annals of Medicine*, *48*(1–2), 42–51. https://doi.org/10.3109/07853890.2015.1131327

Selye, H. (1976). *The stres of Life*. McGraw-Hill.

Setiyono, A., Prasetyo, B., & Maramis, M. (2015). Pengaruh Tingkat Stres dan Kadar Kortisol dengan Jumlah Folikel Dominan pada Penderita Infertilitas yang Menjalani Fertilisasi Invitro. *Majalah Obstetri & Ginekologi*, *23*(3), 128. https://doi.org/10.20473/mog.v23i3.2078

Sherwood, L. (2014). *Fisiologi Manusia dari Sel ke Sistem* (9th ed.). UGC.

Sherwood, L., & Pendit, B. U. (2009). *Fisiologi Manusia: Dari Sel Ke Sistem*

(Introduction to Human Physiology) (6th ed.). EGC.

Soeprodjo, R. O. K., Mandagi, C. K. F., & Engkeng, S. (2017). Hubungan Antara Jenis Kelamin Dan Motivasi Kerja Dengan Kinerja Perawat Di Rumah Sakit Jiwa Prof. Dr. V. L. Ratumbuysang Provinsi Sulawesi Utara. *Kesmas*, *6*(4).

Soewondo, S., Menaldi, A., & Hanum, L. (2017). *Stres, Manajemen Stres, dan Relaksasi Progresif*. LPSP3 UI.

Stanton, W. J. (1999). *Shift Work Effects*. Erlangga.

Sugiyono. (2012). *Metode Penelitian Kuantitatif dan Kualitatif*. Alfabeta.

Suma'mur. (2009). *Keselamatan Kerja dan Pencegahan Kecelakaan*. CV Haji Masagung.

Supariasa, I. D. N., Bakri, B., & Fajar, I. (2002). *Penilaian Status Gizi*. EGC.

Suri, D., & Vaidya, V. A. (2013). Glucocorticoid regulation of brain-derived neurotrophic factor: relevance to hippocampal structural and functional plasticity. *Neuroscience*, *239*, 196–213. https://doi.org/10.1016/j.neuroscience.2012.08.065

Šušoliaková, O., Šmejkalová, J., Bičíková, M., Hodačová, L., Málková, A., & Fiala, Z. (2018). Assessment of Work-Related stres by Using Salivary Cortisol Level Examination among Early Morning Shift Workers. *Central European Journal of Public Health*, *26*(2), 92–97. https://doi.org/10.21101/cejph.a5092

Taliaz, D., Loya, A., Gersner, R., Haramati, S., Chen, A., & Zangen, A. (2011). Resilience to chronic stres is mediated by hippocampal brain-derived neurotrophic factor. *Journal of Neuroscience*, *31*(12), 4475–4483. https://doi.org/10.1523/JNEUROSCI.5725-10.2011

Undang-Undang No 44 Tahun 2009 tentang Rumah Sakit. (2009).

Wartono, T. (2017). Pengaruh Stres Kerja terhadap Kinerja Karyawan. *Jurnal Ilmiah Prodi Manajemen Universitas Pamulang*, *4*(2), 41–55.

World Health Organization. (2007). *Infection Prevention and Control of Epidemic-and Pandemic-Prone Acute Respiratory Diseases in Health Care: WHO Interim Guidelines*. World Health Organization.

World Health Organization. (2013). *mhGAP Module Assessment Management of Conditions Specifically Related to stres*. World Health Organization.

World Health Organization. (2019). *stres at the Workplace*.

Yamada, K., & Nabeshima, T. (2003). Brain-Derived Neurotrophic Factor/TrkB Signaling in Memory Processes. *Journal of Pharmacological Sciences*, *91*(4), 267–270.

Zapata, B. P., Gimpel, J., Bonacic, C., Gonzales, B. A., Riveros, J. L., Ramirez, A. M., Bas, F., & Macdonald, D. W. (2004). The Effect of Transport on Cortisol, Glucose, Heart Rate, Leucocytes, and Body Weight in Captive-Reared Guanacos (Lama Guanicoe). *Animal Welfare*, *13*(4), 439–444.

Zhang, C., Yang, L., Liu, S., Ma, S., Wang, Y., Cai, Z., Du, H., Li, R., Kang, L., Su, M., Zhang, J., Liu, Z., & Zhang, B. (2020). Survey of Insomnia and Related Social Psychological Factors Among Medical Staff Involved in the 2019 Novel Coronavirus Disease Outbreak. *Frontiers in Psychiatry*, *11*(April), 1–9. https://doi.org/10.3389/fpsyt.2020.00306

Zhang, J., Yao, W., & Hashimoto, K. (2016). Brain-derived Neurotrophic Factor (BDNF)-TrkB Signaling in Inflammation-related Depression and

Potential Therapeutic Targets. *Current Neuropharmacology*, *14*, 721–731. https://doi.org/10.2174/1570159X14666160119094

Zheng, R., Zhou, Y., Qiu, M., Yan, Y., Yue, J., Yu, L., Lei, X., Tu, D., & Hu, Y. (2020). Prevalence and associated factors of depression, anxiety, and stres among Hubei pediatric nurses during COVID-19 pandemic. *Comprehensive Psychiatry*, *104*(2021), 1–8. https://doi.org/10.1016/j.comppsych.2020.152217

Zhu, Z., Xu, S., Wang, H., Liu, Z., Wu, J., Li, G., Miao, J., Zhang, C., Yang, Y., Sun, W., Zhu, S., Fan, Y., Hu, J., Liu, J., & Wang, W. (2020). *COVID-19 in Wuhan: Immediate Psychological Impact on 5062 Health Workers*. medRxiv. https://doi.org/10.1101/2020.02.20.20025338

Lampiran 1 *Informed Consent*

INFORMED CONSENT

Kepada Yth.

Bapak/Ibu, Sdr/Sdri

Di -Tempat

Dengan hormat,

Perkenalkan nama saya **Atthariq,** saya adalah mahasiswa Pascasarjana Universitas Hasanuddin Makassar yang sedang melakukan penelitian tentang "Analisis Tingkat Stres Berdasarkan Kadar Kortisol dan Ekspresi mRNA Gen BDNF Pada Perawat RS Islam Jakarta Di Berbagai Unit Kerja dalam masa pandemi covid-19. Kuesioner ini adalah alat pengumpulan data yang hasilnya akan digunakan sebagai data utama dalam penelitian ilmiah ini. Saya mohon kerjasama Bapak/Ibu, Sdr/Sdri untuk menjawab pertanyaan kuesioner ini sesuai dengan keadaan dan pendapat yang sejujurnya.

Tidak ada penilaian benar atau salah dalam kuesioner ini. Jawaban Bapak/Ibu, Sdr/Sdri hanya akan digunakan untuk kepentingan penelitian semata. Saya menjamin kerahasiaan identitas serta informasi atau keterangan yang disampaikan sesuai dengan etika yang berlaku. Bila Bapak/Ibu, Sdr/Sdri bersedia ikut serta dalam penelitian ini, mohon untuk menandatangani formulir persetujuan ini. Sebelum dan sesudahnya saya ucapkan terimakasih.

Tanggal   :   2020

Nama   :

Alamat   :

Tanda   Tangan   :

Lampiran 2 Kuesioner

Kuesioner Penelitian

1. Karakteristik Responden

Nama/Inisial Responden   :

Usia   :   Tahun

Jenis Kelamin   ☐   :   Laki-laki

                                            ☐   Perempuan

Pendidikan   : ☐   D3 Keperawatan

                                            ☐   S1 Keperawatan

Status Pernikahan   : ☐   Belum Menikah

                                            ☐   Menikah

Masa/Lama kerja   :   Tahun

2. Status Gizi

            BB/TB   :   kg/meter

3. Unit Kerja   : ☐   IGD

                                            ☐   OK

                                            ☐   ICU

                                            ☐   Ranap

4. Sift Kerja   : ☐   Pagi   ☐   Siang   ☐   Malam

5. Kuesioner ENSS *(Ekspanded Nurse stres Scale)*

Petunjuk Pengisisan:

1. Bacalah dengan teliti sebelum mengisi kuesioner.

2. Jawablah semua pertanyaan sesuai dengan kondisi yang dialami saat ini.

3. Berilah tanda *check list* (√) pada kolom jawaban yang tersedia dari masing-masing pernyataan dengan penjelasan sebagai berikut:

   a. Tidak pernah (TP), jika pernyataan yang ada tidak pernah dialami di tempat kerja.

   b. Pernah tidak stres (PTS), jika pernyataan yang ada namun tidak membuat stres di tempat kerja.

   c. Pernah kadang stres (PKS), jika pernyataan yang ada kadang-kadang terjadi dan membuat stres di tempat kerja.

   d. Pernah sering stres (PSS), jika pernyataan sering terjadi dan membuat stres di tempat kerja.

   e. Pernah selalu stres (PUS), jika pernyataan selalu terjadi dan membuat stres di tempat kerja.

4. Bila ingin mengubah jawaban silahkan mengganti satu kali dengan memberi tanda garis = pada jawaban yang salah, kemudian memberi tanda *check list* (√) pada jawaban yang dianggap benar.

5. Silahkan isi dengan seksama dan pilih jawaban sesuai dengan kondisi saat ini

No	Pernyataan	TP	PTS	PKS	PSS	PUS
1.	Melakukan tindakan medis yang dirasakan nyeri oleh pasien					
2.	Dikritik oleh dokter					
3.	Merasa tidak cukup siap untuk membantu kebutuhan emosional keluarga pasien					
4.	Kurangnya kesempatan untuk berbicara secara terbuka dengan staf lain mengenai masalah di tempat kerja					
5.	Konflik dengan atasan (supervisor)					
6.	Informasi yang tidak cukup dari dokter terkait kondisi medis pasien					
7.	Pasien mengajukan permintaan yang tidak masuk akal					
8.	Dilecehkan secara seksual					
9.	Merasa tidak berdaya ketika ada pasien yang kondisinya tidak membaik					
10.	Konflik dengan dokter					
11.	Ditanya oleh pasien sesuatu yang tidak dapat memberikan jawaban yang memuaskan					
12.	Kurangnya kesempatan berbagi pengalaman/perasaan dengan staf lain mengenai permasalahan di					

	tempat kerja					
13.	Pengaturan jadawal dan susunan staf yang tidak terduga					
14.	Dokter memerintahkan pengobatan yang tampaknya tidak tepat bagi pasien					
15.	Keluarga pasien mengajukan permintaan yang tidak masuk akal					
16.	Mengalami diskriminasi suku, agama/ras, atau antar golongan (SARA)					
17.	Mendengankan atau berbicara dengan pasien tentang kondisinya mendekati kematian					
18.	Takut membuat kesalahan dalam merawat pasien					
19.	Merasa tidak cukup siap untuk membantu kebutuhan emosional pasien					
20.	Kurangnya kesempatan untuk mengungkapkan perasaan negatif terhadap pasien kepada staf lain					
21.	Kesulitan bekerja perawat tertentu di unit lain					
22.	Tidak cukup waktu untuk memberi dukungan emosional kepada pasien					
23.	Dokter tidak ada pada saat terjadi					

	situasi darurat medis					
24.	Disalahkan atas setiap kesalahan yang terjadi					
25.	Kesulitan bekerja dengan perawat lain di unit sekarang					
26.	Mengalami diskriminasi karena jenis kelamin					
27.	Kematian seorang pasien					
28.	Ketidaksepakatan mengenai pengobatan pasien					
29.	Merasa belum cukup terlatih untuk tugas yang harus dilakukan					
30.	Kurangnya dukungan dari atasan					
31.	Dikritik oleh atasan					
32.	Tidak cukup waktu untuk menyelesaikan tugas-tugas keperawatan					
33.	Tidak tahu apa yang harus disampaikan kepada pasien/keluarga perihal kondisi dan pengobatan pasien					
34.	Menjadi orang yang harus berurusan dengan keluarga pasien					
35.	Harus berurusan dengan pasien yang melakukan kekerasan					
36.	Terpapar risiko keselamatan dan kesehatan kerja					
37.	Meninggalnya pasien yang dalam					

	perawatan saya dan keluraga pasien menjadi dekat dengan saya					
38.	Harus mengambil keputusan mengenai pasien pada saat dokter sedang tidak ada					
39.	Bertanggung jawab atas suatu tugas tanpa pengalaman memadai					
40.	Kurangnya dukungan dari bagian keperawatan					
41.	Terlalu banyak tugas non keperawatan yang harus dilakukan, seperti tugas administrasi					
42.	Kekurangan staf untuk memenuhi kebutuhan unit					
43.	Tidak begitu mengerti cara pengoperasian dan penggunaan peralatan khusus					
44.	Harus berurusan dengan pasien yang kasar					
45.	Tidak cukup waktu untuk merespon kebutuhan keluarga pasien					
46.	Diminta bertanggung jawab atas sesuatu hal yang berada di luar kekuasaan					
47.	Dokter tidak ada pada saat pasien meninggal					

48.	Harus mengatur pekerjaan dokter					
49.	Kurangnya dukungan dari bagian lain					
50.	Kesulitan bekerja dengan perawat lawan jenis					
51.	Tuntutan pelayanan terkait system penggolongan pasien					
52.	Harus berurusan dengan perlakuan kasar dari keluarga pasien					
53.	Menyaksikan pasien menderita					
54.	Dikritik dari bagian keperawatan					
55.	Harus bekerja di jam istirahat					
56.	Tidak mengetahui apakah keluarga pasien akan melaporkan saya atas perawatan yang tidak memadai					
57.	Harus mengambil keputusan di bawah tekanan					

Sumber: Diadopsi dari Harsono (2017)

Lampiran 3 OUTPUT SPSS

NORMALITAS DATA MEAN EKSPRESI GEN mRNA BDNF DAN KADAR Kortisol

Descriptives

		Statistic	Std. Error
Gen BDNF	Mean	8.93133	.200499
	95% Confidence Interval for Mean Lower Bound	8.53288	
	Upper Bound	9.32978	
	5% Trimmed Mean	8.88256	
	Median	8.63000	
	Variance	3.578	
	Std. Deviation	1.891502	
	Minimum	5.344	
	Maximum	13.434	
	Range	8.090	
	Interquartile Range	2.311	
	Skewness	.533	.255
	Kurtosis	-.209	.506
Cortisol	Mean	521.41929	26.510659
	95% Confidence Interval for Mean Lower Bound	468.73493	
	Upper Bound	574.10366	
	5% Trimmed Mean	522.56985	
	Median	462.42700	
	Variance	62550.539	
	Std. Deviation	250.101058	
	Minimum	16.854	

Maximum	981.756	
Range	964.902	
Interquartile Range	422.057	
Skewness	.161	.255
Kurtosis	-.892	.506

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Gen BDNF	.092	89	.061	.965	89	.017
Cortisol	.103	89	.021	.955	89	.004

a. Lilliefors Significance Correction

ANALISIS UNIVARIAT

jenis kelamin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Perempuan	68	76.4	76.4	76.4
	Laki-laki	21	23.6	23.6	100.0
	Total	89	100.0	100.0	

pendidikan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D3 Keperawatan	74	83.1	83.1	83.1
	S1 Keperawatan	15	16.9	16.9	100.0
	Total	89	100.0	100.0	

status pernikahan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Belum Menikah	16	18.0	18.0	18.0
	Menikah	73	82.0	82.0	100.0
	Total	89	100.0	100.0	

unit kerja

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	IGD	11	12.4	12.4	12.4
	Rawat Inap	55	61.8	61.8	74.2
	OK	7	7.9	7.9	82.0
	ICU	16	18.0	18.0	100.0
	Total	89	100.0	100.0	

sift kerja

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	pagi	37	41.6	41.6	41.6
	siang	6	6.7	6.7	48.3
	malam	46	51.7	51.7	100.0
	Total	89	100.0	100.0	

tingkat stres

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	rendah	21	23.6	23.6	23.6
	sedang	38	42.7	42.7	66.3
	tinggi	30	33.7	33.7	100.0
	Total	89	100.0	100.0	

Descriptives

		Statistic	Std. Error
umur	Mean	38.75	1.012
	95% Confidence Interval for Mean — Lower Bound	36.74	
	95% Confidence Interval for Mean — Upper Bound	40.76	
	5% Trimmed Mean	38.75	
	Median	39.00	
	Variance	91.211	
	Std. Deviation	9.550	
	Minimum	23	
	Maximum	55	
	Range	32	
	Interquartile Range	16	
	Skewness	-.045	.255
	Kurtosis	-1.271	.506
lama kerja	Mean	15.88	.997
	95% Confidence Interval for Mean — Lower Bound	13.89	
	95% Confidence Interval for Mean — Upper Bound	17.86	
	5% Trimmed Mean	15.78	
	Median	17.00	
	Variance	88.519	
	Std. Deviation	9.408	
	Minimum	1	
	Maximum	34	
	Range	33	
	Interquartile Range	15	

Skewness		.062	.255
Kurtosis		-1.036	.506

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
umur	.124	89	.002	.942	89	.001
lama kerja	.102	89	.023	.953	89	.003

a. Lilliefors Significance Correction

ANALISIS BIVARIAT KARAKTERISTIK RESPONDEN TERHADAP TINGKAT STRES

umur * tingkat stres

Crosstab

			tingkat stres			Total
			rendah	sedang	tinggi	
umur	<= median (39)	Count	10	14	21	45
		% within umur	22.2%	31.1%	46.7%	100.0%
	> median (39)	Count	11	24	9	44
		% within umur	25.0%	54.5%	20.5%	100.0%
Total		Count	21	38	30	89
		% within umur	23.6%	42.7%	33.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.469[a]	2	.024
Likelihood Ratio	7.636	2	.022
Linear-by-Linear Association	3.285	1	.070
N of Valid Cases	89		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.38.

Risk Estimate

	Value
Odds Ratio for umur (<= median (39) / > median (39))	a

a. Risk Estimate statistics cannot be computed. They are only computed for a 2*2 table without empty cells.

jenis kelamin * tingkat stres

Crosstab

			tingkat stres			
			rendah	sedang	tinggi	Total
jenis kelamin	Perempuan	Count	18	30	20	68
		% within jenis kelamin	26.5%	44.1%	29.4%	100.0%
	Laki-laki	Count	3	8	10	21
		% within jenis kelamin	14.3%	38.1%	47.6%	100.0%
Total		Count	21	38	30	89
		% within jenis kelamin	23.6%	42.7%	33.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.724[a]	2	.256
Likelihood Ratio	2.725	2	.256
Linear-by-Linear Association	2.604	1	.107
N of Valid Cases	89		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.96.

Risk Estimate

	Value
Odds Ratio for jenis kelamin (Perempuan / Laki-laki)	a

a. Risk Estimate statistics cannot be computed. They are only computed for a 2*2 table without empty cells.

pendidikan * tingkat stres

Crosstab

			tingkat stres			
			rendah	sedang	tinggi	Total
pendidikan	D3 Keperawatan	Count	21	29	24	74
		% within pendidikan	28.4%	39.2%	32.4%	100.0%
	S1 Keperawatan	Count	0	9	6	15
		% within pendidikan	0.0%	60.0%	40.0%	100.0%
Total		Count	21	38	30	89
		% within pendidikan	23.6%	42.7%	33.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.734a	2	.057
Likelihood Ratio	9.107	2	.011
Linear-by-Linear Association	2.831	1	.092
N of Valid Cases	89		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.54.

Risk Estimate

	Value
Odds Ratio for pendidikan (D3 Keperawatan / S1 Keperawatan)	a

a. Risk Estimate statistics cannot be computed.
They are only computed for a 2*2 table without
empty cells.

status pernikahan * tingkat stres

Crosstab

			tingkat stres			
			rendah	sedang	tinggi	Total
status pernikahan	Belum Menikah	Count	4	6	6	16
		% within status pernikahan	25.0%	37.5%	37.5%	100.0%
	Menikah	Count	17	32	24	73
		% within status pernikahan	23.3%	43.8%	32.9%	100.0%
Total		Count	21	38	30	89
		% within status pernikahan	23.6%	42.7%	33.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.223[a]	2	.895
Likelihood Ratio	.225	2	.894
Linear-by-Linear Association	.020	1	.889
N of Valid Cases	89		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.78.

Risk Estimate

	Value
Odds Ratio for status pernikahan (Belum Menikah / Menikah)	[a]

a. Risk Estimate statistics cannot be computed.
They are only computed for a 2*2 table without
empty cells.

lama kerja * tingkat stres

Crosstab

			tingkat stres			
			rendah	sedang	tinggi	Total
lama kerja	<= median (17)	Count	10	16	19	45
		% within lama kerja	22.2%	35.6%	42.2%	100.0%
	> median (17)	Count	11	22	11	44
		% within lama kerja	25.0%	50.0%	25.0%	100.0%
Total		Count	21	38	30	89
		% within lama kerja	23.6%	42.7%	33.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.117[a]	2	.210
Likelihood Ratio	3.147	2	.207
Linear-by-Linear Association	1.563	1	.211
N of Valid Cases	89		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.38.

Risk Estimate

	Value
Odds Ratio for lama kerja (<= median (17) / > median (17))	[a]

a. Risk Estimate statistics cannot be computed. They are only computed for a 2*2 table without empty cells.

unit kerja * tingkat stres

Crosstab

			tingkat stres			
			rendah	sedang	tinggi	Total
unit kerja	IGD	Count	1	7	3	11
		% within unit kerja	9.1%	63.6%	27.3%	100.0%
	Rawat Inap	Count	11	23	21	55
		% within unit kerja	20.0%	41.8%	38.2%	100.0%
	OK	Count	4	2	1	7
		% within unit kerja	57.1%	28.6%	14.3%	100.0%
	ICU	Count	5	6	5	16
		% within unit kerja	31.3%	37.5%	31.3%	100.0%
Total		Count	21	38	30	89
		% within unit kerja	23.6%	42.7%	33.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.860[a]	6	.249
Likelihood Ratio	7.297	6	.294
Linear-by-Linear Association	1.472	1	.225
N of Valid Cases	89		

a. 7 cells (58.3%) have expected count less than 5. The minimum expected count is 1.65.

Risk Estimate

	Value
Odds Ratio for unit kerja (IGD / Rawat Inap)	[a]

a. Risk Estimate statistics cannot be computed. They are only computed for a 2*2 table without empty cells.

sift kerja * tingkat stres

Crosstab

			tingkat stres			Total
			rendah	sedang	tinggi	
sift kerja	pagi	Count	4	19	14	37
		% within sift kerja	10.8%	51.4%	37.8%	100.0%
	siang	Count	3	2	1	6
		% within sift kerja	50.0%	33.3%	16.7%	100.0%
	malam	Count	14	17	15	46
		% within sift kerja	30.4%	37.0%	32.6%	100.0%
Total		Count	21	38	30	89
		% within sift kerja	23.6%	42.7%	33.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.096[a]	4	.131
Likelihood Ratio	7.336	4	.119
Linear-by-Linear Association	2.102	1	.147
N of Valid Cases	89		

a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is 1.42.

Risk Estimate

	Value
Odds Ratio for sift kerja (pagi / siang)	[a]

a. Risk Estimate statistics cannot be computed. They are only computed for a 2*2 table without empty cells.

ANALISIS BIVARIAT UNIT KERJA TERHADAP EKSPRESI GEN mRNA BDNF

Oneway

Descriptives

Gen BDNF

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
IGD	11	8.99809	1.355873	.408811	8.08720	9.90898	7.552	12.569
Rawat Inap	55	8.60964	1.817556	.245079	8.11828	9.10099	5.344	13.217
OK	7	10.28600	2.505303	.946915	7.96898	12.60302	6.959	13.434
ICU	16	9.39856	1.972006	.493002	8.34775	10.44937	6.217	12.937
Total	89	8.93133	1.891502	.200499	8.53288	9.32978	5.344	13.434

ANOVA

Gen BDNF

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	22.080	3	7.360	2.137	.102
Within Groups	292.765	85	3.444		
Total	314.844	88			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Gen BDNF

Bonferroni

(I) unit kerja	(J) unit kerja	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
IGD	Rawat Inap	.388455	.612977	1.000	-1.26745	2.04435
	OK	-1.287909	.897307	.929	-3.71190	1.13608
	ICU	-.400472	.726902	1.000	-2.36413	1.56318

Rawat Inap	IGD	-.388455	.612977	1.000	-2.04435	1.26745
	OK	-1.676364	.744759	.162	-3.68826	.33553
	ICU	-.788926	.527154	.829	-2.21298	.63513
OK	IGD	1.287909	.897307	.929	-1.13608	3.71190
	Rawat Inap	1.676364	.744759	.162	-.33553	3.68826
	ICU	.887437	.841017	1.000	-1.38449	3.15937
ICU	IGD	.400472	.726902	1.000	-1.56318	2.36413
	Rawat Inap	.788926	.527154	.829	-.63513	2.21298
	OK	-.887437	.841017	1.000	-3.15937	1.38449

ANALISIS BIVARIAT SHIFT KERJA TERHADAP EKSPRESI GEN mRNA BDNF

T-Test

Group Statistics

	Shift Kerja 2 Kat	N	Mean	Std. Deviation	Std. Error Mean
Gen BDNF	Pagi	43	8.94623	1.645348	.250913
	Malam	46	8.91739	2.114105	.311708

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Gen BDNF	Equal variances assumed	7.557	.007	.071	87	.943	.028841	.403513	-.773185	.830867

			.072	84.292	.943	.028841	.400149	-.766859	.824541
Equal variances not assumed			.072	84.292	.943	.028841	.400149	-.766859	.824541

ANALISIS BIVARIAT STATUS GIZI TERHADAP EKSPRESI GEN mRNA BDNF

Oneway

Descriptives

Gen BDNF

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Kurang (<18.5)	3	7.98100	1.242182	.717174	4.89525	11.06675	6.572	8.918
Normal (18.5-25)	41	8.60363	1.842493	.287749	8.02207	9.18520	5.344	13.217
Gemuk (25.1-27)	24	9.28167	2.058167	.420122	8.41258	10.15075	6.217	13.434
Obesitas (>27)	21	9.30648	1.810039	.394983	8.48256	10.13040	6.816	12.569
Total	89	8.93133	1.891502	.200499	8.53288	9.32978	5.344	13.434

ANOVA

Gen BDNF

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13.013	3	4.338	1.222	.307
Within Groups	301.831	85	3.551		
Total	314.844	88			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Gen BDNF

Bonferroni

(I) status gizi	(J) status gizi	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Kurang (<18.5)	Normal (18.5-25)	-.622634	1.127058	1.000	-3.66728	2.42201
	Gemuk (25.1-27)	-1.300667	1.153953	1.000	-4.41796	1.81663
	Obesitas (>27)	-1.325476	1.163076	1.000	-4.46742	1.81646
Normal (18.5-25)	Kurang (<18.5)	.622634	1.127058	1.000	-2.42201	3.66728
	Gemuk (25.1-27)	-.678033	.484319	.991	-1.98638	.63031
	Obesitas (>27)	-.702842	.505670	1.000	-2.06886	.66318
Gemuk (25.1-27)	Kurang (<18.5)	1.300667	1.153953	1.000	-1.81663	4.41796
	Normal (18.5-25)	.678033	.484319	.991	-.63031	1.98638
	Obesitas (>27)	-.024810	.563072	1.000	-1.54589	1.49628
Obesitas (>27)	Kurang (<18.5)	1.325476	1.163076	1.000	-1.81646	4.46742
	Normal (18.5-25)	.702842	.505670	1.000	-.66318	2.06886
	Gemuk (25.1-27)	.024810	.563072	1.000	-1.49628	1.54589

ANALISIS BIVARIAT EKSPRESI GEN mRNA BDNF TERHADAP TINGKAT STRES

Oneway

Descriptives

Gen BDNF

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
rendah	21	11.68752	1.018085	.222164	11.22410	12.15095	10.162	13.434
sedang	38	8.65197	.810925	.131549	8.38543	8.91852	7.270	9.875
tinggi	30	7.35583	1.063881	.194237	6.95857	7.75309	5.344	8.962
Total	89	8.93133	1.891502	.200499	8.53288	9.32978	5.344	13.434

ANOVA

Gen BDNF

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	236.960	2	118.480	130.825	.000
Within Groups	77.885	86	.906		
Total	314.844	88			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Gen BDNF

Bonferroni

(I) tingkat stres	(J) tingkat stres	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
rendah	sedang	3.035550*	.258762	.000	2.40373	3.66737
	tinggi	4.331690*	.270764	.000	3.67056	4.99282
sedang	rendah	-3.035550*	.258762	.000	-3.66737	-2.40373
	tinggi	1.296140*	.232423	.000	.72863	1.86365

| tinggi | rendah | -4.331690* | .270764 | .000 | -4.99282 | -3.67056 |
| | sedang | -1.296140* | .232423 | .000 | -1.86365 | -.72863 |

*. The mean difference is significant at the 0.05 level.

ANALISIS BIVARIAT UNIT KERJA TERHADAP KADAR Kortisol

Oneway

Descriptives

Cortisol

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
IGD	11	480.02336	212.979247	64.215659	336.94196	623.10477	123.860	856.297
Rawat Inap	55	551.85898	257.461162	34.716056	482.25748	621.46048	16.854	981.756
OK	7	383.53014	251.441516	95.035960	150.98553	616.07476	44.596	843.751
ICU	16	505.56906	242.916482	60.729121	376.12801	635.01012	92.154	860.479
Total	89	521.41929	250.101058	26.510659	468.73493	574.10366	16.854	981.756

ANOVA

Cortisol

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	206925.060	3	68975.020	1.107	.351
Within Groups	5297522.379	85	62323.793		
Total	5504447.439	88			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Cortisol

Bonferroni

(I) unit kerja	(J) unit kerja	Mean	Std. Error	Sig.	95% Confidence Interval

		Difference (I-J)			Lower Bound	Upper Bound
IGD	Rawat Inap	-71.835618	82.455802	1.000	-294.58222	150.91099
	OK	96.493221	120.702934	1.000	-229.57442	422.56086
	ICU	-25.545699	97.780552	1.000	-289.69068	238.59928
Rawat Inap	IGD	71.835618	82.455802	1.000	-150.91099	294.58222
	OK	168.328839	100.182627	.580	-102.30512	438.96280
	ICU	46.289919	70.911190	1.000	-145.27000	237.84984
OK	IGD	-96.493221	120.702934	1.000	-422.56086	229.57442
	Rawat Inap	-168.328839	100.182627	.580	-438.96280	102.30512
	ICU	-122.038920	113.131057	1.000	-427.65185	183.57401
ICU	IGD	25.545699	97.780552	1.000	-238.59928	289.69068
	Rawat Inap	-46.289919	70.911190	1.000	-237.84984	145.27000
	OK	122.038920	113.131057	1.000	-183.57401	427.65185

ANALISIS BIVARIAT SHIFT KERJA TERHADAP KADAR Kortisol

T-Test

Group Statistics

	Shift Kerja 2 Kat	N	Mean	Std. Deviation	Std. Error Mean
Cortisol	Pagi	43	526.20937	232.836753	35.507272
	Malam	46	516.94161	267.730979	39.474779

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper

Cortisol	Equal variances assumed	1.207	.275	.174	87	.862	9.267763	53.346236	-96.763656	115.299183
	Equal variances not assumed			.175	86.563	.862	9.267763	53.094487	-96.270799	114.806326

ANALISIS BIVARIAT KADAR Kortisol TERHADAP TINGKAT STRES

Oneway

Descriptives

Cortisol

			Std.		95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
rendah	21	238.60343	126.322233	27.565771	181.10224	296.10462	16.854	413.172
sedang	38	438.92574	81.836095	13.275568	412.02688	465.82459	277.268	588.493
tinggi	30	823.88223	93.718913	17.110654	788.88702	858.87745	634.652	981.756
Total	89	521.41929	250.101058	26.510659	468.73493	574.10366	16.854	981.756

ANOVA

Cortisol

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4682793.084	2	2341396.542	245.067	.000
Within Groups	821654.356	86	9554.120		
Total	5504447.439	88			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Cortisol

Bonferroni

(I) tingkat stres	(J) tingkat stres	Mean	Std. Error	Sig.	95% Confidence Interval	

		Difference (I-J)			Lower Bound	Upper Bound
rendah	sedang	-200.322308*	26.577854	.000	-265.21770	-135.42692
	tinggi	-585.278805*	27.810588	.000	-653.18417	-517.37344
sedang	rendah	200.322308*	26.577854	.000	135.42692	265.21770
	tinggi	-384.956496*	23.872472	.000	-443.24613	-326.66687
tinggi	rendah	585.278805*	27.810588	.000	517.37344	653.18417
	sedang	384.956496*	23.872472	.000	326.66687	443.24613

*. The mean difference is significant at the 0.05 level.

ANALISIS BIVARIAT EKSPRESI GEN mRNA BDNF TERHADAP KADAR Kortisol

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Cortisol[b]	.	Enter

a. Dependent Variable: Gen BDNF

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.838[a]	.702	.699	1.038358

a. Predictors: (Constant), Cortisol

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	221.042	1	221.042	205.013	.000[b]
	Residual	93.802	87	1.078		
	Total	314.844	88			

a. Dependent Variable: Gen BDNF

b. Predictors: (Constant), Cortisol

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.236	.256		47.856	.000
	Cortisol	-.006	.000	-.838	-14.318	.000

a. Dependent Variable: Gen BDNF

ANALISIS MULTIVARIAT EKSPRESI GEN mRNA BDNF

MODEL AWAL

Regression

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	tingkat stres, Shift Kerja 2 Kat, unit kerja^b	.	Enter

a. Dependent Variable: Gen BDNF

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.845^a	.714	.704	1.028498

a. Predictors: (Constant), tingkat stres, Shift Kerja 2 Kat, unit kerja

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	224.931	3	74.977	70.880	.000^b
	Residual	89.914	85	1.058		
	Total	314.844	88			

a. Dependent Variable: Gen BDNF

b. Predictors: (Constant), tingkat stres, Shift Kerja 2 Kat, unit kerja

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.686	.566		24.159	.000
	unit kerja	.123	.122	.059	1.009	.316
	Shift Kerja 2 Kat	-.400	.221	-.106	-1.815	.073
	tingkat stres	-2.109	.147	-.841	-14.325	.000

a. Dependent Variable: Gen BDNF

PROSES PENGELUARAN VARIABEL UNIT KERJA

Regression

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	tingkat stres, Shift Kerja 2 Kat^b	.	Enter

a. Dependent Variable: Gen BDNF

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.843^a	.711	.704	1.028603

a. Predictors: (Constant), tingkat stres, Shift Kerja 2 Kat

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	223.854	2	111.927	105.789	.000^b

Residual	90.990	86	1.058		
Total	314.844	88			

a. Dependent Variable: Gen BDNF

b. Predictors: (Constant), tingkat stres, Shift Kerja 2 Kat

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.974	.489		28.552	.000
	Shift Kerja 2 Kat	-.378	.220	-.101	-1.723	.088
	tingkat stres	-2.127	.146	-.848	-14.545	.000

a. Dependent Variable: Gen BDNF

MODEL AKHIR

Regression

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	tingkat stres^b	.	Enter

a. Dependent Variable: Gen BDNF

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.837^a	.701	.698	1.040182

a. Predictors: (Constant), tingkat stres

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	220.712	1	220.712	203.990	.000[b]
	Residual	94.132	87	1.082		
	Total	314.844	88			

a. Dependent Variable: Gen BDNF

b. Predictors: (Constant), tingkat stres

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.342	.328		40.689	.000
	tingkat stres	-2.099	.147	-.837	-14.282	.000

a. Dependent Variable: Gen BDNF

ANALISIS MULTIVARIAT KADAR Kortisol

MODEL AWAL

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	tingkat stres, status gizi[b]	.	Enter

a. Dependent Variable: Cortisol

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.904[a]	.817	.813	108.086482

a. Predictors: (Constant), tingkat stres, status gizi

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4499736.297	2	2249868.149	192.581	.000[b]
	Residual	1004711.142	86	11682.688		
	Total	5504447.439	88			

a. Dependent Variable: Cortisol

b. Predictors: (Constant), tingkat stres, status gizi

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-109.560	54.933		-1.994	.049
	status gizi	.385	13.530	.001	.028	.977
	tingkat stres	299.809	15.578	.904	19.246	.000

a. Dependent Variable: Cortisol

MODEL AKHIR

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	tingkat stres[b]	.	Enter

a. Dependent Variable: Cortisol

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.904[a]	.817	.815	107.464007

a. Predictors: (Constant), tingkat stres

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4499726.817	1	4499726.817	389.637	.000[b]
	Residual	1004720.622	87	11548.513		
	Total	5504447.439	88			

a. Dependent Variable: Cortisol

b. Predictors: (Constant), tingkat stres

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-108.333	33.876		-3.198	.002
	tingkat stres	299.722	15.184	.904	19.739	.000

a. Dependent Variable: Cortisol