

DAFTAR PUSTAKA

1. Sumariyono, Kalim H, Hidayat R, Najirman, Hamijoyo L, Reza A, et al. Diagnosis dan pengelolaan lupus eritematosus sistemik. Perhimpunan Reumatologi Indonesia. Jakarta. 2019:1–16.
2. Vaillant J, Goyal A, Varacallo M. Systemic Lupus Erythematosus. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing. 2023:1–12.
3. Barber MRW, Drenkard C, Falasinnu T, Hoi A, Mak A, Kow N, et al. Global epidemiology of systemic lupus erythematosus. *Nat Rev Rheumatol*. 2021;17(9):515–32.
4. PUSDATIN. Situasi lupus di Indonesia. Pusat data dan informasi Kementerian Kesehatan RI. 2017:1–8.
5. Falasinnu T, Chaichian Y, Simard JF. Impact of sex on systemic lupus erythematosus-related causes of premature mortality in the United States. *J Womens Health*. 2017;26(11):1214 – 21.
6. Tanzilia MF, Tambunan BA, Dewi DNSS. Tinjauan Pustaka: Patogenesis dan diagnosis sistemik lupus eritematosus. *Syifa Med J Kedokteran dan Kesehatan*. 2021;11(2):139.
7. Bachen EA, Chesney MA, Criswell LA. Prevalence of mood and anxiety disorders in women with systemic lupus erythematosus. *Arthritis Rheum*. 2009;61(6):822–29.
8. Roberts AL, Kubzansky LD, Malspeis S, Feldman CH, Costenbader KH. Association of depression with risk of incident systemic lupus erythematosus in women assessed across 2 decades. *JAMA Psychiatry*. 2018;75(12):1225.

9. Kementrian Kesehatan Badan Penelitian dan Pengembangan Kesehatan. Hasil Utama Riset Kesehatan Dasar (RISKESDAS). 2018.
10. Moustafa AT, Moazzami M, Engel L, Bangert, Hassanein M, Marzouk S, et al. Prevalence and metric of depression and anxiety in systemic lupus erythematosus: a systematic review and meta-analysis. *Semin Arthritis Rheum.* 2020;50(1):84 – 94.
11. Palagini L, Mosca M, Tani C, Gemignani A, Mauri M, Bombardieri S. Depression and systemic lupus erythematosus: a systematic review. *Lupus.* 2013;22(5):409 – 16.
12. Zhang L, Fu T, Yin R, Zhang Q, Shen B. Prevalence of depression and anxiety in systemic lupus erythematosus: a systematic review and meta-analysis. *BMC Psychiatry.* 2017;17(1):70.
13. Aryaningrum E, Salim EM, Apriansyah MA, Bahar E, Kusnadi Y. Hubungan antara kadar Interleukin 10 serum dengan tingkat depresi penderita lupus eritematosus sistemik di RSUP Dr. Mohammad Hoesin Palembang. *Sriwij J Med.* 2021;4(3):164 – 74.
14. Kellahan SR, Huang X, Lew D, Xian H, Eisen S, Kim AHJ. Depressed symptomatology in systemic lupus erythematosus patients. *Arthritis Care Res.* 2023;75(4):749 – 57.
15. DiMatteo MR, Lepper HS, Croghan TW. Depression is a risk factor for noncompliance with medical treatment: Meta-analysis of the effects of anxiety and depression on patient adherence. *Arch Intern Med.* 2000;160(14):2101.

16. Khedr EM, Gamal RM, Rashad SM, Yacoub M, Ahmed GK. Impact of depression on quality of life in systemic lupus erythematosus patients. *Egypt J Neurol Psychiatry Neurosurg.* 2021;57(1):88.
17. Jiang M, Near AM, Desta B, Wang X, Hammond ER. Disease and economic burden increase with systemic lupus erythematosus severity 1 year before and after diagnosis: a real-world cohort study, United States, 2004–2015. *Lupus Sci Med.* 2021:1–9.
18. Lood C, Tydén H, Gullstrand B, Cecilia K, Christina W, Christoffer N, et al. type I Interferon-Mediated skewing of the serotonin synthesis is associated with severe disease in systemic lupus erythematosus. Bobé P, ed. *PLOS ONE.* 2015;10(4).
19. Murni AW. Kadar kortisol plasma pada dispepsia fungsional dengan gangguan psikosomatik. *J Penyakit Dalam Indones.* 2020;7(1):15.
20. Thau L, Gandhi J, Sharma S. Physiology, Cortisol. In: *StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing.* 2023:1–10.
21. Pretorius E. Corticosteroids, Depression and the role of serotonin. *Rev Neurosci.* 2004;15(2):109–16.
22. Tian B, Yang C, Wang J, Hou X, Zhaou S, Li Y, et al. Peripheral blood brain-derived neurotrophic factor level and tyrosine kinase B expression on T lymphocytes in systemic lupus erythematosus: implications for systemic involvement. *Cytokine.* 2019;123:1547–64.
23. Zheng Q, Xu MJ, Cheng J, Chen JM, Zheng L, Li ZG. Serum levels of brain-derived neurotrophic factor are associated with depressive symptoms in

- patients with systemic lupus erythematosus. *Psychoneuroendocrinology*. 2017;78:246 – 52.
24. Autry AE, Monteggia LM. Brain-derived neurotrophic factor and neuropsychiatric disorders. Daws LC, ed. *Pharmacol Rev*. 2012;64(2):238–58.
25. Yang T, Nie Z, Shu H, Kuang Y, Chen X, Cheng J, et al. The role of BDNF on neural plasticity in depression. *Front Cell Neurosci*. 2020;14:82.
26. Guilloux JP, Douillard-Guilloux G, Kota R, Wang X, Gardier A, Martinowich K, et al. Molecular evidence for BDNF- and GABA-related dysfunctions in the amygdala of female subjects with major depression. *Mol Psychiatry*. 2012;17(11):1130 – 42.
27. Tamashiro LF, Oliveira RDR, Oliveira R, Frota E, Donadi E, Del-Ben C, et al. Participation of the neutrophin brain-derived neurotrophic factor in neuropsychiatric systemic lupus erythematosus. *Rheumatology*. 2014;53(12):2182 – 90.
28. Ikenouchi-Sugita A, Yoshimura R, Okamoto T, Umene-Nakano W, Ueda N, Hori H, et al. Serum brain-derived neurotrophic factor levels as a novel biological marker for the activities of psychiatric symptoms in systemic lupus erythematosus. *World J Biol Psychiatry*. 2010;11(2):121– 28.
29. Chang SH, Cho JH, Shin NH, Oh HJ, Choi BY, Yoon MJ, et al. Depression and quality of life in patients with systemic lupus erythematosus. *J Rheum Dis*. 2015;22(6):346.
30. Khanna S, Pal H, Pandey RM, Handa R. The relationship between disease activity and quality of life in systemic lupus erythematosus. *Rheumatology*. 2004;43(12):1536 – 40.

31. Collin M, Lan-Anh H, Vinood P, Victor P, Rajkumar R. The Neuroscience of Depression 1st ed. Academic Press. 2021:165–74.
32. Nimesh S, Ahmad MdI, Dhama S, Kumar P, Akram M, Hasaroeih NEN. Systemic lupus erythematosus disease: an overview of the clinical approach to pathogenesis, diagnosis, and treatment. *Borneo J Pharm.* 2021;4(2):91–98.
33. Tanaka Y, Mizukami A, Kobayashi A, Ito C, Matsuki T. Disease severity and economic burden in Japanese patients with systemic lupus erythematosus: A retrospective, observational study. *Int J Rheum Dis.* 2018;21(8):1609 –18.
34. Suarjana IN. Immunopatogenesis lupus eritematosus sistemik. Dalam: Sudoyo A, Setiyohadi B, Idrus A (edt). *Buku ajar ilmu penyakit dalam.* 6th ed. Interna Publishing. Jakarta. 2014 : 3331– 42.
35. Meszaros ZS, Perl A, Faraone SV. Psychiatric symptoms in systemic lupus erythematosus: a systematic review. *J Clin Psychiatry.* 2012;73(07):993–1001.
36. Tsai HL, Chang JW, Lu JH, Liu CS. Epidemiology and risk factors associated with avascular necrosis in patients with autoimmune diseases: a nationwide study. *Korean J Intern Med.* 2022;37(4):864 – 76.
37. Fanouriakis A, Tziolos N, Bertsias G, Boumpas D. Update on the diagnosis and management of systemic lupus erythematosus. *Annals of the rheumatic diseases.* 2021;80.1: 14 –25.
38. Bertsias G, Cervera R, Boumpas DT. Systemic lupus erythematosus: pathogenesis and clinical features. *EULAR Textbook on Rheumatic Diseases.* 5th ed. 2012:476–96.

39. Gergianaki I, Bortoluzzi A, Bertias G. Update on the epidemiology, risk factors, and disease outcomes of systemic lupus erythematosus. *Best Pract Res Clin Rheumatol*. 2018;32(2):188 – 205.
40. Widya Murni A. Terapi depresi pada nyeri kronis. *The 4 Scientific Meeting on Psycosomatic Medicine*. 2016.
41. Belden AC, Irvin K, Hajcak G, Kappenman E, Kelly D, Karlow S, et al. Neural correlates of reward processing in depressed and healthy preschool-age children. *J Am Acad Child Adolesc Psychiatry*. 2016;55(12):1081–89.
42. Moeloek NF. Keputusan Menteri Kesehatan Republik Indonesia. Pedoman nasional pelayanan kedokteran jiwa. 2015.
43. Jesulola E, Micalos P, Baguley IJ. Understanding the pathophysiology of depression: From monoamines to the neurogenesis hypothesis model - are we there yet?. *Behav Brain Res*. 2018;341:79–90.
44. Lupien SJ, McEwen BS, Gunnar MR, Heim C. Effects of stress throughout the lifespan on the brain, behaviour and cognition. *Nat Rev Neurosci*. 2009;10(6):434 – 45.
45. Kunugi H, Hori H, Adachi N, Numakawa T. Interface between Hypothalamic-Pituitary-Adrenal axis and Brain-derived neurotrophic factor in expression. *Psychiatry Clin Neurosci*. 2010;64(5):447– 59.
46. Shadrina M, Bondarenko EA, Slominsky PA. Genetics factors in major depression disease. *Front Psychiatry*. 2018;9:334.
47. Soria V, González-Rodríguez A, Huerta-Ramos E, Usall J, Cobo J, Miquel B, et al. Targeting hypothalamic-pituitary-adrenal axis hormones and sex steroids for improving cognition in major mood disorders and schizophrenia: a

- systematic review and narrative synthesis. *Psychoneuroendocrinology*. 2018;93:8–19.
48. Dubovsky AN, Arvikar S, Stern TA, Axelrod L. The Neuropsychiatric Complications of Glucocorticoid Use: Steroid Psychosis Revisited. *Psychosomatics*. 2012;53(2):103 – 15.
49. Thibaut F. Corticosteroid-induced psychiatric disorders: genetic studies are needed. *Eur Arch Psychiatry Clin Neurosci*. 2019;269(6):623 – 5.
50. Macêdo EA, Appenzeller S, Costallat LTL. Depression in systemic lupus erythematosus: gender differences in the performance of the Beck Depression Inventory (BDI), Center for Epidemiologic Studies Depression scale (CES-D), and Hospital Anxiety and Depression Scale (HADS). *Lupus*. 2018;27(2):179–89.
51. Tapia-Arancibia L, Aliaga E, Silhol M, Arancibia S. New insights into brain BDNF function in normal aging and Alzheimer disease. *Brain Res Rev*. 2008;59(1):201 – 20.
52. Numakawa T, Odaka H, Adachi N. Actions of Brain-derived neurotrophin factor in the neurogenesis and neuronal function, and its involvement in the pathophysiology of brain diseases. *Int J Mol Sci*. 2018;19(11):3650.
53. Cattaneo A, Cattane N, Begni V, Pariante CM, Riva MA. The human BDNF gene: peripheral gene expression and protein levels as biomarkers for psychiatric disorders. *Transl Psychiatry*. 2016;6(11):958 – 9.
54. Kowiański P, Lietzau G, Czuba E, Waśkow M, Steliga A, Moryś J. BDNF: a key factor with multipotent impact on brain signaling and synaptic plasticity. *Cell Mol Neurobiol*. 2018;38(3):579 – 83.

55. Naegelin Y, Dingsdale H, Säuberli K, Schädelin S, Kappos L, Barde YA. Measuring and validating the levels of brain-derived neurotrophic factor in human serum. *Eneuro*. 2018;5(2): 419 – 17.
56. Klein AB, Williamson R, Santini MA, Clemmensen C, Ettrup A, Rios M, et al. Blood BDNF concentrations reflect brain-tissue BDNF levels across species. *Int J Neuropsychopharmacol*. 2011;14(03):347 – 53.
57. Pansri P, Phanthong P, Suthprasertporn N, Kitiyanant Y, Tubsuwan A, Dinnyes A, et al. Brain-derived neurotrophic factor increases cell number of neural progenitor cells derived from human induced pluripotent stem cells. *Peer J*. 2021;9:e11388:1–15.
58. Miranda M, Morici JF, Zanoni MB, Bekinschtein P. Brain-derived neurotrophic factor: a key molecule for memory in the healthy and the pathological brain. *Front Cell Neurosci*. 2019;13:363.
59. Ting EYC, Yang AC, Tsai SJ. Role of Interleukin-6 in depressive disorder. *Int J Mol Sci*. 2020;21(6):2194.
60. Zhou C, Zhong J, Zou B. Meta-analyses of comparative efficacy of antidepressant medications on peripheral BDNF concentration in patients with depression. Hashimoto K, ed. *PLOS ONE*. 2017;12(2):e0172270:1–14.
61. Chaturvedi P, Kumar A, Tiwari V, Kumar A. Brain-derived neurotrophic factor levels in acute stroke and its clinical implication. *Wolters Kluwer Health*. 2020;6(3):185 – 90.
62. Mudjihartini N. Brain-derived neurotrophic factor (BDNF) dan proses penuaan: sebuah tinjauan. *J Biomedika Kesehatan*. 2021;4(3):120 – 9.

63. Polacchini A, Metelli G, Francavilla R, Baj G, Florean M, Mascaretti L, et al. A method for reproducible measurements of serum BDNF: comparison of the performance of six commercial assays. *Sci Rep.* 2015;5(1):179 – 89.
64. Trentin F, Signorini V, Manca ML, Cascarano G, Gualtieri L, Schiliro D, et al. Gender differences in SLE: report from a cohort of 417 Caucasian patients. *Lupus Sci Med.* 2023;10(1):1–10.
65. Ramírez Sepúlveda JI, Bolin K, Mofors J, Leonard D, Svenungsson E, Jonsen A, et al. Sex differences in clinical presentation of systemic lupus erythematosus. *Biol Sex Differ.* 2019;10(1):60.
66. Kim JW, Kim HA, Suh CH, Jung JY. Sex hormones affect the pathogenesis and clinical characteristics of systemic lupus erythematosus. *Front Med.* 2022;9:9064.
67. Guéry JC. Why Is systemic lupus erythematosus more common in women?. *Joint Bone Spine.* 2019;86(3):297 – 9.
68. Brinks R, Hoyer A, Weber S, Fischer-Betz R, Sander O, Richter J, et al. Age-specific and sex-specific incidence of systemic lupus erythematosus: an estimate from cross-sectional claims data of 2.3 million people in the German statutory health insurance 2002. *Lupus Sci Med.* 2016;3(1):1–12.
69. Lerang K, Gilboe I, Garen T, Thelle D, Gran J. High incidence and prevalence of systemic lupus erythematosus in Norway. *Lupus.* 2012;21(12):1362 – 69.
70. Sachdeva R, Pal R. The influence of reproductive hormones on systemic lupus erythematosus. *Explor Immunol.* 2022:351– 62.

71. Legorreta-Haquet MV, Santana-Sánchez P, Chávez-Sánchez L, Chávez-Rueda AK. The effect of prolactin on immune cell subsets involved in SLE pathogenesis. *Front Immunol.* 2022;13:1016 – 27.
72. Barnado A, Wheless L, Meyer A, Gilkeson G, Kamen D. Quality of life in patients with systemic lupus erythematosus (SLE) compared with related controls within a unique African American population. *Lupus.* 2012;21(5):563–9.
73. Trisnaramawati F, Satiadarma MP, Soetikno N. Gambaran kecemasan dan depresi pada orang dengan systemic lupus erythematosus (SLE) di rumah sakit x. *J Muara Ilmu Sos Hum Dan Seni.* 2019;3(2):457.
74. Taple BJ, Chapman R, Schalet BD, Brower R, Griffith JW. The impact of education on depression assessment: differential item functioning analysis. *Assessment.* 2022;29(2):272–84.
75. Liao J, Kang J, Li F, Li Q, Wang J, Tang Q, et al. A cross-sectional study on the association of anxiety and depression with the disease activity of systemic lupus erythematosus. *BMC Psychiatry.* 2022;22(1):591.
76. Shaaban A, Tayel M, Hassan E, Salah M, Ibrahim M, Said W. Evaluation of depression and general health assessment among systemic lupus erythematosus patients in relation to disease activity and damage. *Egypt Rheumatol Rehabil.* 2022;49(1):15.
77. Zakeri Z, Shakiba M, Narouie B, Mladkova N, Ghasemi-Rad M, Khosravi A. Prevalence of depression and depressive symptoms in patients with systemic lupus erythematosus: Iranian experience. *Rheumatol Int.* 2012;32(5):1179–87.

78. Raafat HA, El Refai RM, Alrasheed HA, El Din MN. Major depression and disease activity among systemic lupus erythematosus Egyptian females. *Egypt Rheumatol*. 2015;37(4):S1-S6.
79. Fawzy RM, Elshambaky AY, Fahmy ST, Elbhesy MM, Moustafa BA. Study of brain-derived neurotrophic factor in the serum of patients with systemic lupus erythematosus. *Egypt Rheumatol Rehabil*. 2017;44(2):52–7.
80. Shobeiri P, Maleki S, Amanollahi M, Habibzadeh A, Teixeira AL, Rezaei N. Blood levels of brain-derived neurotrophic factor (BDNF) in systemic lupus erythematosus (SLE): a systematic review and meta-analysis. *Adv Rheumatol*. 2023;63(1):8.
81. Wang N, Tian Bailing. Brain-derived neurotrophic factor in autoimmune inflammatory diseases (Review). *Exp Ther Med*. 2021;22(5):1292.
82. Gyorkos A, Baker MH, Miutz LN, Lown DA, Jones MA, Houghton LD. Carbohydrate-restricted diet and exercise increase brain-derived neurotrophic factor and cognitive function: a randomized crossover trial. *Cureus*. 2019:1–9.
83. Cefis M, Chaney Remi, Wirtz J, Meloux A, Quirie A, Leger C, et al. Molecular mechanisms underlying physical exercise-induced brain BDNF overproduction. *Front Mol Neurosci*. 2023;16:1–5.
84. Zhong Y, Zhu Yitong, He T, Wei L, Li Q, Miao Y. Brain-derived neurotrophic factor inhibits hyperglycemia-induced apoptosis and downregulation of synaptic plasticity-related proteins in hippocampal neurons via the PI3K/Akt pathway. *Int J Mol Med*. 2018;43:294 – 304.

85. Fulvia C, Carlo P, Paola B, Cinzia C, Sara R, Enrica C, et al. Genetic factors in systemic lupus erythematosus: contribution to disease phenotype. *J Immunol Res.* 2015;1–3.
86. Liu F, Yang Y, Fan XW, Ning Z, Shuo W, Yi-Jun S, et al. Impacts of inflammatory cytokines on depression: a cohort study. *BMC Psychiatry.* 2024;24(1):195.

