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DAFTAR PUSTAKA

Aboonq, M.S. (2015). Pathophysiology of carpal tunnel syndrome. *Neuroscience Journal*,20(1), pp. 4–9. *www.neurosciencesjournal.org PMC4727604*

Abyad, A. (2016). Update on the Use of Vitamin B12 in Management of pain, 31–39. *Middle east Journal of Internal Medicine*, 9(2), pp.31-39. *https://pdfs.semanticscholar.org/6710/77e55b22105e3288334f2acee9c782f31f2c.pdf*

Akalin E, El Ö, Peker Ö, et al. Treatment of carpal tunnel syndrome with nerve and tendon gliding exercises. *American Journal of Physical Medicine & Rehabilitation*, 81(2), pp.108-113. *DOI: 10.1097/00002060-200202000-00006*

Akulwar, A.S., Ghugare, B.W., Singh, R., et al. (2013): Clinical and electrophysiological evaluation of carpal tunnel syndrome in diabetes mellitus to assess association of age, gender and duration of diabetes on median neuropathy at wrist. *The Health Agenda*, 1(3), pp.71-76.

Alley, D., Suthers, K., Crimmins, E. (2007). Education and Cognitive Decline in Older Americans. *Research o Aging,* 29(1), pp.73-94. *DOI:10.1177/0164027506294245*

Ali, Z., Khan, A., Shah, S.M.A., & Zafa,r A. (2012). Clinical and Electro-Diagnostic Quantification of the Severity of Carpal Tunnel Syndrome. *Annals of Pakistant Institutes Medical Science*, 8(4), pp. 207–212.

Alotaibi, S.N.S., Alqahtani, S.S.M., Alammar, R.M.S., Alqahtani, M.S.A., Alshehri, S.A.M., Alshehri, S.F.S., & Alqarni, S.A.M. (2018). The Prevalence and Patterns of Carpal Tunnel Syndrome and Their Associated Risk Factors Among Diabetic Population In South-West of Kingdom of Saudi Arabia, *The Egyptian Journal of Hospital Medicine*, 70(7), pp.1152-1158. *https://doi.org/10.12816/0044542*

Agustin, C. P. M. (2012). Masa Kerja, Sikap Kerja Dan Kejadian Sindrom Karpal Pada Pembatik. *Jurnal Kesehatan Masyarakat*, *7*(2), pp. 170–176. *https://doi.org/10.15294/kemas.v7i2.2814*

Agustin, C. P. M., Mardiana, dan Budiono, I. (2013).Hubungan Masa Kerja Dan Sikap Kerja Dengan Kejadian Sindrom Karpal Pada Pembatik CV. Pusaka Beruang Lasem. *Unnes Journal of Public Health*,2(2), pp. 74-80. *https://journal.unnes.ac.id/sju/index.php/ujph/article/view/3893*

Amadio, P.C. (2011). Carpal tunnel syndrome: Surgeon‘s management. In: Skirven, T.M., Osterman, A.L., Fedorczyk, J.M., Amadio, P.C., (eds). *Rehabilitation of the Hand and Upper Extremity*. 6th ed. Philadelphia: Elsevier Mosby,pp. 657-665.

Asti, M & Ambar, B.A. (2011). Batik Warisan Adiluhung Nusatara. Yogyakarta: G-media

Atsuta, Y., Iwahara, T., Sugawara, O., Muramoto, T., Watakabe, T., Takemisu, Y. (1994). The study of generating and suppressive factors of ectopic firing in the lumbar dorsal root using an in vivo model. *Clinical Orthopaedics*, 29, pp.441–446.

UNIVERSITAS GADJAH MADA
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Azevedo, J.W.V., Oliveira, A.B., Nascimento, V.G., et.al. (2015). Profile of Patients on Sick Leave with Carpal Tunnel Syndrome. *Acta Ortopedica Brasilleira.* 23(5), pp. 244–246. *DOI:10.1590/1413-785220152305145784*.

Baker, N. A., & Livengood, H. M. (2014). Symptom Severity and Conservative Treatment for Carpal Tunnel Syndrome in Association With Eventual Carpal Tunnel Release. *Journal of Hand Surgery*, 39(9), pp.1–7. *https://doi.org/10.1016/j.jhsa.2014.04.034*

Ballestero-pérez, R., Plaza-manzano, G. and Urraca-gesto, A. (2016).Effectiveness of Nerve Gliding Exercises on Carpal Tunnel Syndrome : A Effectiveness of Nerve Gliding Exercises on Carpal Tunnel Syndrome : A Systematic Review. *Journal of Manipulative and Physiological Therapeutics*, 40(1), pp.50-59. *DOI:10.1016/j.jmpt.2016.10.004.*

Ballestero-Pérez, R., Plaza-Manzano, G., Urraca-Gesto, A., Romo-Romo, F., Atín-Arratibel, M., Pecos-Martín, D., Gallego-Izquierdo, T. and Romero-Franco, N. (2017). Effectiveness of Nerve Gliding Exercises on Carpal Tunnel Syndrome: A Systematic Review. *Journal of Manipulative and Physiological Therapeutics*, 40(1), pp.50-59. *DOI:10.1016/j.jmpt.2016.10.004. Epub 2016 Nov 11.*

Barcenilla , A. , March , L. , Chen , J. , & Sambrook , P. (2012). Carpal tunnel syndrome and its relationship to occupation: A meta-analysis.Rheumatology. *Rheumatology,* 51(2), pp. 250 – 261. *DOI:10.1093/rheumatology/ker108*

Bardak, N., Alp, M., Erhan, B., Paker, N., Kaya, B., Önal, E. (2009). Evaluation of the Clinical Efficacy of Conservative Treatment in the Management of Carpal Tunnel. *Advanced in Therapy*, 26(10),pp.107-116. *DOI:10.1007/s12325-008-0134-7*

Basson, A., Olivier B, Ellis R, Coppieters M, et al. (2017).The Effectiveness of Neural Mobilization for Neuromusculoskeletal Conditions: A Systematic Review and Meta-analysis. *Journal of Orthopaedic & Sports Physical Therapy*, 47(9), pp.593-615. *DOI:10.2519/jospt.2017.7117*

Baysal, O., Altay, Z., Ozcan, C., Ertem, K., Yologlu, S., Kayhan, A. (2006). Comparison of three conservative treatment protocols in carpal tunnel syndrome. *International Journal of Clinical Practice*. 60(7), pp.820-828. *https://doi.org/10.1111/j.1742-1241.2006.00867.x*

Bialosky, J.E., Bishop, M.D., Price, D.D., Robinson, M.E., Vincent, K.R., George, S.Z. (2009). A randomized sham-controlled trial of a neurodynamic technique in the treatment of carpal tunnel syndrome. *Journal of Orthopedic Sports and Physical Therapy*, 39(10), pp.709-723. *DOI:10.2519/jospt.2009.3117.*

Bland, J.D.P. (2000). A neurophysiological grading scale for carpal tunnel syndrome. *Muscle Nerve*, 23, pp.1280-1283. *https://doi.org/10.1002/1097-4598(200008)23:8<1280::AID-MUS20>3.0.CO;2-Y*

Bland, J.D. (2005) The relationship of obesity, age, and carpal tunnel syndrome: more complex than was thought? *Muscle Nerve*, 32(4), pp.527–532. *DOI:10.1002/mus.20408*

UNIVERSITAS GADJAH MADA
PENGARUH PEMBERIAN NERVE GLIDING TERHADAP PERBAIKAN KLINIS CARPAL TUNNEL SYNDROME PADA PEMBATIK DI LENDAH KULONPROGO YOGYAKARTA
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Bonfiglioli, R., Mattioli, S., Fiorentini, C., Graziosi, F., Curti, S., & Violante, F. S. (2007). Relationship between repetitive work and the prevalence of carpal tunnel syndrome in part-time and full-time female supermarket cashiers: A quasi-experimental study. *International Archives of Occupational and Environmental Health*, 80(3), pp. 248–253. *DOI:10.1007/s00420-006-0129-0*

Brininger, M. A. J. T. L., Rogers, J. C., Holm, M. B. and Baker, N. A. (2007). Efficacy of a Fabricated Customized Splint and Tendon and Nerve Gliding Exercises for the Treatment of Carpal Tunnel Syndrome: A Randomized Controlled Trial. *Archives of Physical Medicine and Rehabilitation*, 88(11), pp. 1429-1435. *DOI:10.1016/j.apmr.2007.07.019.*

Burton, C. L., et al. (2018).Trends in the prevalence, incidence and surgical management of carpal tunnel syndrome between 1993 and 2013: An observational analysis of UK primary care records. *British Medical Journal*, 8(6), pp. 1–11. *DOI:10.1136/bmjopen-2017-020166.*

Caliandro, P., La Torre, G., Aprile, I., Pazzaglia, C., Commodari, I., Tonali, P., et al. (2006). Distribution of paresthesias in carpal tunnel syndrome reflects the degree of nerve damage at wrist. *Clinical Neurophysiology*, 117(1), pp.228–231. *DOI: 10.1016/j.clinph.2005.09.001*

Caliandro, P. et al. (2010) 'A new clinical scale to grade the impairment of median nerve in carpal tunnel syndrome', Clinical Neurophysiology. *International Federation of Clinical Neurophysiology*, 121(7), pp. 1066–1071. *DOI:10.1016/j.clinph.2010.02.002.*

Chammas, M., Boretto , J., Burmann, L., Ramos ,R., dos Santos Neto, F., & Silva , J. (2014). Carpal tunnel syndrome Part I (anatomy, physiology, etiology and diagnosis). *Brazilian Orthopedics Review*, 49 (5), pp.7. *http://dx.doi.org/10.1016/ j.rboe.2014.08.001 . r e v b r a s o r t o p . 2 0 1 4;4 9(5):429–436 www.rbo.org.br*

Chang, W., Wu, J., Jiang, J., Yeh, C. and Tsai, C. (2008). Carpal Tunnel Syndrome Treated with a Diode Laser: A Controlled Treatment of the Transverse Carpal Ligament. *Photomedicine and Laser Surgery*, 26(6), pp.551-557. *DOI:10.1089/pho.2007.2234.*

Coppieters, M.W., Alshami, A.M. (2007). Longitudinal excursion and strain in the median nerve during novel nerve gliding exercises for carpal tunnel syndrome. *Journal of Orthopaedic Researchs*, 25(7), pp.972-980. *DOI:10.1002/jor.20310*

Couper, M., Tourangeau, R.&, Conrad, F., et al. (2006). Evaluating the effectiveness of visual analog scales: A web experiment. *Social Science Computer Review*, 23, pp.227-245. *DOI: 10.1177/0894439305281503*

Dahlan M. S, (2009). *Besar sampel dan Cara Pengambilan Sampel dalam Penelitian Kedokteran dan Kesehatan*. 3rd ed. Jakarta: Salemba Medika, pp 72-73

Dekranasda (2019). *Ayo ke Jogja International Batik Biennale 2016*. [online] Panduan Wisata Keliling Dunia. Available at: http://panduanwisata.id/2016/09/28/ayo-ke-jogja-international-batik-biennale-2016/ [Accessed 16 Februari 2017].

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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Dale, A.M., Harris, A.C., Rempel, D., et al. (2013). Prevalence and incidence of carpal tunnel syndrome in US working populations: pooled analysis of six prospective studies. *Scandinavia Journals of Work and Environmental Health,* 39(5), pp. 495-505. *DOI: 10.5271/sjweh.3351*

Delgado, D. A., Lambert, B. S., Boutris, N., McCulloch, P. C., Robbins, A. B., Moreno, M. R., & Harris, J. D. (2018). Validation of Digital Visual Analog Scale Pain Scoring With a Traditional Paper-based Visual Analog Scale in Adults. *Journal of the American Academy of Orthopaedic Surgeons. Global Research & Reviews*, *2*(3), pp.088. *https://doi.org/10.5435/JAAOSGlobal-D-17-00088*

De-La-Llave-Rincon, A. I. Ortega-Santiago R, Ambite-Quesada S, Gil-Crujera A, *et al*. (2012). Response of pain intensity to soft tissue mobilization and neurodynamic technique: A series of 18 patients with chronic carpal tunnel syndrome. *Journal of Manipulative and Physiological Therapeutics. National University of Health Sciences*, 35(6), pp. 420–427. *DOI: 10.1016/j.jmpt.2012.06.002.*

de Krom MC, Knipschild PG, Kester AD M, Thijs CT, Boekkooi PF, Spaans F. (1992) Carpal tunnel syndrome: prevalence in the general population. *Journal of Clinical Epidemiology*, 45(4), pp.373–376. *https://doi.org/10.1016/0895-4356(92)90038-O*

Dodd, J. (2015). Lung Disease as a Determinant of Cognitive Decline and Dementia. *Alzheimer's Research & Therapy,* 7(1), pp. 1-8. *DOI:10.1186/s13195-015-0116-3*

Duncan, S.F.M., & Kakinoki, R. (2017). *Carpal Tunnel Syndrome and Related Median Neuropathies.* Berlin: Springer. *https://doi.org/10.1007/978-3-319-57010-5*

Durham, C. O., & Vanravenstein, K. (2017). It's All in the Wrist: Diagnosis and Management of Carpal Tunnel Syndrome. *Orthopaedic Nursing*, 36(5), pp. 323–327. *https://doi.org/10.1097/NOR.0000000000000390*

Ellis, R. F., Phty, B. Hing WA, and Dip, P. G. (2008). Neural Mobilization: A Systematic Review of Randomized Controlled Trials with an Analysis of Therapeutic Efficacy. *The Journal of Manual & Manipulative Therapy*, 16(1), pp. 8–22. *DOI:10.1179/106698108790818594*

El-helaly, M., Balkhy, H. H. and Vallenius, L. (2017). (2017). Carpal tunnel syndrome among laboratory technicians in relation to personal and ergonomic factors at work. *Journal of Occupational Health*, 59(6), pp.513-520. *DOI:10.1539/joh.16-0279-OA*

Ettema, A.M., Zhao, C., Amadio, P.C., O'Byrne, M.M., An, K.N.(2007).Gliding characteristics of flexor tendon and tenosynovium in carpal tunnel syndrome: a pilot study. *Clinical Anatomy,* 20(3), pp.292-299. *DOI:10.1002/ca.20379*

Fagarasanu, M., & Kumar, S. (2003). Work-Related Carpal Tunnel Syndrome : History Of Carpal Tunnel. *Journal of Musculoskeletal Research*, *7*(2), pp. 87–96. *https://doi.org/10.1142/S0218957703001022*

UNIVERSITAS GADJAH MADA
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Fernández-de-las-Peñas, C., De-la-Llave-Rincón, A.I., Fernán- dez-Carnero, J., Cuadrado, M.L., Arendt-Nielsen, L., Pareja, J.A. (2009). Bilateral widespread mechanical pain sensitivity in carpal tunnel syndrome: evidence of central processing in unilateral neuropathy. *Brain*, 6(1), pp. 1472-1479. *https://doi.org/10.1093/brain/awp050*.

Fernández-De-Las-Peñas, C., Cleland, J. A., Ortega-Santiago, R., De-La-Llave-Rincon, A. I., Martínez-Perez, A., & Pareja, J. A. (2010). Central sensitization does not identify patients with carpal tunnel syndrome who are likely to achieve short-term success with physical therapy. *Experimental Brain Research*, 207(1–2), pp. 85–94. *https://doi.org/10.1007/s00221-010-2436-7*

Fernández-De-Las Peñas, C., Ortega-Santiago, R., De La Llave-Rincón, A.I., Martínez-Perez, A., Fahandezh-Saddi Díaz, H., Martínez-Martín, J., Cuadrado-Pérez, M.L. (2015). Manual Physical Therapy Versus Surgery for Carpal Tunnel Syndrome: A Randomized Parallel-Group Trial. *Journal of Pain*, 16(11), pp.1087–1094. *https://doi.org/10.1016/j.jpain.2015.07.012*

Ferry, S., Pritchard, T., Keenan, J., Croft P. (1998). Estimating the prevalence of delayed median nerve conduction in the general population. *British Journals of Rheumatology*, 37(6), pp.630-635. *DOI:10.1093/rheumatology/37.6.630*

Feuerstein, M., Miller, V.L., Burrell, L.M., Berger R. (1998). Occupational upper extremity disorders in the federal workforce: prevalence, health care expenditures, and patterns of work disability. *Journal of Occupational Environmental Medicine*, 40(6) pp.546–555. *DOI:10.1097/00043764-199806000-00007*.

Franklin, G.M & Friedman, A., (2015). Work Related Carpal Tunnel Syndrome Diagnosis and Treatment Guideline. *Physical Medicine and Rehabilitation Clinics of NA*, 26(3), pp.523-537. *https://doi.org/10.1016/j.pmr.2015.04.003*

Fs, V., Farioli, A., Graziosi, F., Marinelli, F., Curti, S., Tj, A., & Bologna, I. (2017). Carpal tunnel syndrome and manual work: the OCTOPUS cohort, results of a ten-year longitudinal study. *Journal of Work Environmental, and Health*, 42(4), pp. 280–290. *https://doi.org/10.5271/sjweh.3566*

Ganjoo, S., Kaul, D. and Shah, P. (2018). Carpal tunnel syndrome in females: pregnancy and lactation the major risk factors. International Journal of Reproduction, Contraception, Obstetrics and Gynecology, p.3512. International *Journal of Reproduction and Contraception Obstetric and Gynecology*, 7(9), pp.3512-3515. *http://dx.doi.org/10.18203/2320-1770.ijrcog20183366*

Gelberman, R.H., Hergenroeder, P.T., Hargens, A.R., Lundborg, G.N., and Akeson, W.H. (1981). The carpal tunnel syndrome. A study of carpal canal pressures. *Journal of Bone Joint Surgery America*, 63(3), pp.380-383. *DOI:10.2106/00004623-198163030-00009*

Geller, M., Oliveira, L., Nigri, R., Mezitis, S.G., Ribeiro MG,. *et al.* (2017). B Vitamins for Neuropathy and Neuropathic Pain. *Vitamins and Mineral*, 6 (2). *DOI:10.4172/2376-1318.1000161*.

UNIVERSITAS GADJAH MADA
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Ghasemirad ,M., Nosair, E., Vegh, A., Mohammadi A. (2014). A handy review of carpal tunnel syndrome: From anatomy to diagnosis and treatment. *World Journal Radiology*, 6(6), pp.284-300. *DOI:10.4329/wjr.v6.i6.284.*

Giannini, F., et al. (2002). A new clinical scale of carpal tunnel syndrome: Validation of the measurement and clinical-neurophysiological assessment. *Clinical Neurophysiology*, 113(1), pp. 71–77. *DOI:10.1016/S1388-2457(01)00704-0.*

Gomes, I., Becker, J., Ehlers, J.A., and Nora, D.B. (2006). Prediction of the neurophysiological diagnosis of carpal tunnel syndrome from the demographic and clinical data. *Clinical Neurophysiology*, 117(5), pp.964–971. *DOI:10.1016/j.clinph.2005.12.020*

Goodyear-Smith, F., & Arroll, B. (2004). What can family physicians offer patients with carpal tunnel syndrome other than surgery? A systematic review of nonsurgical management. *Annals of Family Medicine*, 2(3), pp.267–273. *https://doi.org/10.1370/afm*

Graham, B. (2008). The value added by electrodiagnostic testing in the diagnosis of carpal tunnel syndrome. *The Journal of Bone and Joint Surgery*, 90(12), pp.2587–2593. *DOI:10.2106/JBJS.G.01362*

Guan, W., Lao, J. I. E., Gu, Y., Zhao, X. I. N., Rui, J., & Gao, K. (2018). Case-control study on individual risk factors of carpal tunnel syndrome, pp. 2761–2766. *https://doi.org/10.3892/etm.2018.5817*

Gül Yurdakul , F., Bodur , H., Oztop Cakmak, O., Ates , C., Sivas , F., Eser , F., & Tasdelen , O. Y. (2015). On the severity of carpal tunnel syndrome: Diabetes or metabolic syndrome. *Journal of Clinical Neurology*, 11(3), pp. 6. *http://dx.doi.org/10.3988/jcn.2015.11.3.234*

Havard Medical School. Carpal Tunnel Syndrome. Tifoq. *http://www.tifaq.com/htrnl. 1998.p.l-10*.

Hawker, G., Mian, S., Kendzerska, T. and French, M. (2011). Measures of adult pain: Visual Analog Scale for Pain (VAS Pain), Numeric Rating Scale for Pain (NRS Pain), McGill Pain Questionnaire (MPQ), Short-Form McGill Pain Questionnaire (SF-MPQ), Chronic Pain Grade Scale (CPGS), Short Form-36 Bodily Pain Scale (SF. *Arthritis Care & Research*, 63(S11), pp.S240-S252. *https://doi.org/10.1002/acr.20543*

Head, K. A. (2006). Peripheral Neuropathy : Pathogenic Mechanisms and Alternative Therapies, 11(4). *Alternative Medicine Review*, 11(4), pp. 294-329.

Heebner, M. L., & Roddey, T. S. (2008). The Effects of Neural Mobilization in Addition to Standard Care in Persons with Carpal Tunnel Syndrome from a Community Hospital. *Journal of Hand Therapy*, *21*(3), pp.229–241. *https://doi.org/10.1197/j.jht.2007.12.001*

Horng, Y.S, Hsieh S.F., Tu, Y.K., Lin, M.C., Horng, Y.S., Wang, J.D., et al. (2011). The Comparative Effectiveness of Tendon and Nerve Gliding Exercises in Patients with Carpal Tunnel Syndrome. *American Journal of Physical Medicine & Rehabilitation*, 90(6), pp. 435–442. *DOI:10.1097/PHM.0b013e318214eaaf.*

UNIVERSITAS GADJAH MADA
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Hough, A.D., Moore, A.P., Jones, M.P. Reduced longitudinal excursion of the median nerve in carpal tunnel syndrome. *Archives of Physiology Medical Rehabilitation*, 88, pp.569-576. *DOI:10.1016/j.apmr.2007.02.015*

Hussein, N., Desmarets, T.n, Seth, M., and Vilchez, R. (2018). Correlation between clinical and electrophysiological findings of carpal tunnel syndrome. *International Physical Medicine & Rehabilitation Journal*, 3(3), pp. 234-238. *DOI:10.15406/ipmrj.2018.03.00109.*

Ibrahim, I., Khan, W.S., Goddard, N., & Smitham, P.(2012). Carpal Tunnel Syndrome : A Review of the Recent Literature. *Open Orthopaedic Journals*, 6, pp. 69–76. *DOI:10.2174/1874325001206010069*

Iyer, K. & Shetty, N. (2013) 'The wrist joint', in Iyer, K. (eds). *Orthopedics of the upper and lower limb* .London, England: Springer. *DOI:10.1007/978-1-4471-4447-2*

Jensen, M.P., Chen, C, and Brugger, A.M. (2003). Interpretation of visual analog scale ratings and change scores: a reanalysis of two clinical trials of post-operative pain. *Journal of Pain*, 4, pp.407–414. *https://doi.org/10.1016/S1526-5900(03)00716-8*

Jk, G & Sana, Q.S. (2015). Potential Benefits of Methylcobalamin : A Review. *Journal of Pharmacology and Therapy*, 3(3), pp.2373-6208. *http://austinpublishinggroup.com/pharmacology-therapeutics/fulltext/ajpt-v3-id1076.php*

Johnson, E.W. (1993). Diagnosis of carpal tunnel syndrome. The gold standard. *American Journal of Physical Medival Rehabilitation*, 72(1), pp. 1.

Karne, S.S & Bhalerao, N.S. (2016). Carpal Tunnel Syndrome in Hypothyroidism. *Journal of Clinical and Diagnostic Research*, 10(2), pp.36-38. *DOI:10.7860/JCDR/2016/16464.7316*

Kececi, H. and Degirmenci, Y. (2006). Hormone replacement therapy in hypothyroidism and nerve conduction study. *Clinical Neurophysiology*, 36(2), pp.79-83. *DOI:10.1016/j.neucli.2006.04.001*

Kersten, P., White, P. J., & Tennant, A. (2014). Is the pain visual analogue scale linear and responsive to change? An exploration using rasch analysis. *Plos One*, *9*(6). *https://doi.org/10.1371/journal.pone.0099485*

Kim, S.D. (2015). Efficacy of tendon and nerve gliding exercises for carpal tunnel syndrome: a systematic review of randomized controlled trials. *Journal of Physical Therapy Science*, 27(8), pp. 2645–2648. *DOI:10.1589/jpts.27.2645*

Kleopa, K.A.(2015). In the clinic. Carpal tunnel syndrome. *Annals of Internal Medicine*, 163(5), pp. 2-14. *DOI:10.7326/AITC201509010*

Kotwal, P.P.. and Varshney, M.K. (2011). Carpal Tunnel Syndrome : Current Concepts. *JIMSA*, 24(1), pp. 21–25. *http://medind.nic.in/jav/t11/i1/javt11i1p21.pdf*

Kurniawan, M., Suharjanti, I., Pinzon, R.T. (2016). *Acuan Panduan Praktek Klinik Neurologi*. Jakarta: Perhimpunan Dokter Spesialis Saraf Indonesia.

Lajoie, A.S., McCabe, S.J., Thomas B., Edgell, S.E. (2005). Determining the sensitivity and specificity of common diagnostic test for carpal tunnel syndrome using latent class analysis. *Plastic Reconstruction Surgery*, 116(2), pp.502-507. *DOI:10.1097/01.prs.0000172894.21006.e2*

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Langade, D., S Jayaram and Khobragade, A. (2009). Methylcobalamin, Pyridoxine and Nicotinamide in Diabetic Neuropathy: A Review. *Indian Journal of Clinical Practice*, 20(1). *https://www.researchgate.net/publication/289916259*

LeBlanc, K.E. & Cestia, W. (2011). Carpal tunnel syndrome. *American Family Physician*, 83(8), pp. 952–958. *https://www.ncbi.nlm.nih.gov/pubmed/21524035*

Levine D. W., Simmons B. P., Koris M. J, L. et al. (1993). A self-administered questionnaire for the assessment of severity of symptoms and functional status in carpal tunnel syndrome. *The Journal of Bone and Joint Surgery*, 75(11), pp.1585-1592. *DOI:10.2106/00004623-199311000-00002*

Lim, Y. H., Chee, D. Y., Girdler, S. and Lee, H. C. (2017). Median Nerve Mobilization Techniques in The Treatment of Carpal Tunnel Syndrome: A Systematic Review. *Journal of Hand Therapy*. *DOI:10.1016/j.jht.2017.06.019.*

Luckhaupt, S.E., Dahlhamer, J.M., Ward, B.W., Sweeney, M.H., Sestito, J.P., Calvert, G.M. (2010). Prevalence and work-relatedness of carpal tunnel syndrome in the working population, United States, 2010 national health interview survey. *American Journal of Industrial Medicine*, 56(6), pp.615-624. *DOI:10.1002/ajim.22048*

Maghsoudipour, M., Moghimi, S., Dehghaan, F. and Rahimpanah, A. (2008). Association of Occupational and Non-occupational Risk Factors with the Prevalence of Work Related Carpal Tunnel Syndrome. *Journal of Occupational Rehabilitation*, 18(2), pp.152-156. *https://doi.org/10.1007/s10926-008-9125-4*

Mahoney, J. (1995). Cummulative Trauma Disorders and Carpal Tunnel Syndrome: Sorting out the Confusion. *Canadian Journal of Plastic Surgery*, 3(4), pp. 185-189. *https://doi.org/10.1177/229255039500300404*

Maulana, U & Nurhadi. (2016). Strategi Pengembangan Kawasan Dalam Mendukung Peningkatan Daya Saing Antar Kecamatan Di Kabupaten Kulon Progo. *Geomedia*, 14(1), pp. 56-64. *https://journal.uny.ac.id/index.php/geomedia/article/view/13777/9265*

Mckeon, J.M.M. and Yancosek, K.E. (2008). Neural Gliding Techniques for the Treatment of Carpal Tunnel Syndrome : A Systematic Review. *Journal of sport rehabilitation*, 17(3), pp.324-341. *DOI:10.1123/jsr.17.3.324*

Merijanti, L.T. (2009). Body mass index as predictor of carpal tunnel syndrome among garment workers. *Universa Medicina*, 28(3), pp. 3–8. DOI: *http://dx.doi.org/10.18051/UnivMed.2009.v28.146-151*

Mondelli, M., Ginanneschi, F., Rossi, S., Reale, F., Padua, L., and Giannini F. (2002). Inter-observer reproducibility and responsiveness of a clinical severity scale in surgically treated carpal tunnel syndrome. *Acta Neurology Scandinavica*, 106(5), pp. 263–268. *https://doi.org/10.1034/j.1600-0404.2002.01368.x*

Moersid, A.F. (2013). Re-Investasi Batik Dan Identitas Indonesia Dalam Arena Pasar Global, 1(2). pp. 121-128. *https://e-journal.jurwidyakop3.com/index.php/jurnal-ilmiah/article/view/120*

UNIVERSITAS GADJAH MADA
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Muller, M., Tsui, D., Schnurr, R., Biddulph-Deisroth, L., Hard, J., MacDermid, J.C. (2004). Effectiveness of hand therapy interventions in primary management of carpal tunnel syndrome: a systematic review. *Journal of Hand Therapy*. 17, pp.210-228. *DOI:10.1197/j.jht.2004.02.009*

Mutiawati, E., Meliala, L., Aji, D., Wasito, W., & Muchlisin, Z.A. (2001). A preliminary study on the effect of methylcobalamin application on reducing neuropathic pain. *Human & Veterinary Medicine International Journal of the Bioflux Society*, 7(2), pp. 101–103. *Phttp://www.hvm.bioflux.com.ro*

Newington, L., Harris, E. C., & Walker-Bone, K. (2015). Carpal tunnel syndrome and work. *Best Practice and Research. Clinical Rheumatology*, 29(3), pp. 440–453. *https://doi.org/10.1016/j.berh.2015.04.026*

Ng, A.W.H., Grif, J.F., Lee, R.K.L., Tse, W.L., Wong, C.W.Y., & Ho, P.C. (2017). Ultrasound carpal tunnel syndrome : additional criteria for diagnosis. *Clinical Radiology*, 1(8), pp. 1-8. *https://doi.org/10.1016/j.crad.2017.07.025*

Nora, D.B., Becker, J., Ehlers, J.A., and Gomes, I. (2005). What symptoms are truly caused by median nerve compression in carpal tunnel syndrome. *Clinical Neurophysiology*, 116, pp.275-283. *DOI:10.1016/j.clinph.2004.08.013*

O'Connor, D., Marshall, S., Massy-Westropp, N. and Pitt, V. (2003). Non-surgical treatment (other than steroid injection) for carpal tunnel syndrome. *Cochrane Database of Systematic Reviews*. *DOI:10.1002/14651858.CD003219*

Okamura, A., Meirelles, L.M., Fernandes, C.H., Raduan, N.J., Dos, S.J.B., Faloppa, F (2014). Evaluation of patients with carpal tunnel syndrome treated by endoscopic technique. *Acta Ortopedica Brasileira*, 22(1), pp.29-33. *DOI:10.1590/S1413-78522014000100005.*

Oktayoglu, P. (2015). Assessment of the Presence of Carpal Tunnel Syndrome in Patients with Diabetes Mellitus, Hypothyroidism and Acromegaly. *Journal of Clinical Diagnostic and Research*, 9(6), pp.14-18. *DOI:10.7860/JCDR/2015/13149.6101*

Padua, L., Padua, R., LoMonaco, M., Aprile, I., Tonali, P. (1999). Multiperspective assessment of carpal tunnel syndrome. A multicenter study. *Neurology*, 53, pp.1654-1659. : *https://doi.org/10.1212/WNL.53.8.1654*

Palumbo, C.F., Szabo, R.M., and Olmsted, S.L. (2000) The effects of hypothyroidism and thyroid replacement on the development of carpal tunnel syndrome. *Journal of Hand Surgery*, 25, pp. 734-739. 2000. *https://doi.org/10.1053/jhsu.2000.8642*

Pangestuti, A.A. and Widajati, N. (2014). Faktor yang Berhubungan dengan Keluhan Carpal Tunnel Syndrome pada Pekerja Gerinda di PT DOK dan Perkapalan Surabaya. *The Indonesian Journal of Occupational Safety and Health*, 3(1), pp. 14–24.

Pinar, L., Enhos, A., Ada, S., Gungor, N., Enhos, A. (2005). Can we use nerve gliding exercises in women with carpal tunnel syndrome? *Advances in Therapy*, 22(5), pp.467-475. *DOI:10.1007/BF02849867*

UNIVERSITAS GADJAH MADA
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Prasetyo, Anindito. 2010. *Batik Karya Agung Warisan Budaya Dunia*. Yogyakarta: Pura Pustaka.

Purnell, D.C., Daly, D.D., Lipsconb, P.R. (1961). Carpal tunnel syndrome associated with myxedema. *Archives of Internal Medicine*, 108(5), pp.751-756. *DOI:10.1001/archinte.1961.03620110091012*

Rempel D., Dahlin L., Lundborg G. (1999). Pathophysiology of nerve compression syndromes: response of peripheral nerves to loading. *The Journal of Bone and Joint Surgery*, 8(11) pp. 1600–1610. *DOI:10.2106/00004623-199911000-00013*

Roll, S.C., Volz, K., Fahy, C.M., Evans, K.D. (2015). Carpal tunnel syndrome severity staging using sonographic and clinical measures. *Muscle Nerve*, 51(6), pp.838–845. *DOI:10.1002/mus.24478*

Rosenbaum, R.B., Ochoa, J.L., Heinemann, B., Stoneham. (1993). Carpal tunnel syndrome and other disorders of the median nerve. *Muscle and Nerve*, 16(8), pp.197-231. *https://doi.org/10.1002/mus.880160813*

Rossa, T.D. & Lakoro, R. (2011). Perancangan Desain Motif Batik Berkarakter Kota Surabaya, 1–6. Jurusan Desain Produk Industri, Fakultas Teknik Sipil dan Perencanaan Institut Teknologi Sepuluh Nopember (ITS). diakses *https://anzdoc.com/perancangan-desain-motif-batik-berkarakter-kota-surabaya.html*

Rticle, C.R.A. et al. (2017). Median nerve mobilization techniques in the treatment of carpal tunnel syndrome : A systematic review. *Journal of Hand Therapy*, 30(4), pp. 397–406. *DOI:10.1016/j.jht.2017.06.019.*

Sambandam, S., Priyanka, P., Gul, A. and Ilango, B. (2008). Critical analysis of outcome measures used in the assessment of carpal tunnel syndrome. *International Orthopaedics*, 32(4), pp.497-504. *DOI:10.1007/s00264-007-0344-7*

Saint-lary, O., Rébois, A., Mediouni, Z., Descatha, A. (2015) .Carpal tunnel syndrome : primary care and occupational factors. *Frontiers in Medicine*, 2, pp. 1–4. *DOI:10.3389/fmed.2015.00028*

Sastroasmoro, S., Ismael, S. 2002. *Dasar-Dasar Metodologi Penelitian Klinis*. 2ed. Jakarta: Sagung Seto.

Sastroasmoro, S., Ismael, S. 2011. Inferensi: Dari Sampel ke Populasi. *In: Dasar-Dasar Metodologi Penelitian Klinis.* Jakarta: Sagung Seto, pp. 14-30.

Sato, Y. et al. (2005). Amelioration by mecobalamin of subclinical carpal tunnel syndrome involving unaffected limbs in stroke patients. *Journal of the Neurological Sciences*, 231, pp. 13–18. *DOI: 10.1016/j.jns.2004.12.005.*

Sa'du, Abdul Aziz. 2010. *Buku Panduan Mengenal & Membuat Batik.* Yogyakarta: Harmoni

Schiller, F. and Kolb, F.O. (1954). Carpal tunnel syndrome in acromegaly. *Neurology*, 4, pp.271–282. *https://doi.org/10.1212/WNL.4.4.271*

Shaffi A.S., Anas, B., Aref, A., et al. (2015). Prevalence and associated factors of carpal tunnel syndrome (CTS) among medical laboratory staff at king saud university hospitals, KSA. *Pakistan Journal of Medical Sciences*, 31(2), pp. 331–335. *DOI:10.12669/pjms.312.6831*.

UNIVERSITAS GADJAH MADA
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Shiri, R., Heliövaara, M., Moilanen, L., Viikari, J., Liira, H., & Viikari-juntura, E. (2011). Associations of cardiovascular risk factors, carotid intima-media thickness and manifest atherosclerotic vascular disease with carpal tunnel syndrome. *BMC Musculoskeletal Disorders*, 12(1), pp.80. *https://doi.org/10.1186/1471-2474-12-80*

Shirabe, T., Tawara, S., Terao, A., Araki, S. (1975). Myxedematous polyneuropathy: a light and electron microscobic study of the peripheral nevre and muscle. *Journal of Neurology and Psychiatry*, 38(3), 241–247. *DOI:10.1136/jnnp.38.3.241*

Sim, S.E., Gunasagaran, J., Goh, K., Ahmad, T.S,. et al. (2018). Short-term clinical outcome of orthosis alone vs combination of orthosis, nerve, and tendon gliding exercises and ultrasound therapy for treatment of carpal tunnel syndrome. *Journal of Hand Therapy*, pp. 3–7. *DOI:10.1016/j.jht.2018.01.004*.

Solomon, D.H., Katz, J.N., Bahn, R., Mogun, H., & Avorn, J. (1999). Nonoccupational risk factors for carpal tunnel syndrome. *Journal of General Internal Medicine*, 14, pp.310-314.

Spinner, R.J., Bachman, J.W., Amadio, P.C. (1989). The many faces of carpal tunnel syndrome. *Mayo Clinic Proceedings*, 64(7), pp.829–836. *https://doi.org/10.1016/S0025-6196(12)61756-X*

Supriyono, Primus. 2016. The Heritage of Batik-Identitas Pemersatu Bangsa: Penerbit Andi

Susanto, W.E. & Wibisono, (2015). Perancangan Website Sebagai Media Informasi Dan Promosi Batik Khas Kabupaten Kulonprogo Guntur. *Jurnal Evolusim*, 3(2).

Tana L. (2003). Sindrom terowongan karpal pada pekerja : pencegahan dan pengobatannya, Pusat Penelitian dan Pengembangan Pemberantasan Penyakit, Badan Penelitian dan Pengembangan Kesehatan Departemen Kesehatan RI. *Jurnal Kedokter Trisakti*, 22(3), pp 99-104. *http://www.univmed.org/wp-content/uploads/2011/02/Lusianawaty.pdf*

Tana, L. et al. (2004). Carpal Tunnel Syndrome pada Pekerja Garmen di Jakarta. *Buletin Penelitian Kesehatan*, 32(2), pp. 73–82.

Tanaka, S., Deanna, K.W., Seligman, P.J. (1995). Prevalence and Work-relatedness of Self Reported Carpal Tunnel Syndrome Among U.S Workers: Analysis of The Occupational Health Supplement Data of 1988 National Health Supplement Data of 1988. *American Journal of Industrial Medicine,* 27(4), pp.451-470. *http://dx.doi.org/10.1002/ajim.4700270402*

Toesca A., Pagnotta A., Zumbo A., & Sadun R. (2008). Estrogen and progesterone receptors in carpal tunnel syndrome. *Cell Biology International*, 32(1), pp.75-79. *DOI:10.1016/j.cellbi.2007.08.014*

Torres, C.F., Moxley, R.T. (1990). Hypothyroid neuropathy and myopathy: clinical and electrodiagnostic longitudinal findings. *Journal of Neurology*, 237(4), pp.271–274.

Totten, P.A., Hunter, J.M. (1991). Therapeutic techniques to enhance nerve gliding in thoracic outlet syndrome and carpal tunnel syndrome. *Hand Clinics*, 7(3), pp.505-520. *https://www.ncbi.nlm.nih.gov/pubmed/1939356*

UNIVERSITAS GADJAH MADA
PENGARUH PEMBERIAN NERVE GLIDING TERHADAP PERBAIKAN KLINIS CARPAL TUNNEL SYNDROME PADA PEMBATIK DI LENDAH KULONPROGO YOGYAKARTA
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

Tyas, F.Y. (2013). Analisis Semiotika Motif Batik Khas Samarinda, eJournal Ilmu Komunikasi, 1(4), pp. 328–339.

Uchiyama, S., *et al.* (2010). Current concepts of carpal tunnel syndrome: Pathophysiology, treatment, and evaluation. *Journal of Orthopaedic Science*, 15(1), pp. 1–13. *DOI: 10.1007/s00776-009-1416-x*

Van Rijn, R.M., Huisstede, B.M.A., Koes, B.W., & Burdorf,A. (2009). Associations between work-related factors and the carpal tunnel syndrome - A systematic review. *Scandinavian Journal of Work, Environment and Health*, 35(1), pp. 19–36. *https://doi.org/10.5271/sjweh.1306*

Werner, R.A., Albers, J.W., Alfred F., Armstrong T.J. (1994). The relationship between body mass index and the diagnosis of carpal tunnel syndrome. *Muscle and Nerve*, 17(6), pp. 632–36. *DOI:10.1002/mus.880170610*

Washington State Department of Labor and Industries (2014). Conservative care options for occupational carpal tunnel syndrome. Retrieved from *http://www.lni. wa.gov/ClaimsIns/Files/OMD/IICAC/2014Work-RelatedCarpalTunnelSyndrome.pdf*

T. Watanabe, R. Kaji, N. Oka, W. Bara, and J. Kimura. (1994). Ultra-high dose methylcobalamin promotes nerve regeneration in experimental acrylamide neuropathy. *Journal of the Neurological Sciences*, 122(2), pp. 140-143. *DOI:10.1016/0022-510X(94)90290-9*

Wilder-Smith, E.P., Lirong, L., Seet, R.C.S., Lim, E.C.H. (2006). Symptoms associated with electrophysiologically verified carpal tunnel syndrome in Asian patients. *Journal of Hand Surgery*, 31(3), pp. 326–330. *https://doi.org/10.1016/j.jhsb.2005.12.017*

Wolny, T., Linek, P., & Saulicz, E. (2016). Overall health status in patients with mild to moderate carpal tunnel syndrome : A case-control study. *Journal of Hand Therapy*, 30(3), pp.293-298. *https://doi.org/10.1016/j.jht.2016.10.003*

Wolny, T. and Linek, P. (2018). Is manual therapy based on neurodynamic techniques effective in the treatment of carpal tunnel syndrome? A randomized controlled trial. *Clinical Rehabilitation*. *DOI:10.1177/0269215518805213.*

Wirjoatmodjo,, K. (2000). *Anestesiologi dan Reanimasi Modul Dasar Untuk Pendidikan S1 Kedokteran*. Jakarta: Direktorat jenderal pendidikan Tinggi Departemen Pendidikan Nasional, pp. 114-129

Younes, T. and Elattar, E. (2013). Electrophysiological assessment of hand elevation test in the diagnosis of carpal tunnel syndrome. *Egyptian Rheumatology and Rehabilitation*, 40(4), p.203.

Yugueros, P., Berger, R.A. (2002). 'Anatomy of the carpal tunnel', in Luchetti, R., Amadio, P. *Carpal tunnel syndrome.* Springer: Berlin.

Wolny, T., Linek, P., Saulicz, E, Shacklock M, Myśliwiec Al. (2017). Efficacy of Manual Therapy Including Neurodynamic Techniques for the Treatment of Carpal Tunnel Syndrome: A Randomized Controlled Trial. *Journal of Manipulative and Physiological Therapeutics*, 40(4), pp. 263–272. *DOI:10.1016/j.jmpt.2017.02.004.*Younes, T. and Elattar, E. (2013). Electrophysiological assessment of hand elevation test in the diagnosis of

UNIVERSITAS GADJAH MADA
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Universitas Gadjah Mada, 2019 | Diunduh dari http://etd.repository.ugm.ac.id/

carpal tunnel syndrome. *Egyptian Rheumatology and Rehabilitation*, 40(4), p.203. *DOI:10.4103/1110-161X.123808.*

Zain, N.H.M., Jaafar, A., & Razak, F.H.A. (2014). Severity Scoring Of Symptoms Associated With Carpal Tunnel Syndrome Based on Recall Of Computer Game Playing Experiences. *Journal of Theoretical and Applied Information Technology*, 63(1).

Zanette, G., Marani, S., Tamburin, S. Extra-median spread of sensory symptoms in carpal tunnel syndrome suggests the presence of pain-related mechanisms. *Pain*, 122, pp.264–270. *DOI:10.1016/j.pain.2006.01.034*

Zhang, Y. & Ning, G.D. (2008). Mecobalamin. 'Drug Evaluation', Literature Review in Expert Opinion on Investigational Drugs , 17(6), pp.953-964. *DOI: 10.1517/13543784.17.6.953*

Zhang, M., Han, W., Hu, S. and Xu, H. (2013). Methylcobalamin: A Potential Vitamin of Pain Killer. *Neural Plasticity*, 2013, pp.1-6. *DOI:10.1155/2013/424651*

Zimmerman, M., Dahlin, E., Thomsen, N., Andersson, G., Björkman, A. and Dahlin, L. (2016). Outcome after carpal tunnel release: impact of factors related to metabolic syndrome. *Journal of Plastic Surgery and Hand Surgery*,51(3),pp.165-171. *https://doi.org/10.1080/2000656X.2016.1210521*