



## DAFTAR PUSTAKA

- AlOmar, R. S., AlShamlan, N. A., Alawashiz, S., Badawood, Y., Ghwoidi, B. A., & Abugad, H. (2021). Musculoskeletal symptoms and their associated risk factors among Saudi office workers: a cross-sectional study. *BMC Musculoskeletal Disorders*, 22(1), 1–9. <https://doi.org/10.1186/s12891-021-04652-4>
- Ahmadifar, M., Balochkhaneh, A., Bidel, H., Rafeemanesh, E., & Yazdi, D. K. (2019). Science Arena Publications International journal of Business Management. 4(2), 82–89. [www.sciarena.com](http://www.sciarena.com)
- Bintang, S. S. B. S., . A., Mutiara, R., Zannah, M., & Febri Suryanto, D. T. (2021). Faktor - Faktor Yang Mempengaruhi Timbulnya Nyeri Punggung Bawah Pada Karyawan Work From Home Dimasa Pandemi Covid 19. *Jurnal Kesmas Dan Gizi (Jkg)*, 4(1), 38–44. <https://doi.org/10.35451/jkg.v4i1.826>
- Carroll, N., Sadowski, A., Laila, A., Hruska, V., Nixon, M., Ma, D. W. L., & Haines, J. (2020). The impact of covid-19 on health behavior, stress, financial and food security among middle to high income canadian families with young children. *Nutrients*, 12(8), 1–14. <https://doi.org/10.3390/nu12082352>
- Choi K, Park JH, C. H. (2013). *Prevalence of musculoskeletal symptoms related with activities of daily living and contributing factors in Korean adults. J Prev Med Public Health.* .2013.46.1.39. 46(1), 39–49.
- CNN Indonesia. (2020). Kilas Balik Pandemi Covid-19 di Indonesia. 11/11/2020, 4–11. <https://www.cnnindonesia.com/nasional/20201110123516-25-568018/kilas-balik-pandemi-covid-19-di-indonesia>
- Condrowati, C., & Bachtiar, F. (2021). Hubungan antara Posisi Postur Kerja dengan Keluhan Nyeri Leher pada Pekerja di Indonesia di Masa Pandemi Covid-19. *Journal of Health, Education and Literacy (J-Healt)*, 3(2), 116–122. <https://ojs.unsulbar.ac.id/index.php/j-healt/article/view/946>



UNIVERSITAS  
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Universitas Gadjah Mada, 2023 | Diunduh dari <http://etd.repository.ugm.ac.id/>

- Cunningham, L. S., & Kelsey, J. L. (1984). Epidemiology of musculoskeletal impairments and associated disability. *American Journal of Public Health*, 74(6), 574–579. <https://doi.org/10.2105/AJPH.74.6.574>
- da Costa, B. R., & Vieira, E. R. (2008). Stretching to reduce work-related musculoskeletal disorders: A systematic review. *Journal of Rehabilitation Medicine*, 40(5), 321–328. <https://doi.org/10.2340/16501977-0204>
- Dockrell, S., Earle, D., & Galvin, R. (2010). Computer-related posture and discomfort in primary school children: The effects of a school-based ergonomic intervention. *Computers and Education*, 55(1), 276–284. <https://doi.org/10.1016/j.compedu.2010.01.013>
- Ekpanyaskul, C., & Padungtod, C. (2021). Occupational Health Problems and Lifestyle Changes Among Novice Working-From-Home Workers Amid the COVID-19 Pandemic. *Safety and Health at Work*, 12(3), 384–389. <https://doi.org/10.1016/j.shaw.2021.01.010>
- Emerson, S., Emerson, K., & Fedorczyk, J. (2021). Computer workstation ergonomics: Current evidence for evaluation, corrections, and recommendations for remote evaluation. *Journal of Hand Therapy*, 34(2), 166–178. <https://doi.org/10.1016/j.jht.2021.04.002>
- Fogleman, M., & Lewis, R. J. (2002). Factors associated with self-reported musculoskeletal discomfort in video display terminal (VDT) users. *International Journal of Industrial Ergonomics*, 29(6), 311–318. [https://doi.org/10.1016/S0169-8141\(01\)00071-3](https://doi.org/10.1016/S0169-8141(01)00071-3)
- Gallagher, S., & Heberger, J. R. (2013). Examining the interaction of force and repetition on musculoskeletal disorder risk: A systematic literature review. *Human Factors*, 55(1), 108–124. <https://doi.org/10.1177/0018720812449648>
- Ge, H., Sun, X., Liu, J., & Zhang, C. (2018). The status of musculoskeletal disorders



and its influence on the working ability of Oilworkers in Xinjiang, China.

*International Journal of Environmental Research and Public Health, 15(5).*

<https://doi.org/10.3390/ijerph15050842>

Gerding, T., Syck, M., Daniel, D., Naylor, J., Kotowski, S. E., Gillespie, G. L., Freeman, A. M., Huston, T. R., & Davis, K. G. (2021). An assessment of ergonomic issues in the home offices of university employees sent home due to the COVID-19 pandemic. *Work, 68*(4), 981–992. <https://doi.org/10.3233/WOR-205294>

Ghasemkhani, M., Mahmudi, E., & Jabbari, H. (2008). Musculoskeletal symptoms in workers. *International Journal of Occupational Safety and Ergonomics, 14*(4), 455–462. <https://doi.org/10.1080/10803548.2008.11076784>

Hakala, P. T., Rimpelä, A. H., Saarni, L. A., & Salminen, J. J. (2006). Frequent computer-related activities increase the risk of neck-shoulder and low back pain in adolescents. *European Journal of Public Health, 16*(5), 536–541. <https://doi.org/10.1093/eurpub/ckl025>

Hamburg, M. (1974). *Basic Statistics : A Modern Approach.*

Hamilton, I. S. (2007). *Dictionary of Psychological Testing : Assesment and Treatment.*

Harcombe, H., McBride, D., Derrett, S., & Gray, A. (2009). Prevalence and impact of musculoskeletal disorders in New Zealand nurses, postal workers and office workers. *Australian and New Zealand Journal of Public Health, 33*(5), 437–441. <https://doi.org/10.1111/j.1753-6405.2009.00425.x>

Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence-Based Nursing, 18*(3), 66–67. <https://doi.org/10.1136/eb-2015-102129>

[https://himmelfarb.gwu.edu/tutorials/studydesign101cohorts.cfm.](https://himmelfarb.gwu.edu/tutorials/studydesign101cohorts.cfm) (n.d.).



Hu, Y., Xu, Q., Shi, J., Lin, X., Fei, J., Hu, Y., Mei, S., & Wu, X. (2021). Poor Uncorrected Visual Acuity and Association With Sleep Duration and Screen

Time: A Dose–Response Relationship Study. *Dose-Response*, 19(4), 1–8.

<https://doi.org/10.1177/15593258211042161>

Irma, I., Lestari, I., & Kurniawan, A. R. (2019). Faktor Yang Berhubungan Dengan Keluhan Subjektif Kelelahan Mata Pada Pengguna Komputer. *Jurnal Kesehatan P*, 8(1), 15–23.

Izzaty, R. E., Astuti, B., & Cholimah, N. (1967). 濟無No Title No Title No Title.

*Angewandte Chemie International Edition*, 6(11), 951–952., 1(3), 5–24.

Janwantanakul, P., Pensri, P., Jiamjarasrangsri, V., & Sinsongsook, T. (2008). Prevalence of self-reported musculoskeletal symptoms among office workers. *Occupational Medicine*, 58(6), 436–438. <https://doi.org/10.1093/occmed/kqn072>

Kelts, G. I., McMains, K. C., Chen, P. G., & Weitzel, E. K. (2015). Monitor Height Ergonomics: A Comparison of Operating Room Video Display Terminals. *Allergy & Rhinology*, 6(1), ar.2015.6.0119.

<https://doi.org/10.2500/ar.2015.6.0119>

Kuorinka, I., Jonsson, B., Kilbom, A., Vinterberg, H., Biering-Sørensen, F., Andersson, G., & Jørgensen, K. (1987). Standardised Nordic questionnaires for the analysis of musculoskeletal symptoms. *Applied Ergonomics*, 18(3), 233–237. [https://doi.org/10.1016/0003-6870\(87\)90010-X](https://doi.org/10.1016/0003-6870(87)90010-X)

Laraz, L. G., Dewanti, L., Andriati, A., & Sulistiawati, S. (2020). The Correlation between Human Posture and Musculoskeletal Disorder of Upper Extremities among Computer Workers at Indonesian State Owned Enterprises in Surabaya. *JUXTA: Jurnal Ilmiah Mahasiswa Kedokteran Universitas Airlangga*, 11(1), 28. <https://doi.org/10.20473/juxta.v11i12020.28-31>

Lewis, R. J., Fogelman, M., Deeb, J., Crandall, E., & Agopsowicz, D. (2001).



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SURVEI STASIUN KERJA DAN KELUHAN OTOT RANGKA PEKERJA INDONESIA PENGGUNA  
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TATA IRFADINATA, Ardiyanto, Ph.D., AEP.

Universitas Gadjah Mada, 2023 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Effectiveness of a VDT ergonomics training program. *International Journal of Industrial Ergonomics*, 27(2), 119–131. [https://doi.org/10.1016/S0169-8141\(00\)00043-3](https://doi.org/10.1016/S0169-8141(00)00043-3)

G. Li et al., —The impact of mouse weight and connection type on muscle activity and performance while gaming,|| Proceedings of the Human Factors and Ergonomics Society Annual Meeting, vol. 63, no. 1, pp. 1969–1971, Nov. 2019, doi: 10.1177/1071181319631458.

J. W. Owens, J. Teves, B. Nguyen, A. Smith, M. C. Phelps, and B. S. Chaparro, —Examination of Dual vs. Single Monitor Use during Common Office Tasks,|| Proceedings of the Human Factors and Ergonomics Society Annual Meeting, vol. 56, no. 1, pp. 1506–1510, Sep. 2012, doi: 10.1177/1071181312561299.

Li, Q., Guan, X., Wu, P., Wang, X., Zhou, L., Tong, Y., Ren, R., Leung, K. S. M., Lau, E. H. Y., Wong, J. Y., Xing, X., Xiang, N., Wu, Y., Li, C., Chen, Q., Li, D., Liu, T., Zhao, J., Liu, M., ... Feng, Z. (2020). Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus–Infected Pneumonia. *New England Journal of Medicine*, 382(13), 1199–1207.  
<https://doi.org/10.1056/nejmoa2001316>

Maki, S., Sakakibara, Y., & Hisanaga, N. (2021). Five-year survey of personal computer work by the staff of a teacher training university and affiliated schools. *Health Behavior and Policy Review*, 8(5), 394–487.  
<https://doi.org/10.14485/HBPR.8.5.1>

Munnangi, S., & Boktor, S. W. (2019). Epidemiology Of Study Design. In *StatPearls*. <https://www.ncbi.nlm.nih.gov/books/NBK470342/>

Occupational Safety and Health Administration (OSHA, 1970)

Padjadjaran, U., Padjadjaran, U., & Padjadjaran, U. (2022). *Ergonomics Analysis of Computer Use in Distance Learning during the Pandemic of COVID-19*. 3(1),



9–19.

Petreanu, V., Seracin, A. M., & Iordache, R. (2016). Musculoskeletal disorders in visual display unit ( VDU ) tasks. *Assessment, July*, 3, 3.

Portier, K. M., Fabi, G., & Darius, P. H. (2000). Study design and data analysis issues. *Artificial Reef Evaluation: With Application to Natural Marine Habitats*, 21–50. <https://doi.org/10.1201/9781420036633.ch2>

Pravitasari, A., Ardisasmita, M., Indrayatna, F., & Yulita, I. (2022). Ergonomics analysis of computer use in distance learning during the pandemic of covid-19. REKA ELKOMIKA: Jurnal Pengabdian Kepada Masyarakat, 3(1), 9–19. <https://doi.org/10.26760/rekaelkomika.v3i1.9-19>

Perhimpunan Ergonomi Indonesia (PEI).

Rahul Jain, Kunj Bihari Rana, M. L. M. (2021). *Association of individual and device usage factors with musculoskeletal disorders amongst handheld devices users during homestay due to pandemic*. 14(6).

Robin Hornik Parritz; Michael F Troy. (2018). *Disorders of childhood : development and psychopathology*. 3, 38.

Rodrigues, M. S. A., Sonne, M., Andrews, D. M., Tomazini, L. F., Sato, T. de O., & Chaves, T. C. (2019). Rapid office strain assessment (ROSA): Cross cultural validity, reliability and structural validity of the Brazilian-Portuguese version. *Applied Ergonomics*, 75(December 2017), 143–154. <https://doi.org/10.1016/j.apergo.2018.09.009>

Sauter, S. L., & Arndt, R. (1984). Ergonomics in the automated office: gaps in knowledge and practice. *Human computer interaction*, 411-414.

Setyowati, D. L., Nuryanto, M. K., Sultan, M., Sofia, L., Gunawan, S., & Wiranto, A. (2021). Computer Vision Syndrome Among Academic Community in



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GADJAH MADA

SURVEI STASIUN KERJA DAN KELUHAN OTOT RANGKA PEKERJA INDONESIA PENGGUNA  
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Mulawarman University, Indonesia During Work From Home in Covid-19

Pandemic. *Annals of Tropical Medicine & Public Health*, 24(01).

<https://doi.org/10.36295/asro.2021.24187>

Situmorang, C. K., Widjasena, B., Wahyuni, I., Masyarakat, F. K., Diponegoro, U., Masyarakat, F. K., & Diponegoro, U. (2020). Hubungan Antara Durasi, Postur Tubuh, dan Penggunaan Komputer Terhadap Keluhan Neck Pain Pada Tenaga Kependidikan. *Jurnal Kesehatan Masyarakat*, 8(5), 672–678.

SL Sauter , Schleifer LM, K. S. (1991). *Work Posture, Workstation Design, and Musculoskeletal Discomfort in a VDT Data Entry Task. Human Factors*. 33(2), 151–167.

Soetisna, H. R., Widyanti, A., Syafira, A., & Pujiartati, D. A. (2021). Risk Assessment during Covid-19 and Learning from Home: Evidence from University Students in Indonesia. *Jurnal Optimasi Sistem Industri*, 20(1), 42. <https://doi.org/10.25077/josi.v20.n1.p42-51.2021>

Stacey, N., Karam, J., Dwyer, D., Speed, C., & Meekan, M. (2008). Assessing Traditional Ecological Knowledge of Whale Sharks (*Rhincodon typus*) in eastern Indonesia: A pilot study with fishing communities in Nusa Tenggara Timur. *East, April*, 73.

Sultana, A., Tasnim, S., Hossain, M. M., Bhattacharya, S., & Purohit, N. (2021). Digital screen time during the COVID-19 pandemic: a public health concern. *F1000Research*, 10, 1–8. <https://doi.org/10.12688/F1000RESEARCH.50880.1>

Sutarto, A. P., Wijayanto, T., & Afiah, I. N. (2022). Exploring the mediation role of employees' well-being in the relationship between psychosocial factors and musculoskeletal pain during the COVID-19 pandemic. *Work*, 71(1), 65–78. <https://doi.org/10.3233/WOR-210922>



- Szeto, G. P. Y., Chan, C. C. Y., Chan, S. K. M., Lai, H. Y., & Lau, E. P. Y. (2014). The effects of using a single display screen versus dual screens on neck-shoulder muscle activity during computer tasks. *International Journal of Industrial Ergonomics*, 44(3), 460–465. <https://doi.org/10.1016/j.ergon.2014.01.003>
- Tanzila, R. A., Prameswarie, T., Hartanti, M. D., & Denaneer, T. (2021). The Correlation between Position and Duration Use of Laptops with Musculoskeletal Disorders (MSDs). *Mutiara Medika: Jurnal Kedokteran Dan Kesehatan*, 21(2), 79–85. <https://doi.org/10.18196/mmjkk.v21i2.11375>
- Theresia, C., & Nabilla, Y. (2021). *Analysis of Mental Workload and Musculoskeletal Disorders among IT Workers. Cesit 2020*, 340–345. <https://doi.org/10.5220/0010311203400345>
- Trujillo, Leonard and Zeng, X. (2006). „Trujillo, Leonard and Zeng, X. (2006). hSoftware Program.” 111–121. *Data Entry Workers Perceptions and Satisfaction Response to the “Stop and Stretch” Software Program*. 111–121.
- Wald, N. J., Hackshaw, A. K., & Frost, C. D. (1999). When can a risk factor be used as a worthwhile screening test? *Bmj*, 319(7224), 1562. <https://doi.org/10.1136/bmj.319.7224.1562>
- World Health Organization (2021). Global Database on Body Mass Index (BMI).
- Woo, E. H. C., White, P., & Lai, C. W. K. (2016). Ergonomics standards and guidelines for computer workstation design and the impact on users' health – a review. *Ergonomics*, 59(3), 464–475. <https://doi.org/10.1080/00140139.2015.1076528>
- Wu, S., He, L., Li, J., Wang, J., & Wang, S. (2012). Visual display terminal use increases the prevalence and risk of work-related musculoskeletal disorders among chinese office workers: A cross-sectional study. *Journal of Occupational Health*, 54(1), 34–43. <https://doi.org/10.1539/joh.11-0119-OA>



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TATA IRFADINATA, Ardiyanto, Ph.D., AEP.

Universitas Gadjah Mada, 2023 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Yamane, T. (1967). *Statistics: An Introductory Analysis, 2nd Edition.*

Zapata, A. L., Moraes, A. J. P., Leone, C., Doria-Filho, U., & Silva, C.

A. A. (2006). Pain and musculoskeletal pain syndromes related to computer and video game use in adolescents. *European Journal of Pediatrics*, 165(6), 408–414. <https://doi.org/10.1007/s00431-005-0018-7>