



DAFTAR PUSTAKA

- Abebaw, M., Messele, A., Hailu, M., dan Zewdu, F., 2016. Adherence and Associated Factors towards Antidiabetic Medication among Type II Diabetic Patients on Follow-Up at University of Gondar Hospital, Northwest Ethiopia. *Advances in Nursing*, 2016: 1–7.
- Adepu, R. dan Ari, S.M., 2010. Influence of structured patient education on therapeutic outcomes in diabetes and hypertensive patients. *Asian J Pharm Clin*, 3: 174–178.
- Adisa, R., B. Alutundu, M., dan O. Fakeye, T., 2009. Factors Contributing to Nonadherence to Oral Hypoglycemic Medications among Ambulatory Type 2 Diabetes Patients in Southwestern Nigeria. *Pharmacy Practice (Internet)*, 7: .
- Ahmad, N.S., Islahudin, F., dan Paraidathathu, T., 2014. Factors associated with good glycemic control among patients with type 2 diabetes mellitus. *Journal of Diabetes Investigation*, 5: 563–569.
- Al Bargawi, M., Snethen, J., Gannass, A.A.L., dan Kelber, S., 2016. Perception of persons with type 2 diabetes mellitus in Saudi Arabia. *International Journal of Nursing Sciences*, 3: 39–44.
- Al Goblan, A., Al Alfi, M., dan Khan, M., 2014. Mechanism linking diabetes mellitus and obesity. *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*, 587.
- Al Habib, S., Al Draimly, M., dan Al Farhan, A., 2016. An evolving role of clinical pharmacists in managing diabetes: Evidence from the literature. *Saudi Pharmaceutical Journal*, 24: 441–446.
- Al Hamid, A., Ghaleb, M., Aljadhey, H., dan Aslanpour, Z., 2014. A systematic review of qualitative research on the contributory factors leading to medicine-related problems from the perspectives of adult patients with cardiovascular diseases and diabetes mellitus. *BMJ Open*, 4: e005992–e005992.
- Al Hewiti, A., 2014. Adherence to Long-Term Therapies and Beliefs about Medications. *International Journal of Family Medicine*, 2014: 1–8.
- Al Shahrani, A. dan Baraja, M., 2014. Patient Satisfaction and it's Relation to Diabetic Control in a Primary Care Setting. *Journal of family medicine and primary care*, 3: 5–11.
- Albikawi, Z.F., Petro-Nustas, W., dan Abuadas, M., 2016. Self-care Management Intervention to Improve Psychological Wellbeing for Jordanian Patients with Type Two Diabetes Mellitus. *Issues in Mental Health Nursing*, 37: 190–201.
- Ali, M., Schifano, F., Robinson, P., Phillips, G., Doherty, L., Melnick, P., dkk., 2012. Impact of community pharmacy diabetes monitoring and education programme on diabetes management: a randomized controlled study: Community pharmacy diabetes monitoring and education programme. *Diabetic Medicine*, 29: e326–e333.



- Al-Khawaldeh, O.A., Al-Hassan, M.A., dan Froelicher, E.S., 2012. Self-Efficacy, Self-Management, and Glycemic Control in Adults with Type 2 Diabetes Mellitus. *Journal of Diabetes and its Complications*, 26: 10–16.
- Almutairi, M.A., Said, S., dan Zainuddin, H., 2013. Predictors of Poor Glycemic Control Among Type Two Diabetic Patients. *American Journal of Medicine and Medical Sciences*, 5.
- Al-Qazaz, H.K., Sulaiman, S.A., Hassali, M.A., Shafie, A.A., Sundram, S., Al-Nuri, R., dkk., 2011. Diabetes knowledge, medication adherence and glycemic control among patients with type 2 diabetes. *International Journal of Clinical Pharmacy*, 33: 1028–1035.
- American Diabetes Association, 2014. Standards of Medical Care in Diabetes—2014. *Diabetes Care*, 37: S14–S80.
- American Diabetes Association, 2015. Standards of Medical Care in Diabetes 2015. *Diabetes Care*, 38: S1–S2.
- Amruso, N.A. dan O’Neal, M.L., 2004. Pharmacist and Physician Collaboration in the Patient’s Home. *Annals of Pharmacotherapy*, 38: 1048–1052.
- Anderson, R.T., Girman, C.J., Pawaskar, M.D., Camacho, F.T., Calles, J., Kelly, W.S., dkk., 2009. Diabetes Medication Satisfaction Tool: A focus on treatment regimens. *Diabetes Care*, 32: 51–53.
- Andreassen, L.M., Sandberg, S., Kristensen, G.B.B., Sølvi, U.Ø., dan Kjome, R.L.S., 2014. Nursing home patients with diabetes: Prevalence, drug treatment and glycemic control. *Diabetes Research and Clinical Practice*, 105: 102–109.
- APhA, 1995. 'Principles of Practice for Pharmaceutical Care', American Pharmacists Association. URL: <http://www.pharmacist.com/principles-practice-pharmaceutical-care> (diakses tanggal 2/4/2015).
- Asche, C., LaFleur, J., dan Conner, C., 2011. A Review of Diabetes Treatment Adherence and the Association with Clinical and Economic Outcomes. *Clinical Therapeutics*, 33: 74–109.
- Association, A.D., 2015. Standards of Medical Care in Diabetes—2015 Abridged for Primary Care Providers. *Clinical Diabetes*, 33: 97–111.
- Atreja, A., Bellam, N., dan Levy, S.R., 2005. Strategies to enhance patient adherence: making it simple. *MedGenMed : Medscape general medicine*, 7: 4–4.
- Austin, M.M., 2006. Diabetes educators: partners in diabetes care and management. *Endocrine Practice: Official Journal of the American College of Endocrinology and the American Association of Clinical Endocrinologists*, 12 Suppl 1: 138–141.
- Ayele, K., Tesfa, B., Abebe, L., Tilahun, T., dan Girma, E., 2012. Self Care Behavior among Patients with Diabetes in Harari, Eastern Ethiopia: The Health Belief Model Perspective. *PLoS ONE*, 7: e35515.
- Bains, S.S. dan Egede, L.E., 2011. Associations Between Health Literacy, Diabetes Knowledge, Self-Care Behaviors, and Glycemic Control in a Low Income Population with Type 2 Diabetes. *Diabetes Technology & Therapeutics*, 13: 335–341.



- Benson, J., 2002. Patients' decisions about whether or not to take antihypertensive drugs: qualitative study. *BMJ*, 325: 873–873.
- Beverly, E.A., Miller, C.K., dan Wray, L.A., 2008. Spousal Support and Food-Related Behavior Change in Middle-Aged and Older Adults Living With Type 2 Diabetes. *Health Education & Behavior*, 35: 707–720.
- Bharmal, M., Payne, K., Atkinson, M.J., Desrosiers, M.-P., Morisky, D.E., dan Gemmen, E., 2009. Validation of an abbreviated Treatment Satisfaction Questionnaire for Medication (TSQM-9) among patients on antihypertensive medications. *Health and Quality of Life Outcomes*, 7: .
- Bojadziewski, T. dan Gabbay, R.A., 2011. Patient-Centered Medical Home and Diabetes. *Diabetes Care*, 34: 1047–1053.
- Borges, A.P. de S., Guidoni, C.M., Ferreira, L.D., Freitas, O. de, dan Pereira, L.R.L., 2010. The Pharmaceutical care of patients with type 2 diabetes mellitus. *Pharmacy World & Science*, 32: 730–736.
- Bozorgmehr, K., Szecsenyi, J., Ose, D., Besier, W., Mayer, M., Krisam, J., dkk., 2014. Practice network-based care management for patients with type 2 diabetes and multiple comorbidities (GEDIMApplus): study protocol for a randomized controlled trial. *Trials*, 15: .
- Bron, M., Marynchenko, M., Yang, H., Yu, A.P., dan Wu, E.Q., 2012. Hypoglycemia, Treatment Discontinuation, and Costs in Patients with Type 2 Diabetes Mellitus on Oral Antidiabetic Drugs. *Postgraduate Medicine*, 124: 124–132.
- Brown, M.T. dan Bussell, J.K., 2011. Medication Adherence: WHO Cares? *Mayo Clinic Proceedings*, 86: 304–314.
- Bruns, C.M. dan Kemnitz, J.W., 2004. Sex Hormones, Insulin Sensitivity, and Diabetes Mellitus. *ILAR Journal*, 45: 160–169.
- Byrd, M.E., 1995. A Concept Analysis of Home Visiting. *Public Health Nursing*, 12: 83–89.
- Caldera, D., Burrell, L., Rodriguez, K., Crowne, S.S., Rohde, C., dan Duggan, A., 2007. Impact of a statewide home visiting program on parenting and on child health and development. *Child Abuse & Neglect*, 31: 829–852.
- Carrasquillo, O., Lebron, C., Alonzo, Y., Li, H., Chang, A., dan Kenya, S., 2017. Effect of a Community Health Worker Intervention Among Latinos With Poorly Controlled Type 2 Diabetes: The Miami Healthy Heart Initiative Randomized Clinical Trial. *JAMA internal medicine*, 177: 948–954.
- Carretero, M.T., Calderón-Larrañaga, A., Poblador-Plou, B., dan Prados-Torres, A., 2014. Primary health care use from the perspective of gender and morbidity burden. *BMC Women's Health*, 14: .
- Chakrabarti, S., 2014. What's in a name? Compliance, adherence and concordance in chronic psychiatric disorders. *World Journal of Psychiatry*, 4: 30.
- Chalik, R., 2012. 'Kepatuhan dan Kepuasan Terapi dengan Antidiabetik Oral pada Pasien Diabetes melitus Tipe 2 Rawat Jalan di RSUP Dr. Sardjito Yogyakarta', , Thesis, . Universitas Gadjah Mada, Yogyakarta.
- Charpentier, G., Fleury, F., Dubroca, I., Vaur, L., dan Clerson, P., 2005. Electronic pill-boxes in the evaluation of oral hypoglycemic agent compliance. *Diabetes & Metabolism*, 31: 189–195.



- Chawla, S., 2011. Nontraditional or noncentralized models of diabetes care: medication therapy management services. *The Journal of family practice*, 60: S12-18.
- Cherrington, A., Wallston, K.A., dan Rothman, R.L., 2010. Exploring the relationship between diabetes self-efficacy, depressive symptoms, and glycemic control among men and women with type 2 diabetes. *Journal of Behavioral Medicine*, 33: 81–89.
- Chia, Y., 2008. *Understanding Patient Management: The Need For Medication Adherence And Persistence* 3: 5.
- Chiu, C.-J. dan Wray, L.A., 2011. Gender Differences in Functional Limitations in Adults Living with Type 2 Diabetes: Biobehavioral and Psychosocial Mediators. *Annals of Behavioral Medicine*, 41: 71–82.
- Chow, E.P., Hassali, M.A., Saleem, F., dan Aljadhey, H., 2016. Effects of pharmacist-led patient education on diabetes-related knowledge and medication adherence: A home-based study. *Health Education Journal*, 75: 421–433.
- Chua, S.-S., Chung, W.W., Lai, P.S.M., dan Chan, S.P., 2014. Effects of a pharmaceutical care model on medication adherence and glycemic control of people with type 2 diabetes. *Patient Preference and Adherence*, 1185.
- Cipolle, R.J., Strand, L., dan Morley, P., 2012. *Pharmaceutical Care Practice: The Patient-Centered Approach to Medication Management, Third Edition*. McGraw Hill Professional.
- Cipolle, R.J., Strand, L., dan Morley, P.C., 2004. *Pharmaceutical Care Practice: The Clinician's Guide, Second Edition: The Clinician's Guide*. McGraw-Hill Companies, Incorporated.
- Claxton, A.J., Cramer, J., dan Pierce, C., 2001. A systematic review of the associations between dose regimens and medication compliance. *Clinical Therapeutics*, 23: 1296–1310.
- Collins, C., Limone, B.L., Scholle, J.M., dan Coleman, C.I., 2011. Effect of pharmacist intervention on glycemic control in diabetes. *Diabetes Research and Clinical Practice*, 92: 145–152.
- Collins, R., Armitage, J., Parish, S., Sleight, P., dan Peto, R., 2003. MRC/BHF Heart Protection Study of cholesterol-lowering with simvastatin in 5963 people with diabetes: a randomised placebo-controlled trial. *The Lancet*, 361: 2005–16.
- Cramer, J.A., 2004. A systematic review of adherence with medications for diabetes. *Diabetes Care*, 27: 1218–1224.
- Creswell, J.W., 2009. *Research Design Qualitative, Quantitative, and Mixed Methodes Approaches, Pendekatan Kualitatif, Kuantitatif, Dan Mixed*, 3rd ed. Sage Publication, California.
- Dahlan, S., 2013. *Besar Sampel dan Cara Pengambilan Sampel dalam Penelitian Kedokteran dan Kesehatan*, 3rd ed. Salemba Medika.
- Darebo, T., Mesfin, A., dan Gebremedhin, S., 2019. Prevalence and factors associated with overweight and obesity among adults in Hawassa city, southern Ethiopia: a community based cross-sectional study. *BMC Obesity*, 6: .



- Delamater, A.M., 2006. Improving Patient Adherence. *Clinical Diabetes*, 24: 71–77.
- Departemen Kesehatan RI, 2005. *Pharmaceutical Care Untuk Penyakit Diabetes Melitus*. Direktorat Bina Farmasi Komunitas dan Klinik Dirjen Bina Kefarmasian dan Alkes Depkes RI.
- Departemen Kesehatan RI, 2008. *Pedoman Pelayanan Kefarmasian di Rumah (Home Pharmacy Care)*.
- Dinas Kesehatan DIY, 2016. *Profil Kesehatan Daerah Istimewa Yogyakarta Tahun 2016 (Data Tahun 2015)*.
- Dinas Kesehatan DIY, 2017. *Profil Kesehatan Propinsi Daerah Istimewa Yogyakarta tahun 2017*.
- D'Souza, M.S., 2018. Self-Efficacy Impact Adherence in Diabetes Mellitus 1: 3.
- Eckel, R.H., Kahn, S.E., Ferrannini, E., Goldfine, A.B., Nathan, D.M., Schwartz, M.W., dkk., 2011. Obesity and Type 2 Diabetes: What Can Be Unified and What Needs to Be Individualized? *Diabetes Care*, 34: 1424–1430.
- Edraki, M., Moravej, H., dan Rambod, M., 2015. Effect of Home Visit Training Program on Growth and Development of Preterm Infants: A Double Blind Randomized Controlled Trial 3: 11.
- EI-Hadiyah, T.M., Mustafa Madani, A., Abdelrahim, H.M., dan Khidir Yousif, A., 2016. Factors Affecting Medication Non Adherence in Type 2 Sudanese Diabetic Patients. *Pharmacology & Pharmacy*, 07: 141–146.
- Elkan, R., Kendrick, D., Dewey, M., Hewitt, M., Robinson, J., Blair, M., dkk., 2001. Effectiveness of home based support for older people: systematic review and meta-analysis 323: 9.
- Ellis, S.E., Speroff, T., Dittus, R.S., Brown, A., Pichert, J.W., dan Elasy, T.A., 2004. Diabetes patient education: a meta-analysis and meta-regression. *Patient Education and Counseling*, 52: 97–105.
- Fasil, A., Biadgo, B., dan Abebe, M., 2018. Glycemic control and diabetes complications among diabetes mellitus patients attending at University of Gondar Hospital, Northwest Ethiopia. *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*, 12: 75–83.
- Feldman, B.S., Cohen-Stavi, C.J., Leibowitz, M., Hoshen, M.B., Singer, S.R., Bitterman, H., dkk., 2014. Defining the Role of Medication Adherence in Poor Glycemic Control among a General Adult Population with Diabetes. *PLoS ONE*, 9: e108145.
- Fornos, J.A., Andrés, N.F., Andrés, J.C., Guerra, M.M., dan Egea, B., 2006. A pharmacotherapy follow-up program in patients with type-2 diabetes in community pharmacies in Spain. *Pharmacy World & Science: PWS*, 28: 65–72.
- Funnell, M.M. dan Anderson, R.M., 2004. Empowerment and Self-Management of Diabetes. *Clinical Diabetes*, 22: 123–127.
- Gambineri, A. dan Pelusi, C., 2019. Sex hormones, obesity and type 2 diabetes: is there a link? *Endocrine Connections*, R1–R9.
- Ganiyu, A.B., Mabuza, L.H., Maleté, N.H., Govender, I., dan Ogunbanjo, G.A., 2013. Non-adherence to diet and exercise recommendations amongst patients with type 2 diabetes mellitus attending Extension II Clinic in



- Botswana. *African Journal of Primary Health Care & Family Medicine*, 5: 1–6.
- Garcia, A.A., Villagomez, E.T., Brown, S.A., Kouzekanani, K., dan Hanis, C.L., 2001. The Starr County Diabetes Education Study: Development of the Spanish-language diabetes knowledge questionnaire. *Diabetes Care*, 24: 16–21.
- García-Pérez, L.-E., Álvarez, M., Dilla, T., Gil-Guillén, V., dan Orozco-Beltrán, D., 2013. Adherence to Therapies in Patients with Type 2 Diabetes. *Diabetes Therapy*, 4: 175–194.
- Gary, T.L., Genkinger, J.M., Guallar, E., Peyrot, M., dan Brancati, F.L., 2003. Meta-analysis of randomized educational and behavioral interventions in type 2 diabetes. *The Diabetes Educator*, 29: 488–501.
- Geisel-Marbaise, S. dan Stummer, H., 2010. Diabetes adherence—does gender matter? *Journal of Public Health*, 18: 219–226.
- Gillani, S.W., Azhar Syed Sulaiman, S., Baig, M., Oktavia Sari, Y., Maisharah Sheikh Ghadzi, S., Noor Haroon, S., dkk., 2012. Pharmacist Intervention in Home Care Program for Diabetes Patients. *Journal of Diabetes Mellitus*, 02: 279–293.
- Gonzalez-Zacarias, A.A., Mavarez-Martinez, A., Arias-Morales, C.E., Stoicea, N., dan Rogers, B., 2016. Impact of Demographic, Socioeconomic, and Psychological Factors on Glycemic Self-Management in Adults with Type 2 Diabetes Mellitus. *Frontiers in Public Health*, 4: 195.
- Grant, R.W., Devita, N.G., Singer, D.E., dan Meigs, J.B., 2003. Polypharmacy and medication adherence in patients with type 2 diabetes. *Diabetes Care*, 26: 1408–1412.
- Guariguata, L., Whiting, D.R., Hambleton, I., Beagley, J., Linnenkamp, U., dan Shaw, J.E., 2014. Global estimates of diabetes prevalence for 2013 and projections for 2035. *Diabetes Research and Clinical Practice*, 103: 137–149.
- Gucciardi, E., Wang, S.C.-T., Cde, M.D., dan Rsw, L.A.M., 2008. Characteristics of men and women with diabetes. *Can Fam Physician*, 10.
- Gülnaz, K., Akkuş, Y., Öztürk, B., dan Sülü, B., 2016. The Effectiveness of a Home-Based Diabetes Management Program on Diabetes Control. *Archives of Preventive Medicine*, 1: 015–020.
- Han, L., Ma, Y., Wei, S., Tian, J., Yang, X., Shen, X., dkk., 2017. Are home visits an effective method for diabetes management? A quantitative systematic review and meta-analysis. *Journal of Diabetes Investigation*, 8: 701–708.
- Hartz, A., Kent, S., James, P., Xu, Y., Kelly, M., dan Daly, J., 2006. Factors that influence improvement for patients with poorly controlled type 2 diabetes. *Diabetes Research and Clinical Practice*, 74: 227–232.
- Hasina, R., Probosuseno, dan Wiedyaningsih, C., 2014. Hubungan Tingkat Kepatuhan, kepuasan Kepuasan Terapi dengan Kualitas Hidup pasien Usia Lanjut Diabaetes Melitus Tipe 2. *Jurnal Manajemen dan Pelayanan Farmasi*, 4: 251–256.



- Haugbølle, L.S. dan Sørensen, E.W., 2006. Drug-related problems in patients with angina pectoris, type 2 diabetes and asthma – interviewing patients at home. *Pharmacy World and Science*, 28: 239–247.
- Henningsen, N., 2008. 'Portraits of Home Care in Canada.', . The Canadian Home Care Association, .
- Horne, R., Chapman, S.C.E., Parham, R., Freemantle, N., Forbes, A., dan Cooper, V., 2013. Understanding Patients' Adherence-Related Beliefs about Medicines Prescribed for Long-Term Conditions: A Meta-Analytic Review of the Necessity-Concerns Framework. *PLoS ONE*, 8: e80633.
- Houle, S. dan MacKeigan, L., 2017. Home Care Pharmacy Practice in Canada: A Cross-Sectional Survey of Services Provided, Remuneration, Barriers, and Facilitators. *The Canadian Journal of Hospital Pharmacy*, 70: .
- Housden, L., Wong RN, S.T., dan Dawes, M., 2013. Effectiveness of group medical visits for improving diabetes care: a systematic review and meta-analysis. *CMAJ* 2013. DOI:10.1503 /cmaj.130053, .
- Huri, H.Z. dan Ling, L.C., 2013. Drug-related problems in type 2 diabetes mellitus patients with dyslipidemia. *BMC Public Health*, 13: 1192.
- Huri, H.Z. dan Wee, H.F., 2013. Drug related problems in type 2 diabetes patients with hypertension: a cross-sectional retrospective study. *BMC Endocrine Disorders*, 13: 2.
- Hutchinson, M.S., Joakimsen, R.M., Njølstad, I., Schirmer, H., Figenschau, Y., Svartberg, J., dkk., 2013. Effects of Age and Sex on Estimated Diabetes Prevalence Using Different Diagnostic Criteria: The Tromsø OGTT Study. *International Journal of Endocrinology*, 2013: 1–9.
- Indelicato, L., Dauriz, M., Bacchi, E., Donà, S., Santi, L., Negri, C., dkk., 2018. Sex differences in the association of psychological status with measures of physical activity and sedentary behaviour in adults with type 2 diabetes. *Acta Diabetologica*, 55: 627–635.
- Islam, S.M.S., Biswas, T., Bhuiyan, F.A., Mustafa, K., dan Islam, A., 2017. Patients' perspective of disease and medication adherence for type 2 diabetes in an urban area in Bangladesh: a qualitative study. *BMC Research Notes*, 10: .
- Jameson, J.P. dan Baty, P.J., 2010. Pharmacist collaborative management of poorly controlled diabetes mellitus: a randomized controlled trial. *The American Journal of Managed Care*, 16: 250–5.
- Jenny, L., 2014. Patients' Adherence to Anti-Diabetic Medications in a Hospital at Ajman, UAE. *Malays J Med Sci*, 21: 44–49.
- Jimmy, B., Jose, J., Al.Hinai, Z., Wadair, K.I., dan Al Amri, G., 2014. Adherence to medications among type 2 diabetes mellitus patients in three districts of Al Dakhliyah governorate, Oman. *Sultan Qaboos Univ Med J*, 14: e231–e235.
- Juarez, D.T., Sentell, T., Tokumaru, S., Goo, R., Davis, J.W., dan Mau, M.M., 2012. Factors Associated With Poor Glycemic Control or Wide Glycemic Variability Among Diabetes Patients in Hawaii, 2006–2009. *Preventing Chronic Disease*, 9: E151.



- Kalyango, J.N., Owino, E., dan Nambuya, A.P., 2008. Non-adherence to diabetes treatment at Mulago Hospital in Uganda: prevalence and associated factors 8: 67–73.
- Karpe, F., Dickmann, J.R., dan Frayn, K.N., 2011. Fatty Acids, Obesity, and Insulin Resistance: Time for a Reevaluation. *Diabetes*, 60: 2441–2449.
- Kassahun, T., Eshetie, T., dan Gesesew, H., 2016a. Factors associated with glycemic control among adult patients with type 2 diabetes mellitus: a cross-sectional survey in Ethiopia. *BMC Research Notes*, 9: .
- Kassahun, T., Gesesew, H., Mwanri, L., dan Eshetie, T., 2016b. Diabetes related knowledge, self-care behaviours and adherence to medications among diabetic patients in Southwest Ethiopia: a cross-sectional survey. *BMC Endocrine Disorders*, 16: 28.
- Keitel, S., 2012. *Pharmaceutical Care*. Council of Europe, France.
- Khan, A., Al-Abdul Lateef, Z., Al Aithan, M., Bu-Khamseen, M., Al Ibrahim, I., dan Khan, S., 2012. Factors contributing to non-compliance among diabetics attending primary health centers in the Al Hasa district of Saudi Arabia. *Journal of Family and Community Medicine*, 19: 26.
- Khan, H., Lasker, S.S., dan Chowdhury, T.A., 2011. Exploring reasons for very poor glycaemic control in patients with Type 2 diabetes. *Primary Care Diabetes*, 5: 251–255.
- Khattab, M., Khader, Y.S., Al-Khawaldeh, A., dan Ajlouni, K., 2010. Factors associated with poor glycemic control among patients with Type 2 diabetes. *Journal of Diabetes and its Complications*, 24: 84–89.
- Kirkman, M.S., Rowan-Martin, M.T., Levin, R., Fonseca, V.A., Schmittziel, J.A., Herman, W.H., dkk., 2015. Determinants of Adherence to Diabetes Medications: Findings From a Large Pharmacy Claims Database. *Diabetes Care*, 38: 604–609.
- Koh, Y., Kutty, F.B.M., dan Li, S.C., 2005. Drug-related problems in hospitalized patients on polypharmacy: the influence of age and gender. *Therapeutics and Clinical Risk Management*, 1: 39–48.
- Korcegez, E.I., Sancar, M., dan Demirkan, K., 2017. Effect of a Pharmacist-Led Program on Improving Outcomes in Patients with Type 2 Diabetes Mellitus from Northern Cyprus: A Randomized Controlled Trial. *Journal of Managed Care & Specialty Pharmacy*, 23: 573–582.
- Krag, M.Ø., Hasselbalch, L., Siersma, V., Nielsen, A.B.S., Reventlow, S., Malterud, K., dkk., 2016. The impact of gender on the long-term morbidity and mortality of patients with type 2 diabetes receiving structured personal care: a 13 year follow-up study. *Diabetologia*, 59: 275–285.
- Kueh, Y.C., Morris, T., Borkoles, E., dan Shee, H., 2015. Modelling of diabetes knowledge, attitudes, self-management, and quality of life: a cross-sectional study with an Australian sample. *Health and Quality of Life Outcomes*, 13: 129.
- Kumari, R., Raman, R., dan Sharma, T., 2008. Physicians, pharmacists, and people with diabetes in India. *Pharmacy world & science: PWS*, 30: 750–752.



- Legato, M.J., Gelzer, A., Goland, R., Ebner, S.A., Rajan, S., Villagra, V., dkk., 2006. Gender-specific care of the patient with diabetes: Review and recommendations. *Gender Medicine*, 3: 131–158.
- Lerman, I., Lozano, L., Villa, A.R., Hernández-Jiménez, S., Weinger, K., Enrique Caballero, A., dkk., 2004. Psychosocial factors associated with poor diabetes self-care management in a specialized Center in Mexico City. *Biomedicine & Pharmacotherapy*, 58: 566–570.
- Lim, K.G., Kasim, N.H., Ramamoothy, T., Yam, A., Lim, E.W., dan Loh, M., 2019. The Effectiveness of Conducting Home Visits by Medical Students among Malaysians with Type 2 Diabetes: A Retrospective Analysis. *Journal of the ASEAN Federation of Endocrine Societies*, 34: 56–61.
- Lim, P.C. dan Lim, K., 2010. Evaluation of a pharmacist-managed diabetes medication therapy adherence clinic. *Pharmacy Practice*, 8: 250–254.
- Lin, E.H.B., Katon, W., Von Korff, M., Rutter, C., Simon, G.E., Oliver, M., dkk., 2004. Relationship of Depression and Diabetes Self-Care, Medication Adherence, and Preventive Care. *Diabetes Care*, 27: 2154–2160.
- Litbangkes, B., 2013. Hasil Riset Kesehatan Dasar (Riskesdas) 2013.
- Lopez, J., Annunziata, K., Bailey, R., Morisky, D.E., dan Rupnow, M., 2014. Impact of Hypoglycemia on Patients with Type 2 Diabetes Mellitus and Their Quality of Life, Work Productivity, and Medication Adherence. *Patient Preference and Adherence*, 8: 683–693.
- Lustman, P.J., Anderson, R.J., Freedland, K.E., de Groot, M., Carney, R.M., dan Clouse, R.E., 2000. Depression and poor glycemic control: a meta-analytic review of the literature. *Diabetes Care*, 23: 934–942.
- Mathew, E. dan Rajiah, K., 2014. Assessment of Medication Adherence in Type-2 Diabetes Patients on Poly Pharmacy and The Effect of Patient Counseling Given to Them in A Multispecialty Hospital. *Journal of Basic and Clinical Pharmacy*, 5: 15–18.
- Mathew, R., Gucciardi, E., De Melo, M., dan Barata, P., 2012. Self-Management Experiences among Men and Women with Type 2 Diabetes Mellitus: A Qualitative Analysis. *BMC Family Practice*, 13: 122.
- Mayberry, L.S. dan Osborn, C.Y., 2012. Family Support, Medication Adherence, and Glycemic Control Among Adults With Type 2 Diabetes. *Diabetes Care*, 35: 1239–1245.
- McPherson, M.L., Smith, S.W., Powers, A., dan Zuckerman, I.H., 2008. Association between diabetes patients' knowledge about medications and their blood glucose control. *Research in Social and Administrative Pharmacy*, 4: 37–45.
- Mehuys, E., Van Bortel, L., De Bolle, L., Van Tongelen, I., Annemans, L., Remon, J.-P., dkk., 2011. Effectiveness of a community pharmacist intervention in diabetes care: a randomized controlled trial. *Journal of Clinical Pharmacy and Therapeutics*, 36: 602–613.
- Menino, E., Maria, dos A., dan Maria, C., 2017. Validation of Diabetes Knowledge Questionnaire (DKQ) in the Portuguese Population. *Diabetes Obes Int J* 2017, 2(S1): 000S1-002. *Diabetes Obes Int J*, 2: 000S1-002.



- Merzel, C., 2000. Gender differences in health care access indicators in an urban, low-income community. *American Journal of Public Health*, 90: 909–916.
- Miller, T. dan DiMatteo, R., 2013. Importance of Family/Social Support and Impact on Adherence to Diabetic Therapy. *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy*, 6: 421–426.
- Molarius, A., Berglund, K., Eriksson, C., Lambe, M., Nordstrom, E., Eriksson, H.G., dkk., 2007. Socioeconomic conditions, lifestyle factors, and self-rated health among men and women in Sweden. *The European Journal of Public Health*, 17: 125–133.
- Molloy, G.J., O'Carroll, R.E., Witham, M.D., dan McMurdo, M.E.T., 2012. Interventions to Enhance Adherence to Medications in Patients With Heart Failure: A Systematic Review. *Circulation: Heart Failure*, 5: 126–133.
- Morisky, D.E., Ang, A., Krousel-Wood, M., dan Ward, H.J., 2008. Predictive Validity of a Medication Adherence Measure in an Outpatient Setting. *The Journal of Clinical Hypertension*, 10: 348–354.
- Mühlhauser, I. dan Berger, M., 2002. Patient education - evaluation of a complex intervention. *Diabetologia*, 45: 1723–1733.
- Murata, G.H., Shah, J.H., Hoffman, R.M., Wendel, C.S., Adam, K.D., Solvas, P.A., dkk., 2003. Intensified Blood Glucose Monitoring Improves Glycemic Control in Stable, Insulin-Treated Veterans With Type 2 Diabetes: The Diabetes Outcomes in Veterans Study (DOVES). *Diabetes Care*, 26: 1759–1763.
- Nicklett, E.J., Heisler, M.E.M., Spencer, M.S., dan Rosland, A.-M., 2013. Direct Social Support and Long-term Health Among Middle-Aged and Older Adults With Type 2 Diabetes Mellitus. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 68: 933–943.
- Norris, S.L., Nichols, P.J., Caspersen, C.J., Glasgow, R.E., Engelgau, M.M., Jack, L., dkk., 2002. Increasing diabetes self-management education in community settings. A systematic review. *American Journal of Preventive Medicine*, 22: 39–66.
- Nugraheni, A.Y., 2015. 'Pengaruh Pemberian Konseling Farmasis dengan Alat Bantu Terhadap Kepatuhan dan Outcome Klinik Pasien Diabetes Melitus Tipe 2 Anggota Prolanis pada Dokter Keluarga', Thesis, Universitas Gadjah Mada, Yogyakarta.
- Nugraheni, A.Y. dan Sari, I.P., 2015. Pengaruh Konseling Apoteker dengan Alat Bantu pada Pasien Diabetes Melitus Tipe 2. *Jurnal Manajemen dan Pelayanan Farmasi*, 5: 225–231.
- Okop, K.J., Levitt, N., dan Puoane, T., 2015. Factors Associated with Excessive Body Fat in Men and Women: Cross-Sectional Data from Black South Africans Living in a Rural Community and an Urban Township. *PLOS ONE*, 10: e0140153.
- Omar, M.S. dan San, K.L., 2014. Diabetes Knowledge and Medication Adherence among Geriatric Patient with Type 2 Diabetes Mellitus 6: 103–106.
- Osborn, C.Y., Bains, S.S., dan Egede, L.E., 2010. Health Literacy, Diabetes Self-Care, and Glycemic Control in Adults with Type 2 Diabetes. *Diabetes Technology & Therapeutics*, 12: 913–919.



- Osterberg, L. dan Blaschke, T., 2005. Adherence to Medication. *N Engl J Med*, 353: 487–497.
- Pai, L.-W., Li, T.-C., Hwu, Y.-J., Chang, S.-C., Chen, L.-L., dan Chang, P.-Y., 2016. The effectiveness of regular leisure-time physical activities on long-term glycemic control in people with type 2 diabetes: A systematic review and meta-analysis. *Diabetes Research and Clinical Practice*, 113: 77–85.
- Papastergiou, J., Zervas, J., Li, W., dan Rajan, A., 2013. Home medication reviews by community pharmacists: Reaching out to homebound patients. *Canadian Pharmacists Journal / Revue des Pharmaciens du Canada*, 146: 139–142.
- Parajuli, J., Saleh, F., Thapa, N., dan Ali, L., 2014. Factors Associated with Nonadherence to Diet and Physical Activity among Nepalese Type 2 Diabetes Patients; A Cross Sectional Study. *BMC Research Notes*, 7: 758.
- Park, H.Y., Seo, S.A., Yoo, H., dan Lee, K., 2018. Medication adherence and beliefs about medication in elderly patients living alone with chronic diseases. *Patient Preference and Adherence*, Volume 12: 175–181.
- Pastor, D., 2006. Home Sweet Home: A Concept Analysis of Home Visiting. *Home Healthcare Nurse*, 24: 389–94.
- Patterson, S.M., Hughes, C.M., dan Lapane, K.L., 2007. Assessment of a United States pharmaceutical care model for nursing homes in the United Kingdom. *Pharmacy World & Science*, 29: 517–525.
- Penckofer, S., Ferrans, C.E., Velsor-Friedrich, B., dan Savoy, S., 2007. The Psychological Impact of Living With Diabetes Women's Day-to-Day Experiences. *The Diabetes Educator*, 33: 680–690.
- Pladevall, M., Williams, L.K., Potts, L.A., Divine, G., Xi, H., dan Lafata, J.E., 2004. Clinical outcomes and adherence to medications measured by claims data in patients with diabetes. *Diabetes Care*, 27: 2800–2805.
- Powell, C.K., Hill, E.G., dan Clancy, D.E., 2007. The Relationship Between Health Literacy and Diabetes Knowledge and Readiness to Take Health Actions. *The Diabetes Educator*, 33: 144–151.
- Qi, L., Liu, Q., Qi, X., Wu, N., Tang, W., dan Xiong, H., 2015. Effectiveness of peer support for improving glycaemic control in patients with type 2 diabetes: a meta-analysis of randomized controlled trials. *BMC Public Health*, 15: .
- Rajpathak, S.N., Kumbhani, D.J., Crandall, J., Barzilai, N., Alderman, M., dan Ridker, P.M., 2009. Statin Therapy and Risk of Developing Type 2 Diabetes: A Meta-Analysis. *Diabetes Care*, 32: 1924–1929.
- Rantucci, M.J., 2007. *Pharmacists Talking with Patients: A Guide to Patient Counseling*, 2nd Revised edition edition. ed. Lippincott Williams and Wilkins, Philadelphia.
- Rausch, J.R., Hood, K.K., Delamater, A., Shroff Pendley, J., Rohan, J.M., Reeves, G., dkk., 2012. Changes in Treatment Adherence and Glycemic Control During the Transition to Adolescence in Type 1 Diabetes. *Diabetes Care*, 35: 1219–1224.
- Rothschild, S.K., Martin, M.A., Swider, S.M., Tumialán Lynas, C.M., Janssen, I., Avery, E.F., dkk., 2014. Mexican American Trial of Community Health Workers: A Randomized Controlled Trial of a Community Health Worker



- Intervention for Mexican Americans With Type 2 Diabetes Mellitus. *American Journal of Public Health*, 104: 1540–1548.
- Rubin, R.R., Peyrot, M., dan Saudek, C.D., 1989. Effect of diabetes education on self-care, metabolic control, and emotional well-being. *Diabetes Care*, 12: 673–679.
- Rudianto, A., Dharma, L., Eva, D., Alwi, S., Tri, J.E.T., IGN, A., dkk., 2011. 'Konsensus Dm Tipe 2 Indonesia 2011', . URL: (diakses tanggal 2/4/2015).
- Rudijanto, A., Yuwono, A., Manaf, A., Pramono, B., Lindarto, D., Purnamasari, D., dkk., 2015. *Konsensus Pengelolaan dan Pencegahan Diabetes Melitus tipe 2 di Indonesia 2015*.
- Rusdiana, ., Savira, M., dan Amelia, R., 2018. The Effect of Diabetes Self-Management Education on Hba1c Level and Fasting Blood Sugar in Type 2 Diabetes Mellitus Patients in Primary Health Care in Binjai City of North Sumatera, Indonesia. *Open Access Macedonian Journal of Medical Sciences*, 6: 715–718.
- Rwegerera, G.M., 2014. Adherence to Anti-Diabetic Drugs among Patients with Type 2 Diabetes Mellitus at Muhimbili National Hospital, Dar es Salaam, Tanzania- A cross-sectional study. *Pan African Medical Journal*, 17: 252.
- Sabaté, E. dan World Health Organization (Editor), 2003. *Adherence to Long-Term Therapies: Evidence for Action*. World Health Organization, Geneva.
- Scain, S.F., Friedman, R., dan Gross, J.L., 2009. A structured educational program improves metabolic control in patients with type 2 diabetes: a randomized controlled trial. *The Diabetes Educator*, 35: 603–611.
- Schillinger, D., Barton, L.R., Karter, A.J., Wang, F., dan Adler, N., 2006. Does Literacy Mediate the Relationship between Education and Health Outcomes? A Study of a Low-Income Population with Diabetes. *Public Health Reports*, 121: 245–254.
- Serour, M., Alqhenaei, H., Al-Saqabi, S., Mustafa, A.-R., dan Ben-Nakhi, A., 2007. Cultural Factors and Patients' Adherence to Lifestyle Measures. *British Journal of General Practice*, 57: 291–295.
- Shalev, V., Chodick, G., Heymann, A.D., dan Kokia, E., 2005. Gender differences in healthcare utilization and medical indicators among patients with diabetes. *Public Health*, 119: 45–49.
- Shane-McWhorter, L., Armor, B., Johnson, J.T., Letassy, N., Reichert, S.L., Sisson, E.M., dkk., 2009. Pharmacist Scope of Practice, Standards of Practice, and Standards of Professional Performance for Diabetes Educators. *The Diabetes Educator*, 35: 69S-84S.
- Shao, Y., Liang, L., Shi, L., Wan, C., dan Yu, S., 2017. The Effect of Social Support on Glycemic Control in Patients with Type 2 Diabetes Mellitus: The Mediating Roles of Self-Efficacy and Adherence. *Journal of Diabetes Research*, 2017: 1–8.
- Shehab, A., Elnour, A.A., Swaidi, S.A., Bhagavathula, A.S., Hamad, F., Shehab, O., dkk., 2016. Evaluation and Implementation of Behavioral and Educational Tools that Improves The Patients' Intentional and Unintentional Non-Adherence to Cardiovascular Medications in Family Medicine Clinics. *Saudi Pharmaceutical Journal*, 24: 182–188.



- Shrestha, L., Jha, B., Yadav, B., dan Sharma, S., 2012. Correlation between fasting blood glucose, postprandial blood glucose and glycated hemoglobin in non-insulin treated type 2 diabetic subjects. *Sunsari Technical College Journal*, 1(1): 18–21.
- Shrivastava, S., Shrivastava, P., dan Ramasamy, J., 2013. Role of Self-Care in Management of Diabetes Mellitus. *Journal of Diabetes & Metabolic Disorders*, 12: 14.
- Siddiqui, M., Khan, M., dan Carline, T., 2013. Gender Differences in Living with Diabetes Mellitus. *Materia Socio Medica*, 25: 140.
- Sigurdardottir, A.K., Jonsdottir, H., dan Benediktsson, R., 2007. Outcomes of educational interventions in type 2 diabetes: WEKA data-mining analysis. *Patient Education and Counseling*, 67: 21–31.
- Sirirat Tunpichart, 2012. Chronic Care Model for Diabetics by Pharmacist Home Health in Bangkok Metropolitan: A community based study. *International Journal of Medicine and Medical Sciences*, 4: pp90-96.
- Sisson, E. dan Kuhn, C., 2009. Pharmacist Roles in The Management of Patients with Type 2 Diabetes. *Journal of the American Pharmacists Association: JAPhA*, 49 Suppl 1: S41-45.
- Spencer, M.S., Rosland, A.-M., Kieffer, E.C., Sinco, B.R., Valerio, M., Palmisano, G., dkk., 2011. Effectiveness of a Community Health Worker Intervention Among African American and Latino Adults With Type 2 Diabetes: A Randomized Controlled Trial. *American Journal of Public Health*, 101: 2253–2260.
- Sriram, S., Chack, L.E., Ramasamy, R., Ghasemi, A., Ravi, T.K., dan Sabzghabae, A.M., 2011. Impact of pharmaceutical care on quality of life in patients with type 2 diabetes mellitus. *Journal of Research in Medical Sciences: The Official Journal of Isfahan University of Medical Sciences*, 16 Suppl 1: S412-418.
- Stratton, I.M., Adler, A.I., Neil, H.A.W., Matthews, D.R., Manley, S.E., Cull, C.A., dkk., 2000. Association of glycaemia with macrovascular and microvascular complications of type 2 diabetes (UKPDS 35): prospective observational study. *BMJ : British Medical Journal*, 321: 405–412.
- Stroup, J., Kane, M.P., Busch, R.S., Bakst, G., dan Hamilton, R.A., 2003. The Diabetes Home Visitation Program. *American Journal of Pharmaceutical Education*, 67: 91.
- Sweileh, W.M., Zyoud, S.H., Abu Nab'a, R.J., Deleq, M.I., Enaia, M.I., Nassar, S.M., dkk., 2014. Influence of Patients' Disease Knowledge and Beliefs about Medicines on Medication Adherence: findings from a cross-sectional survey among Patients with Type 2 Diabetes Mellitus in Palestine. *BMC Public Health*, 14: 94.
- Szalat, A. dan Raz, I., 2007. Gender-Specific Care of Diabetes. *Women's Health*, 3: 735–764.
- Tiv, M., Viel, J.-F., Mauny, F., Eschwège, E., Weill, A., Fournier, C., dkk., 2012. Medication Adherence in Type 2 Diabetes: The ENTRED Study 2007, a French Population-Based Study. *PLoS ONE*, 7: e32412.



- Torres, H. de C., Santos, L.M. dos, dan Cordeiro, P.M.C. de S., 2014. Home visit: an educational health strategy for self-care in diabetes. *Acta Paulista de Enfermagem*, 27: 23–28.
- Trief, P.M., Himes, C.L., Orendorff, R., dan Weinstock, R.S., 2001. The Marital Relationship and Psychosocial Adaptation and Glycemic Control of Individuals With Diabetes. *Diabetes Care*, 24: 1384–1389.
- Tuei, V.C., Maiyoh, G.K., dan Ha, C.-E., 2010. Type 2 diabetes mellitus and obesity in sub-Saharan Africa. *Diabetes/Metabolism Research and Reviews*, 26: 433–445.
- Vermeire, E., Hearnshaw, H., Van Royen, P., dan Denekens, J., 2001. Patient adherence to treatment: three decades of research. A comprehensive review. *Journal of Clinical Pharmacy and Therapeutics*, 26: 331–342.
- Vermeire, E.I., Wens, J., Royen, P.V., Biot, Y., Hearnshaw, H., dan Lindenmeyer, A., 2005. Interventions for improving adherence to treatment recommendations in people with type 2 diabetes mellitus. *Cochrane Database of Systematic Reviews*, 47.
- Wabe, N.T., Angamo, M.T., dan Hussein, S., 2011. Medication adherence in diabetes mellitus and self management practices among type-2 diabetics in Ethiopia. *North American Journal of Medical Sciences*, 3: 418–423.
- Waghachavare, V., Gore, A., Chavan, V., Dhobale, R., Dhumale, G., dan Chavan, G., 2015. Knowledge about diabetes and relationship between compliance to the management among the diabetic patients from Rural Area of Sangli District, Maharashtra, India. *Journal of Family Medicine and Primary Care*, 4: 439.
- Walker, E.A., Molitch, M., Kramer, M.K., Kahn, S., Ma, Y., Edelstein, S., dkk., 2006. Adherence to Preventive Medications: Predictors and outcomes in the Diabetes Prevention Program. *Diabetes Care*, 29: 1997–2002.
- Walker, R.J., Smalls, B.L., Hernandez-Tejada, M.A., Campbell, J.A., dan Egede, MD, L.E., 2014. Effect of Diabetes Self-Efficacy on Glycemic Control, Medication Adherence, Self-Care Behaviors, and Quality of Life in a Predominantly Low-Income, Minority Population. *Ethnicity & Disease*, 24: 3 49-55.
- Walz, L., Pettersson, B., Rosenqvist, U., Deleskog, A., Journath, G., dan Wändell, P., 2014. Impact of Symptomatic Hypoglycemia on Medication Adherence, Patient Satisfaction with Treatment, and Glycemic Control in Patients with Type 2 Diabetes. *Patient Preference and Adherence*, 8: 593–601.
- Weinger, K. dan Carver, C.A., 2008. *Educating Your Patient with Diabetes, Contemporary Diabetes*. Humana Press.
- Wexler, D.J., Grant, R.W., Meigs, J.B., Nathan, D.M., dan Cagliero, E., 2005. Sex Disparities in Treatment of Cardiac Risk Factors in Patients With Type 2 Diabetes. *Diabetes Care*, 28: 7.
- Whiting, D.R., Guariguata, L., Weil, C., dan Shaw, J., 2011. IDF diabetes atlas: global estimates of the prevalence of diabetes for 2011 and 2030. *Diabetes Research and Clinical Practice*, 94: 311–321.
- Willens, D., Cripps, R., Wilson, A., Wolff, K., dan Rothman, R., 2011. *Interdisciplinary Team Care for Diabetic Patients by Primary Care*



- Physicians, Advanced Practice Nurses, and Clinical Pharmacists. *Clinical Diabetes*, 29: 60–68.
- Wishah, R.A., Al-Khawaldeh, O.A., dan Albsoul, A.M., 2014. Impact of Pharmaceutical Care Interventions on Glycemic Control and Other Health-Related Clinical Outcomes in Patients with Type 2 Diabetes: Randomized Controlled Trial. *Diabetes & Metabolic Syndrome*, 9: 271–276.
- Wubben, D.P. dan Vivian, E.M., 2008. Effects of Pharmacist Outpatient Interventions on Adults with Diabetes Mellitus: A Systematic Review. *Pharmacotherapy*, 28: 421–436.
- Yan, S.-L., Yang, N.-L., Wang, Y.-G., Yuan, Y., Li, C.G., Wang, L., dkk., 2007. Effect and evaluation of intensive diabetes education on elderly type 2 diabetic patients. *Journal of Clinical Rehabilitative Tissue Engineering Research*, 11: 3228–3230.
- Yokobayashi, K., Kawachi, I., Kondo, K., Kondo, N., Nagamine, Y., Tani, Y., dkk., 2017. Association between Social Relationship and Glycemic Control among Older Japanese: JAGES Cross-Sectional Study. *PLoS ONE*, 12: e0169904.
- Yount, K.M., Agree, E.M., dan Rebellon, C., 2004. Gender and use of health care among older adults in Egypt and Tunisia. *Social Science & Medicine*, 59: 2479–2497.
- Yusuff, K.B., Obe, O., dan Joseph, B.Y., 2008. Adherence to anti-diabetic drug therapy and self management practices among type-2 diabetics in Nigeria. *Pharmacy world & science: PWS*, 30: 876–883.
- Zainuddin, M., 2011. *Metodologi Penelitian Kefarmasian Dan Kesehatan*, 1st ed. Universitas Airlangga, Surabaya.