

KARYA TULIS ILMIAH

HUBUNGAN TINGKAT AKTIVITAS FISIK TERHADAP IMT
PADA MAHASISWA UNIVERSITAS MUHAMMADIYAH
YOGYAKARTA

Diajukan untuk Memeuhi Sebagian Syarat Memperoleh Derajat Sarjana
Pendidikan Dokter Pada Fakultas Kedokteran dan Ilmu Kesehatan
Universitas Muhammadiyah Yogyakarta



Disusun oleh
RADIFAN FARID RASHAAD
20160310014

PROGRAM STUDI SARJANA KEDOKTERAN
FAKULTAS KEDOKTERAN DAN ILMU KESEHATAN
UNIVERSITAS MUHAMMADIYAH YOGYAKARTA
2019

PERNYATAAN KEASLIAN PENELITIAN

Saya yang bertanda tangan dibawah ini:

Nama : Radifan Farid Rashaad

NIM : 20160310014

Program Studi : Pendidikan Dokter

Fakultas : Kedokteran dan Ilmu Kesehatan UMY

Menyatakan dengan sebenar-benarnya bahwa Karya Tulis Ilmiah yang penulis tulis ini benar-benar merupakan hasil karya penulis sendiri dan belum diajukan dalam bentuk apapun kepada perguruan tinggi manapun. Sumber informasi yang berasal atau dikutip dari karya yang diterbitkan maupun tidak diterbitkan dari penulis lain telah disebutkan dalam teks yang dicantumkan dalam Daftar Pustaka dibagian akhir Karya Tulis Ilmiah ini.

Apabila dikemduain hari terbukti atau dapat dibuktikan Karya Tulis Ilmiah ini hasil jiplakan, maka penulis bersedia menerima sanksi atas perbuatan tersebut.

Yogyakarta, 20 November 2019

Yang membuat pernyataan,

Radifan Farid Rashaad

KATA PENGANTAR

Puji syukur ke hadirat Allah SWT yang telah senantiasa memberikan rahmat serta hidayah-Nya sehingga penulis dapat menyelesaikan proposal karya tulis ilmiah yang berjudul **“Hubungan Tingkat Aktivitas Fisik Terhadap IMT pada Mahasiswa Universitas Muhammadiyah Yogyakarta”** dengan baik, lancar, dan tepat waktu.

Proposal karya tulis ini disusun dalam rangka untuk mengusulkan penelitian karya tulis ilmiah sebagai salah satu syarat untuk memperoleh gelar sarjana kedokteran di Fakultas Kedokteran dan Ilmu Kesehatan, Universitas Muhammadiyah Yogyakarta.

Dalam kesempatan ini, penulis mengucapkan terima kasih kepada:

1. Dr. dr. Wiwik Kusumawati, M. Kes selaku Dekan Fakultas Kedokteran dan Ilmu Kesehatan, Universitas Muhammadiyah Yogyakarta.
2. dr. Sri Sundari, M. Kes selaku Ketua Program Studi Pendidikan Dokter, Fakultas Kedokteran dan Ilmu Kesehatan, Universitas Muhammadiyah Yogyakarta.
3. DR. dr. Arlina Dewi M.kes selaku dosen pembimbing yang sabar dan teliti dalam memberikan bimbingan, pikiran, tenaga dan waktu kepada penulis dalam menyusun proposal karya tulis ilmiah ini.
4. dr. Ratna Indriawati M.kes selaku dosen penguji yang memberikan kritik dan saran terhadap proposal karya tulis ilmiah ini agar dapat diperbaiki menjadi lebih baik.

5. Seluruh warga Klinik Firdaus yang telah meluangkan waktu dan membantu dalam pengambilan data penelitian,
6. Ibu Emi Yuliani dan Bapak Djoko Aryanto selaku orang tua dari penulis serta dr Tri Wisnu Nugroho selaku paman penulis yang senantiasa memberikan do'a dan dukungan tanpa henti.
7. Mas Agus Gunadi selaku mentor yang senantiasa memberi bantuan selama penyusunan karya tulis ilmiah.
8. Teman-teman sejawat Fakultas Kedokteran UMY angkatan 2016 yang senantiasa memberi bantuan dan dukungan selama penyusunan proposal karya tulis ilmiah ini.
9. Teman satu bimbingan karya tulis ilmiah dan semua pihak yang sudah memberikan bantuan dan dukungan selama penyusunan proposal karya tulis ilmiah ini.

Penulis menyadari bahwa proposal karya tulis ilmiah ini masih jauh dari kata sempurna, akan tetapi penulis berharap proposal karya tulis ilmiah ini dapat bermanfaat dalam dunia pendidikan juga kesehatan.

Yogyakarta, 20 November 2019

Hormat saya,

Radifan Farid Rashaad

DAFTAR ISI

KARYA TULIS ILMIAH.....	i
HALAMAN PENGESAHAN KTI.....	ii
PERNYATAAN KEASLIAN PENELITIAN	iii
KATA PENGANTAR	iv
DAFTAR ISI.....	vi
DAFTAR TABEL.....	viii
INTISARI	ix
ABSTRACT.....	x
BAB 1	1
PENDAHULUAN	1
A. Latar Belakang Masalah	1
B. Rumusan Masalah	5
C. Tujuan Penelitian.....	5
D. Manfaat Penelitian.....	5
E. Keaslian Penelitian.....	7
BAB II.....	10
TINJAUAN PUSTAKA.....	10
A. Telaah Pustaka	10
1. Aktivitas Fisik	10
2. Obesitas	17
3. Hubungan Aktivitas fisik terhadap IMT	22
B. Kerangka Teori.....	24
C. Kerangka Konsep Penelitian.....	25
D. Hipotesis.....	25
BAB III.....	26
METODE PENELITIAN	26
A. Desain Penelitian	26
B. Populasi dan Sampel.....	26
C. Lokasi dan Waktu Penelitian.....	27
D. Variabel Penelitian.....	27
E. Defisini Operasional.....	28
F. Instrumen Penelitian	29
G. Cara Pengumpulan Data	30
H. Uji Validitas dan Reabilitas	31
I. Analisis Data.....	31

J. Etika Penelitian	33
BAB IV	34
HASIL PENELITIAN DAN PEMBAHASAN	34
A. Hasil Penelitian.....	34
1. Gambaran Umum Lokasi Penelitian.....	34
2. Deskripsi Karakteristik Demografi Responden	34
3. Hubungan Tingkat Aktivitas Fisik Terhadap Indeks Masa Tubuh.....	36
B. Pembahasan.....	37
1. Hubungan Tingkat Aktivitas Fisik terhadap Indeks Masa Tubuh	37
C. Keterbatasan Penelitian	42
BAB V	43
KESIMPULAN DAN SARAN	43
A. Kesimpulan	43
B. Saran.....	43
DAFTAR PUSTAKA.....	45
LAMPIRAN.....	50
Lampiran 1. <i>Global Physical Activity Questionnaire</i>	51
Lampiran 2. Surat Persetujuan Etik KEPK FKIK UMY	53
Lampiran 3. Hasil Analisis Data Penelitian	54

DAFTAR TABEL

TABEL 1.1 KEASLIAN PENELITIAN.....	7
TABEL 2.1 AKTIVITAS FISIK	15
TABEL 2.2 DATA BMI	19
TABEL 2.3 KLASIFIKASI OBESITAS	20
TABEL 2.4 KATEGORI OBESITAS WHO.....	22
TABEL 2.5 KATEGORI OBESITAS DEPKES	22

DAFTAR PUSTAKA

- Abdeen, Ziad, Christine Jildeh, Sahar Dkeideek, Radwan Qasrawi, Ibrahim Ghannam, and Haleama Al Sabbah. 2012. "Overweight and Obesity among Palestinian Adults: Analyses of the Anthropometric Data from the First National Health and Nutrition Survey (1999-2000)." *Journal of Obesity* 2012: 213547. <https://doi.org/10.1155/2012/213547>.
- Al-Maskari, Fatma, Mohamed El-Sadig, Juma M. Al-Kaabi, Bachar Afandi, Nicolas Nagelkerke, and Karin B. Yeatts. 2013. "Knowledge, Attitude and Practices of Diabetic Patients in the United Arab Emirates." *PLOS ONE* 8 (1): e52857. <https://doi.org/10.1371/journal.pone.0052857>.
- Balitbang Kemenkes RI 2018. "Riset Kesehatan Dasar." Accessed May 17, 2018. <http://www.depkes.go.id/resources/download/general/Hasil%20Riskasda%202018.pdf>.
- Baumgartner, T., Andrew (Tony) S. Jackson, M. Mahar, and D. A. Rowe. 2006. "Measurement for Evaluation in Physical Education and Exercise Science." [https://pure.strath.ac.uk/portal/en/publications/measurement-for-evaluation-in-physical-education-and-exercise-science\(3b4058c6-8281425f-b1ce-3ecaadf28a1\)/export.html](https://pure.strath.ac.uk/portal/en/publications/measurement-for-evaluation-in-physical-education-and-exercise-science(3b4058c6-8281425f-b1ce-3ecaadf28a1)/export.html).
- Berrington de Gonzalez, Amy, Patricia Hartge, James R. Cerhan, Alan J. Flint, Lindsay Hannan, Robert J. MacInnis, Steven C. Moore, et al. 2010. "Body Mass Index and Mortality among 1.46 Million White Adults." *The New England Journal of Medicine* 363 (23): 2211–19. <https://doi.org/10.1056/NEJMoa1000367>.
- Bogers, Rik P., Wanda J. E. Bemelmans, Rudolf T. Hoogenveen, Hendrick C. Boshuizen, Mark Woodward, Paul Knekt, Rob M. van Dam, et al. 2007. "Association of Overweight with Increased Risk of Coronary Heart Disease Partly Independent of Blood Pressure and Cholesterol Levels: A Meta Analysis of 21 Cohort Studies Including More than 300 000 Persons." *Archives of Internal Medicine* 167 (16): 1720–28. <https://doi.org/10.1001/archinte.167.16.1720>.
- Bull, Fiona C., Tahlia S. Maslin, and Timothy Armstrong. 2009. "Global Physical Activity Questionnaire (GPAQ): Nine Country Reliability and Validity Study." *Journal of Physical Activity & Health* 6 (6): 790–804.
- Candrawati, Susiana. 2011. "HUBUNGAN TINGKAT AKTIVITAS FISIK DENGAN INDEKS MASSA TUBUH (IMT) DAN LINGKAR PINGGANG MAHASISWA." *Jurnal Keperawatan Soedirman* 6: 7.

- Chang, Heng-Cheng, Hsin-Chou Yang, Hsing-Yi Chang, Chih-Jung Yeh, Hsin Hung Chen, Kuo-Chin Huang, and Wen-Harn Pan. 2017. "Morbidity Obesity in Taiwan: Prevalence, Trends, Associated Social Demographics, and Lifestyle Factors." PLOS ONE 12 (2): e0169577. <https://doi.org/10.1371/journal.pone.0169577>.
- Corbin, Charles B., and Ruth Lindsey. 1997. "Concepts of Physical Fitness, with Laboratories." Brown & Benchmark Publishers."
- Departemen Kesehatan 2008. "Profil Kesehatan Indonesia." Accessed May 16, 2018. http://www.depkes.go.id/resources/download/pusdatin/profil_kesehatan_indonesia/profil-kesehatan-indonesia-2008.pdf.
- Departemen Kesehatan 2007. "Pedoman Pengukuran." Accessed May 17, 2018. <https://www.scribd.com/doc/27217210/PedomanPengukuran-depkes-2007>.
- Flegal, Katherine M., Brian K. Kit, Heather Orpana, and Barry I. Graubard. 2013. "Association of All-Cause Mortality With Overweight and Obesity Using Standard Body Mass Index Categories: A Systematic Review and Meta Analysis." JAMA 309 (1): 71–82. <https://doi.org/10.1001/jama.2012.113905>.
- Fogelholm, M. 2010. "Physical Activity, Fitness and Fatness: Relations to Mortality, Morbidity and Disease Risk Factors. A Systematic Review." Obesity Reviews: An Official Journal of the International Association for the Study of Obesity 11 (3): 202–21. <https://doi.org/10.1111/j.1467-789X.2009.00653.x>.
- Hallal, Pedro C, Lars Bo Andersen, Fiona C Bull, Regina Guthold, William Haskell, and Ulf Ekelund. 2012. "Global Physical Activity Levels: Surveillance Progress, Pitfalls, and Prospects." The Lancet 380 (9838): 47–57. [https://doi.org/10.1016/S0140-6736\(12\)60646-1](https://doi.org/10.1016/S0140-6736(12)60646-1).
- Hamrik, Zdenek, Dagmar Sigmundová, Michal Kalman, Jan Pavelka, and Erik Sigmund. 2014. "Physical Activity and Sedentary Behaviour in Czech Adults: Results from the GPAQ Study." European Journal of Sport Science 14 (2): 193–98. <https://doi.org/10.1080/17461391.2013.822565>.
- Harvard Health Publishing 2017. "The 4 Most Important Types of Exercise." Accessed May 16, 2018. <https://www.health.harvard.edu/>.
- Hills, Andrew P., Najat Mokhtar, and Nuala M. Byrne. 2014. "Assessment of Physical Activity and Energy Expenditure: An Overview of Objective Measures." Frontiers in Nutrition 1 (June). <https://doi.org/10.3389/fnut.2014.00005>.

- Howley, E. T. 2001. "Type of Activity: Resistance, Aerobic and Leisure versus Occupational Physical Activity." *Medicine and Science in Sports and Exercise* 33 (6 Suppl): S364-369; discussion S419-420.
- Institute of Medicine (U.S.), and Institute of Medicine (U.S.), eds. 2005. "Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids." Washington, D.C: National Academies Press.
- Kavouras, Stavros, Demosthenes Panagiotakos, Christos Pitsavos, Christina Chrysohoou, Costas Anastasiou, Yannis Lentzas, and Christodoulos Stefanadis. 2007. "Physical Activity, Obesity Status, and Glycemic Control: The ATTICA Study." *Medicine & Science in Sports & Exercise* 39 (4): 606–11. <https://doi.org/10.1249/mss.0b013e31803084eb>.
- Kay, Melissa C., Dianna D. Carroll, Susan A. Carlson, and Janet E. Fulton. 2014. "Awareness and Knowledge of the 2008 Physical Activity Guidelines for Americans." *Journal of Physical Activity & Health* 11 (4): 693–98. <https://doi.org/10.1123/jpah.2012-0171>.
 Kopelman, P. 2007. "Health Risks Associated with Overweight and Obesity." *Obesity Reviews: An Official Journal of the International Association for the Study of Obesity* 8 Suppl 1 (March): 13–17. <https://doi.org/10.1111/j.1467-789X.2007.00311.x>.
- Kriseman, M., E. Kovanci, C. Mills, and W. Gibbons. 2013. "Antimüllerian Hormone Levels Are Inversely Associated with Body Mass Index (BMI) in Women with Polycystic Ovary Syndrome." *Fertility and Sterility* 100 (3): S332. <https://doi.org/10.1016/j.fertnstert.2013.07.913>.
- Levine, James A., and Jennifer M. Miller. 2007. "The Energy Expenditure of Using a 'Walk-and-Work' Desk for Office Workers with Obesity." *British Journal of Sports Medicine* 41 (9): 558–61. <https://doi.org/10.1136/bjism.2006.032755>.
- McCubbin, Laurie D, and Mapuana Antonio. 2012. "Discrimination and Obesity Among Native Hawaiians." *Hawai'i Journal of Medicine & Public Health* 71 (12): 346–52.
- Muscogiuri, Giovanna, Elena Cantone, Sara Cassarano, Dario Tuccinardi, Luigi Barrea, Silvia Savastano, Annamaria Colao, and on behalf of the Obesity Programs of nutrition, Education, Research and Assessment (OPERA) group. 2019. "Gut Microbiota: A New Path to Treat Obesity." *International Journal of Obesity Supplements* 19 (1): 10–19. <https://doi.org/10.1038/s41367-019-0011-7>.

- Miles, L. 2007. "Physical Activity and Health." *Nutrition Bulletin* 32 (4): 314-63. <https://doi.org/10.1111/j.1467-3010.2007.00668.x>.
- National Heart, Lung, and Blood Institute (2013). "Physical Activity and Your Heart." Accessed May 17, 2018. <https://www.nhlbi.nih.gov/>.
- Nelson, Candace C., Gregory R. Wagner, Alberto J. Caban-Martinez, Orfeu M. Buxton, Christopher T. Kenwood, Erika L. Sabbath, Dean M. Hashimoto, Karen Hopcia, Jennifer Allen, and Glorian Sorensen. 2014. "Physical Activity and Body Mass Index." *American Journal of Preventive Medicine* 46 (3 0 1): S42–51. <https://doi.org/10.1016/j.amepre.2013.10.035>.
- Ni Mhurchu, C., A. Rodgers, W. H. Pan, D. F. Gu, M. Woodward, and Asia Pacific Cohort Studies Collaboration. 2004. "Body Mass Index and Cardiovascular Disease in the Asia-Pacific Region: An Overview of 33 Cohorts Involving 310 000 Participants." *International Journal of Epidemiology* 33 (4): 751–58. <https://doi.org/10.1093/ije/dyh163>.
- Nix 2004. "Williams' Basic Nutrition and Diet Therapy." Accessed May 17, 2018. <https://www.amazon.com/Williams-Basic-Nutrition-Therapy-Paper-back/dp/B00LZMA7SM>.
- OECD 2017."Obesity Update." Accessed May 11, 2018. <https://www.oecd.org/els/health-systems/Obesity-Update-2017.pdf>.
- Sacheck, Jennifer M., Julia F. Kuder, and Christina D. Economos. 2010. "Physical Fitness, Adiposity, and Metabolic Risk Factors in Young College Students." *Medicine and Science in Sports and Exercise* 42 (6): 1039–44. <https://doi.org/10.1249/MSS.0b013e3181c9216b>.
- Singh, Amika, Léonie Uijtdewilligen, Jos W. R. Twisk, Willem van Mechelen, and Mai J. M. Chinapaw. 2012. "Physical Activity and Performance at School: A Systematic Review of the Literature Including a Methodological Quality Assessment." *Archives of Pediatrics & Adolescent Medicine* 166 (1): 49–55. <https://doi.org/10.1001/archpediatrics.2011.716>.
- Tchoukalova, Yourka D., Christina Koutsari, Maksym V. Karpyak, Susanne B. Votruba, Eliana Wendland, and Michael D. Jensen. 2008. "Subcutaneous Adipocyte Size and Body Fat Distribution." *The American Journal of Clinical Nutrition* 87 (1): 56–63. <https://doi.org/10.1093/ajcn/87.1.56>.
- Wang, Y., and M. A. Beydoun. 2007. "The Obesity Epidemic in the United States: Gender, Age, Socioeconomic, Racial/Ethnic, and Geographic Cha

racteristics: A Systematic Review and Meta-Regression Analysis.” *Epidemiologic Reviews* 29 (1): 6–28. <https://doi.org/10.1093/epirev/mxm007>.

WHO 2016. “*Global Physical Activity Questionnaire Analysis Guide.*” Accessed May 16, 2018. http://www.who.int/ncds/surveillance/steps/resources/GPAQ_Analysis_uidpdf.

WHO 2018a.” *Global Database on Body Mass Index.*” Accessed May 11, 2018. <http://apps.who.int/bmi/index.jsp>.

WHO 2018b.” *Physical Activity.*” Accessed May 16, 2018. <http://www.who.int/dietphysicalactivity/pa/en/>.

WHO 2018c.”*Obesity and Overweight.*” World Health Organization. Accessed May 16, 2018. <http://www.who.int/news-room/factsheets/detail/obesity-and-overweight>.

Widiantini, Winne, and Zarfiel Tafal. 2014. “Aktivitas Fisik, Stres, Dan Obesitas Pada Pegawai Negeri Sipil.” *Kesmas: National Public Health Journal* 0 (0): 325–29. <https://doi.org/10.21109/kesmas.v0i0.374>.

Winer, Daniel A., Helen Luck, Sue Tsai, and Shawn Winer. 2016. “The Intestinal Immune System in Obesity and Insulin Resistance.” *Cell Metabolism* 23 (3): 413–26. <https://doi.org/10.1016/j.cmet.2016.01.003>.

Wright, Jan, and Doune Macdonald. 2010. *Young People, Physical Activity and the Everyday.* Routledge.