

**CORRELATION BETWEEN WAIST CIRCUMFERENCE AND
BLOOD PRESSURE AMONG OVERWEIGHT STUDENTS IN
SMA MUHAMMADIYAH 3 YOGYAKARTA**

Student Research Project

*This research is presented as partial fulfillment of the requirement for the
attainment of the Bachelor of Nursing in Muhammadiyah University of
Yogyakarta*



DWI NURANI OHORELLA

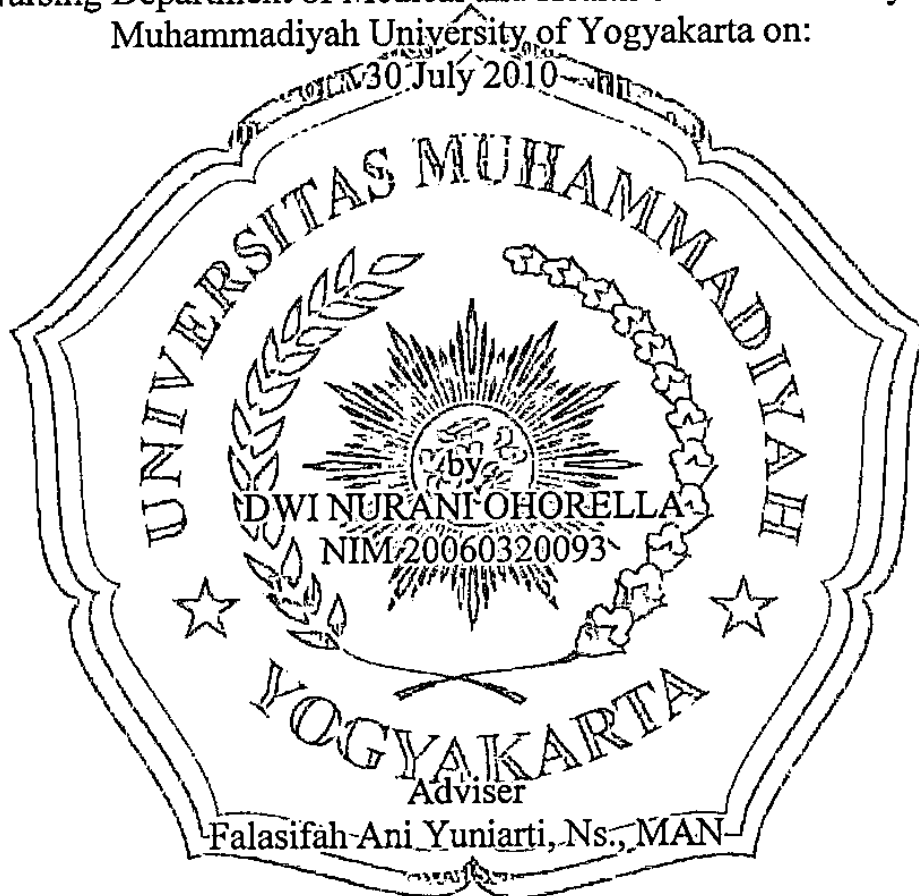
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**NURSING DEPARTMENT
FACULTY OF MEDICAL AND HEALTH SCIENCES
MUHAMMADIYAH UNIVERSITY OF YOGYAKARTA**

AGREEMENT PAGE

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3 YOGYAKARTA

Accepted by Adviser to be Examined by Board of the Research Examiners of
Nursing Department of Medical and Health Sciences Faculty in
Muhammadiyah University of Yogyakarta on:



Falasifah

RATIFICATION PAGE

Student Research Project

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**Examined by Board of the Research Examiners of
Nursing Department of Medical and Health Sciences Faculty in
Muhammadiyah University of Yogyakarta on:
July 30th, 2010**

by:

DWI NURANI OHORELLA

NIM 20060320093

Examiners

Falasifah Ani Yuniarti, S.Kep., Ns., MAN

(.....
[Signature]
.....)

Fitri Arofiati, S.Kep., Ns., MAN

(.....
[Signature]
.....)

**Director of Medical and Health Sciences Faculty
Muhammadiyah University of Yogyakarta**



[Signature]

ACKNOWLEDGEMENT

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Before I start, I would like to thank Almighty God, Allah SWT, for every grace given to me, for giving me strength, and courage to complete this research writing within the time period given to me. This research could be done only by God's willing and blessing. Shalawat and Salaam to Muhammad Rasulullah SAW as the best role model in human live, to the families, friends, tabi'in, tabi'ittabii'in, and the followers.

Research entitled *Correlation between Waist Circumference and Blood Pressure among Overweight Students in SMA Muhammadiyah 3 Yogyakarta* is presented as partial fulfillment of the requirement for the attainment of the Bachelor of Nursing in Muhammadiyah University of Yogyakarta. Writing this research has been a wonderful experience. Author realized that completeness of this writing is inseparable from many assistances, supports, and motivations. On this occasion, author would like to thank:

1. Allah SWT, who has given enjoyment of health and strength, so this research were well resolved.
2. My beloved parent Dr. Ibrahim Ohorella., Ir., MP., and Nur Intan Ohorella, SE., who always love me, who always pray for me and support me in every steps I take, in reaching blessing from Allah SWT.

3. dr. H. Erwin Santoso, Sp.A., M.Kes as the Director in Faculty of Medicine and Health Science who has given an opportunity in conducting and resolving this research.
4. Fitri Arofiati, Ns. MAN as the Head of Nursing Department who has given an opportunity in conducting and resolving this research.
5. Falasifah Ani Yuniarti, Ns. MAN as Adviser who has given many guidances, supports, and motivation in conducting and resolving this research.
6. Drs. HM. Ghofari Latief as the Head of Majelis Pendidikan Dasar dan Menengah Kota Yogyakarta who has released research license.
7. Tri Ismu Husnan Purwono, S. H. as the Head Master of SMA Muhammadiyah 3 Yogyakarta who has permitted author for conduct a research in the school.
8. Dra. Suryati and all school Staffs who has helped author in conducting and resolving this research.
9. All students who has participated well in this research.

Finally, author realizes that this research was not fully perfect, so apologizes for every weaknesses and mistakes in this research. Constructive suggestions are very helpful in constructing this writing.

MOTTO

- ❖ Allah akan meninggikan orang-orang yang beriman di antaramu dan orang-orang yang diberi ilmu pengetahuan beberapa derajat dan Allah Maha mengetahui apa yang kamu kerjakan “ (Q.S. Al Mujadilah : 11)
- ❖ Sesungguhnya Allah tidak mengubah keadaan sesuatu kaum sehingga mereka mengubah keadaan yang ada pada diri mereka sendiri (Q.S. Ar ra'd 13 : 11)
- ❖ Sesungguhnya kesulitan itu ada kemudahan maka apabila kamu telah selesai dari suatu urusan kerjakan dengan sungguh-sungguh urusan yang lain (Qs. Albaqarah, 145).
- ❖ Dan janganlah kamu mengikuti apa yang kamu tidak mempunyai ilmu tentangnya. Sesungguhnya pendengaran, penglihatan, dan hati itu akan diminta pertanggung jawabannya (Qs. Alisraa', 36).

DEDICATION

I dedicate this research paper to:

- ❖ **Allah SWT. Hanya karena kekuasaan Mu dan Ridho Mu semua yang terjadi dalam hidupku mampu ku jalani....**
- ❖ **Ayahanda IBRAHIM OHORELLA dan ibunda NUR INTAN, ananda persembahkan skripsi ini sebagai tanda bakti dan cinta serta terima kasihku kepada ayahanda dan ibunda yang senantiasa memberikan motivasi, ketulusan, perhatian, dan kasih sayang serta tidak henti-hentinya mencurahkan do'a demi cita-cita dan masa depan ananda. Tanpa doa dan restu yang selalu mengalir untuk ananda, tak mungkin ananda bisa setegar ini. Tak akan ada satu apapun di dunia ini yang mampu menandingi dan menggantikan kasih sayang dari kalian. Ayah, ibu.... atas ridha Allah, suatu saat nanti ananda pasti bisa membahagiakan kalian.**
- ❖ **My sister DESSY OHORELLA, and My Brothers MUHAMMAD HUSEN OHORELLA, MUHAMMAD HASAN OHORELLA, MUHAMMAD KURNIAWAN OHORELLA. Aku bangga memiliki saudara seperti kalian, aku bahagia menjalani persaudaraan yang indah bersama kalian.**
- ❖ **My best friends "KecebonK" ANIN, ECHA, WISTIN, SASA, EKA. Terimakasih atas segala motivasi dan kasih sayangnya. Berjuang bersama kalian untuk menaklukkan gunung tinggi dan jurang terjal membuatku tegar. Mari lanjutkan perjuangan meraih cita-cita kita kawan.**
- ❖ **My man AGA. Terimakasih atas support, doa, kasih sayang, serta**

Ohorella, Dwi. Hubungan antara Lingkar Pinggang dan Tekanan Darah pada Siswa Overweight di SMA Muhammadiyah 3 Yogyakarta

Pembimbing:

Yuniarti , Falasifah Ani, Ns., MAN.

INTISARI

Overweight dan obesitas merupakan kondisi dimana berat badan lebih dari kriteria berat badan normal. Anak-anak dan remaja yang memiliki BMI lebih dari atau sama dengan persentil 95 dikategorikan sebagai *overweight*. *Overweight* dan obesitas pada remaja berhubungan dengan beberapa penyakit. Namun, beberapa penelitian mempertimbangkan bahwa distribusi jaringan lemak pada orang *overweight* merupakan factor yang bermakna terhadap morbiditas dan mortalitas dibandingkan BMI. Lingkar pinggang pada remaja berhubungan dengan tekanan darah seperti yang terjadi pada orang dewasa.

Tujuan penelitian ini adalah untuk menentukan adanya hubungan antara lingkar pinggang dan tekanan darah pada siswa *overweight* di SMA Muhammadiyah 3 Yogyakarta. Penelitian ini merupakan penelitian non-eksperimen dengan pendekatan *cross sectional*. Instrumen yang digunakan dalam penelitian ini adalah timbangan, *microtoise*, *sphygmomanometer*, *stethoscope*, grafik *BMI-for-age percentile*, pita ukur, dan lembar observasi. Hipotesis pada penelitian ini diuji menggunakan uji *Spearman*.

Hasil penelitian ini menunjukkan bahwa terdapat hubungan positif yang signifikan antara lingkar pinggang dan tekanan darah sistolik ($p = .001$; $r = .573$) serta tekanan darah diastolik ($p = .009$; $r = .468$). Hubungan antara lingkar pinggang dan tekanan darah pada remaja *overweight* harus diperhatikan dengan baik agar dapat mencegah tingginya angka mortalitas dan morbiditas dari berbagai macam komplikasi yang disebabkan oleh *overweight*.

Kata kunci: *overweight*, remaja, lingkar pinggang, tekanan darah

Ohorella, Dwi. Correlation between Waist Circumference and Blood Pressure among Overweight Student in SMA Muhammadiyah 3 Yogyakarta

Adviser:

Yuniarti , Falasifah Ani, Ns., MAN.

ABSTRACT

Overweight and obesity are both labels for ranges of weight that are greater than what is generally considered healthy for a given height. Children and adolescents who had BMI for age more than or equal to 95th percentile were considered to be overweight. Overweight or obesity in adolescent related to several diseases. However, research suggested that fat distribution may be a more important factor for morbidity and mortality than BMI. Waist circumference in overweight children and adolescents probably also had a correlation to blood pressure as what was happened in adult. There were just a few research in Indonesia describe this correlation

The purpose of this research was to discover the correlation between waist circumference and blood pressure among overweight students in SMA Muhammadiyah 3 Yogyakarta. This research was non-experimental with cross sectional design. 30 overweight students who matched inclusion and exclusion criteria had blood pressure and waist circumference measurements. Equal, microtoise, sphygmomanometer, stethoscope, BMI-for-age percentile chart, measuring tape, and observational page were used as research design. The hypothesis of the study was tested by using the Spearman correlation.

The finding of the study showed a statistically significant correlation between waist circumference and (p = .001 ; r = .573), also diastolic blood pressure (p = .009; r = .468). Correlation between waist circumference and blood pressure among overweight adolescents must be taken as detailed as possible in order to decrease the mortality and morbidity from its variety of complications.

Key words: overweight, adolescents, waist circumference, blood pressure

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