# REGULAR PHYSICAL EXERCISE AND ITS RELATIONSHIP TO GLOBAL AND PHYSICAL SELF-ESTEEM IN ADMINISTRATIVE STAFF UNDER 60 YEARS OF AGE AT CHULALONGKORN UNIVERSITY FACULTY OF ENGINEERING, BANGKOK, THAILAND.

Mr. Adam Huebner

A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Public Health in Health Systems Development
College of Public Health
Chulalongkorn University
Academic Year 2004

ISBN 974-9599-72-1

Copyright of Chulalongkorn University

I21802506

Thesis Title : Regular Physical Exercise and its Relationship to Global and Physical Self-esteem in Administrative Staff under 60 years of age at Chulalongkorn University faculty of Engineering, Bangkok, Thailand.

By : Mr. Adam Huebner

Program : Health Systems Development

Thesis Advisor : Assistant Professor Marc Van der Putten, M.P.H., Dr.P.H.

Committee member : Assistant Professor Panrapee Suttiwan, Ph.D.

---

Accepted by the College of Public Health, Chulalongkorn University, Bangkok Thailand in Partial Fulfillment of the Requirements for the Master's Degree

..... Dean of The College of Public Health

(Professor Chitr Sitthi-amorn, M.D., M.Sc., Ph.D.)

THESIS COMMITTEE

..... Chairperson

(Assistant Professor Nuntavarn Vichit-Vadakan, M.S., Dr. P.H.)

..... Thesis Advisor

(Assistant Professor Marc Van der Putten, M.P.H., Ph.D.)

..... Committee member

(Assistant Professor Panrapee Suttiwan, Ph.D.)

PH: 042417 : MAJOR HEALTH SYSTEMS DEVELOPMENT PROGRAMME
KEY WORDS : EXERCISE/ SELF-ESTEEM

ADAM HUEBNER: REGULAR PHYSICAL EXERCISE AND ITS RELATIONSHIP TO GLOBAL AND PHYSICAL SELF-ESTEEM IN ADMINISTRATIVE STAFF UNDER 60 YEARS OF AGE AT CHULALONGKORN UNIVERSITY FACULTY OF ENGINEERING BANGKOK, THAILAND. THESIS ADVISOR: ASSISTANT PROFESSOR MARC VAN DER PUTTEN, Ph.D., 95 pp. ISBN 974-9599-72-1

The study on regular exercise and self-esteem had five main objectives. The first objective was to determine the prevalence of exercise among the study population, second to examine the relationship between exercise and physical self-esteem, third to examine the relationship between exercise and global self-esteem, fourth to examine the relationship between physical selfesteem, importance values, and global self-esteem, and lastly to identify important factors in this relationship. Self-administered questionnaires (Cronbach's alpha = .86) were used to collect data from 74 administrative staff at the Faculty of Engineering, Chulalongkorn University.

Results showed a low prevalence of regular exercise when using American College of Sports Medicine guidelines (10.8%). A positive significant relationship was observed between exercise intensity and physical self-esteem at p=.020. Significant relationships were also observed between exercise intensity and competency self-esteem (p= .006), exercise frequency and appearance self-esteem (p=.042), and exercise alone status and competency self-esteem (p=.002) Exercise characteristics and global self-esteem showed no significant relationships. Physical self-esteem, importance values, and global self-esteem also showed no significant relationship in a test of linear regression (p=.636). Gender was the biggest determinant of exercise behavior and self-esteem scores. Males were more likely to participate in running (p=.002), while females were more likely to participate in aerobics (p=.003). Additionally males had higher levels of strength self-esteem than females (p=.040)

These findings are in partial agreement with research conducted in the west, however further research is needed in the context of Thailand. Safe areas designated for running and aerobics may increase visibility of exercise benefits, therefore increasing participation. Additionally, since the home is one of the more popular exercise locations for exercisers within this group, exercise-at-home activities should be promoted by local health institutions.

**Field of study** Health Systems Development **Student's signature** .....

**Academic year** 2004 **Advisor's signature** .....

# Acknowledgements

I would first like to thank my mother and father. Without them, undoubtedly none of this would have been possible.

I would also like to thank my advisor Dr. Marc Van der Putten for his wealth of knowledge and for his ability to clarify and simplify all aspects of the thesis development and composition.

I would like to thank Asst. Professor Nuntavarn Vichit for her time and help in giving me direction when I was veering and in helping to translate and clarify my instrument between languages.

I would like to thank my outside chairperson from the faculty of Psychology, Asst. Professor Panrapee Suttiwan, for her help and direction in developing my thesis.

I would also like to thank the Deans of the College of Public Health and the Faculty of Engineering for their help in arranging my data collection.

I would like to thank Khun Somporn at the Faculty of Engineering for help in distributing and recollecting the questionnaires.

I would like to thank all respondents for their time and information.

Lastly, I would like to thank all my friends and fellow students for their support both academically and well, socially.

# Table of Contents


| | Page |
|---|---|
| ABSTRACT | iii |
| ACKNOWLEDGEMENT | iv |
| TABLE OF CONTENTS | v-vi |
| LIST OF TABLES | vii |
| LIST OF FIGURES | viii |
| GLOSSARY | ix |
| **CHAPTER I: BACKGROUND** | |
| 1. Mental Health and Self-esteem | 1 |
| 2. Exercise and other Determinants of Self-esteem | 4 |
| 3. Thai Health Policy | 8 |
| 4. Research Importance | 9 |
| 5. Purpose | 10 |
| **CHAPTER II: LITERATURE REVIEW** | |
| 1. Research Gaps | 11 |
| 2. Framework | 15 |
| 3. Theoretical Model of Self-esteem | 16 |
| 4. Model | 23 |
| 5. Questions | 24 |
| 6. Objectives | 24 |
| 7. Hypothesis | 25 |
| 8. Variables | 25 |
| 9. Key Terms | 28 |
| **CHAPTER III: RESEARCH METHODOLOGY** | |
| 1. Research Design | 30 |
| 2. Target Population | 30 |
| 3. Study Population | 30 |
| 4. Sample Size | 31 |
| 5. Sampling | 31 |
| 6. Setting | 31 |
| 7. Questionnaire | 32 |
| 8. Reliability | 37 |
| 9. Validity | 38 |
| 10. Interviewers | 38 |
| 11. Data Collection | 39 |
| 12. Data Analysis | 39 |

**CHAPTER IV: RESULTS**

1. Descriptive Analysis..... 41
2. Inferential Analysis (Bivariate)..... 53
3. Inferential Analysis (Multivariate)..... 64

**CHAPTER V: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS**

1. Discussion..... 65
2. Limitations..... 75
3. Recommendations from Results..... 76
4. Recommendations for Futures Research..... 77

REFERENCES..... 79

APPENDICES

Appendix A: Questionnaire (English)..... 85
Appendix B: Questionnaire (Thai)..... 88
Appendix C: Ethical Considerations..... 93

CURRICULUM VITAE..... 95

# List of Tables

Page

**Table 4.1:** Percentage Distribution of Respondent by Socio-demographic Characteristics..... 44

**Table 4.2:** Percentage Distribution of Respondents by Exercise Characteristics..... 46

**Table 4.3:** Number and Percentage of Exercisers according to ACSM Guidelines..... 50

**Table 4.4:** Mean, Median, Standard deviation, Minimum, and Maximum Of Global Self-Esteem and Physical Self-Esteem..... 51

**Table 4.5:** Percentage Distribution of Respondents by Importance of PhysicalCharacteristics..... 54

**Table 4.6:** Gender and Aerobics Class Participation..... 56

**Table 4.7:** Gender and Running..... 56

**Table 4.8:** Gender and Strength Self-Esteem Score..... 57

**Table 4.9:** Education Level and Strength Self-Esteem Score..... 58

**Table 4.10**: Household Income and Competency Self-Esteem Score... 59

**Table 4.11:** Physical Self-Esteem Score and Exercise Intensity..... 60

**Table 4.12:** Exercise Frequency and Appearance Self-Esteem Score.. 61

**Table 4.13:** Exercise Intensity and Competency Self-Esteem Score.... 62

**Table 4.14:** Exercise Alone and Competency Self-Esteem Score..... 62

# List of Figures

Page

**Figure 2.1:** Hierarchy of Self-Esteem..... 19

**Figure 2.2:** Conceptual Model of Self-Esteem and Exercise..... 25

**Figure 4.1:** Bar Graph Showing Respondent Age Distribution..... 45

**Figure 4.2:** Bar Graph Showing Average Exercise Frequency..... 48

**Figure 4.3:** Bar Graph Showing Average Exercise Duration..... 48

**Figure 4.4:** Pie Chart Showing Respondents' Main Reasons for Exercising..... 49

**Figure 4.5:** Bar Graph Showing Exercise Type by Number of Exercisers..... 50

**Figure 4.6:** Bar Graph Showing Distribution of Global Self-Esteem Scores..... 52

**Figure 4.7:** Bar Graph Showing Distribution of Physical Self-Esteem Scores..... 53

**Figure 4.8:** Scatter Graph Showing Importance of Competency by Total Competency Self-Esteem Score..... 63

**Figure 4.9:** Scatter Graph Showing Importance of Appearance by Total Appearance Self-Esteem Score..... 64

**Figure 4.10:** Scatter Graph Showing Importance of Strength by Total Strength Self-Esteem Score..... 65

**Figure 4.11:** Scatter Graph Showing Importance of Endurance by Total Endurance Self-Esteem Score..... 65

**Figure 4.12:** Scatter Graph Showing Total Physical Self-Esteem Score by Total Global Self-Esteem Score..... 66

# Glossary

**ACSM:** American College of Sports Medicine

**SD:** Standard Deviation

**Std. Deviation:** Standard Deviation

**Std. Error Mean:** Standard Error Mean

**DF:** Degrees of Freedom

**SE:** Self-Esteem