



UNIVERSITI PUTRA MALAYSIA

**THE HEALTH STATUS OF ELECTRONICS WOMEN WORKERS IN
RELATION TO THEIR LIFESTYLE**

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By

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October 2000

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Faculty: Medicine and Health Sciences

This study aims to examine the lifestyle factors that affect the women workers' health status. Women from selected factories who were Malaysians, production workers aged 17 and above, and had worked for at least one year in their current factory were invited to participate in the study on a voluntary basis. The final number of respondents was 484 women.

The data was collected using a pre-coded questionnaire. Anthropometric measurements (weight and height) were obtained to calculate body mass index (BMI). Further study was conducted among a sub-sample of women (33) to obtain



in-depth information on nutrition and physical activity. The research design for both the main and sub-sample studies is the questionnaire-based survey.

Results show that the major acute health problems experiences are stomach-ache, influenza, back pain, flatulence, sore throat, cough/phlegm, and feeling tired without reasons, while the major chronic health problems are persistent headache, eye strain/problem, menstruation/menopause problem, persistent back pain, and persistent constipation. Physical health status, as measured by BMI, is generally satisfactory, with 58.0% of the women within the normal range. However, women who are overweight or obese make up 26.7%, and those who are underweight make up 15.3%. Mental health, as measured by the DASS 21, shows that most of the women have normal to moderate levels of depression, anxiety, and stress. However, a substantial number are suffering from severe, or extremely severe depression (5.2%), anxiety (24.4%), and stress (5.9%).

Lifestyle factors that are found to be significantly related to the women's mental health are emotional support from their friend/others; household management, financial, and emotional support from their spouses (social support); number of persons in a room (living arrangement); "heavy workload," "financial burden," and "lack of resting time" (sources of stress); and maladaptive coping strategies (coping strategy). Lifestyle factors such as physical activity (active,

moderate, and sedentary), and diet are not significantly related to the women's nutritional status (BMI).

This study concludes that the problems of overweight and obesity, along with severe and extremely severe depression, anxiety, and stress are seen among a substantial number of women in this study. Their lifestyle factors are found to contribute to their poor health status.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains.

**TAHAP KESIHATAN PEKERJA ELEKTRONIK WANITA DAN
PERKAITANNYA DENGAN CARA GAYA HIDUP MEREKA**

Oleh

LIM HWEI MIAN

Oktober 2000

Pengerusi: Profesor Madya Chee Heng Leng, Ph.D.

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Tujuan kajian ini adalah untuk menyelidik faktor cara gaya hidup yang mempengaruhi status kesihatan pekerja wanita. Wanita dari kilang yang terpilih yang adalah warganegara Malaysia, operator pengeluaran yang berumur 17 tahun dan ke atas, dan telah bekerja sekurang-kurangnya satu tahun di kilang tersebut dipelawa untuk menyertai kajian ini secara sukarela. Jumlah responden adalah 484 orang.

Data dikutip dengan menggunakan borang soal selidik. Ukuran antropometri (berat dan ketinggian) diambil untuk mengira indeks jisim tubuh (IJT). Kajian terperinci turut dilakukan di kalangan sub-sampel wanita (33) untuk mendapatkan

maklumat tentang pemakanan dan aktiviti fizikal. Rekabentuk penyelidikan untuk kajian utama dan sub-sampel ini adalah survei menggunakan borang soal selidik.

Keputusan menunjukkan bahawa masalah kesihatan akut utama yang dialami wanita ini adalah sakit perut, selsema, sakit belakang, angin, sakit kerongkong, batuk/kahak, dan merasa penat tanpa sebab, manakala masalah kesihatan kronik utama yang dialami adalah sakit kepala yang berulang, sakit/masalah mata, masalah berkaitan haid/menopaus, sakit belakang yang berulang, dan sembelit yang berulang. Kesihatan fizikal wanita ini, yang diukur melalui BMI, adalah memuaskan, di mana 58.0% dari mereka berada dalam kategori normal. Namun demikian, seramai 26.7% adalah tergolong dalam kategori berlebihan berat atau obes, dan 15.3% adalah tergolong dalam kategori kekurangan berat. Kesihatan mental, yang diukur melalui DASS 21, menunjukkan sebahagian besar wanita ini mempunyai paras depresi, keresahan (*anxiety*), and tekanan dalam kategori normal hingga sederhana. Walaubagaimanapun, terdapat sebilangan yang mempunyai paras depresi (5.2%), keresahan (*anxiety*) (24.4%), dan tekanan (5.9%) yang tinggi dan sangat tinggi.

Faktor-faktor cara gaya hidup yang didapati mempunyai perkaitan signifikan dengan kesihatan mental wanita ini adalah sokongan emosi dari kawan/orang lain, sokongan mengurus rumahtangga, kewangan dan emosi dari suami (sokongan); bilangan orang di dalam sebuah bilik (keadaan tempat tinggal); “beban kerja,”

“beban kewangan,” dan “kurang masa rehat” (sumber tekanan); dan cara menangani tekanan secara negatif (cara menangani tekanan). Faktor-faktor cara gaya hidup seperti aktivitas fizikal (aktif, sederhana, dan tidak aktif), dan pemakanan didapati tidak mempunyai perkaitan signifikan dengan status pemakanan (LJT) wanita ini.

Kesimpulan kajian ini adalah masalah lebih berat badan dan obes, serta paras depresi, keresahan (*anxiety*), dan tekanan yang tinggi, dan sangat tinggi dikenalpasti di sebahagian dari wanita dalam kajian ini. Status kesihatan mental mereka yang kurang memuaskan didapati ada perkaitannya dengan cara gaya hidup mereka.

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LIST OF ABBREVIATIONS

ADA	: Appreciated depreciation allowances
BMI	: Body mass index
CED	: Chronic energy deficiency
CNS	: Central nervous system
CTDs	: Cumulative trauma disorders
DASS	: Depression Anxiety Stress Scales
EIWU	: Electrical & Electronics Industry Workers Union
ETCH	: Etching
FFQ	: Food frequency questionnaire
FTZs	: Free Trade Zones
FURN	: Furnace
GNP	: Gross national product
IMP	: Industrial Master Plan
IMP2	: Second Industrial Master Plan
IRPA	: Intensification of Research in Priority Areas
LB	: Location benefit
LMWs	: Licensed manufacturing warehouses
LUB	: Labour utilization benefit
MAA	: Malaysian Medical Association
MAINT	: Maintenance

MIDA	: Malaysian Industrial Development Authority
MITI	: Ministry of International Trade & Industry
MOF	: Ministry of Finance
MOH	: Ministry of Health
MNCs	: Multinational companies
NEP	: New Economic Policy
NGOs	: Non-governmental organizations
NHMS2	: National Health and Morbidity Survey 2
OR	: Odds ratio
PHOTO	: Photolithography
PKNS	: Selangor State Development Corporation
QC	: Quality control
RDA	: Recommended dietary allowances
RR	: Relative risk
TFII	: Thin film & iron implantation
US	: United States
WHO	: World Health Organization
WHR	: Waist hip ratio



CHAPTER I

INTRODUCTION

Health and Lifestyle

Health is a word that originates from the Old Middle English word 'hal', which means "freedom from disease, pain, or defect." Its synonyms are 'sound', meaning "not weak, diseased, or impaired" and 'whole', which denotes "not diseased or injured", according to the Webster's New World Dictionary (1994).

Nevertheless, there is a body of literature that conceptualizes health as being more than the absence of disease and illness. For example, it has been described as "the ability of the individual to function in a manner acceptable to himself and to the group of which he is a part" (Dubos, 1979). The World Health Organization's (WHO) (1978) definition of health as "a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity" is in line with this positive way of conceptualizing health. Another definition may be found in the Stedman's Concise Medical and Allied Health Dictionary (1997), which describes it as "a state characterized by anatomical, physiological, and psychological integrity, ability to perform personally valued family, work, and community roles; ability to



deal with physical, biological, psychological and social stress; a feeling of well-being; and freedom from the risk of disease and untimely death.”

From this conceptualization of health it may be argued that an individual's health is influenced by the external factors of the person, as well as the internal workings of the person's body. Much of the external factors around a person is embodied in his or her lifestyle. The concept of lifestyle is described by the Stedman's Concise Medical and Allied Health Dictionary as (1997):

Habits and customs influenced by the lifelong process of socialization, including social use of alcohol, dietary habit, and exercise, all of which have important implications for health.

Evidence from epidemiological and nutritional studies have shown that dietary habits have a linkage to illness and disease. For example, the level of saturated fat intake is related to a person's risk of having coronary heart disease and certain types of cancers. Furthermore, regular exercise, another lifestyle habit, is considered to be the best for maintaining health and well-being (Last, 1998).

However, Blaxter (1995) argues that this is not a holistic view on lifestyle, because it merely touches on 'voluntary lifestyles,' meaning personal choices regarding behaviour and consumption patterns. This way of conceptualizing lifestyle assumes that individuals are wholly responsible for their own behaviour in maintaining their health. Lifestyle topics in relation to health have most often dwelt on a person's eating, smoking and drinking behaviour and habits, including how they spend their free time. This, according to Blaxter, is a very narrow outlook on