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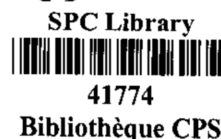

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MARSHALL ISLANDS WOMEN'S HEALTH SURVEY

The Marshall Islands Women's Health Survey was a joint undertaking involving the Government of the Republic of the Marshall Islands, the South Pacific Commission, the United Nations Fund for Population Activities (which provided the bulk of the funds) and other agencies. Stage I of the survey involved the collection, examination and, in some cases, processing of available demographic, morbidity and mortality data, and discussion with the Marshall Islands Department of Health and Department of Social Services and representatives of women's groups concerning the scope and content of Stage II of the survey. The main findings from stage I of the survey are set out out in the summary statistics.

The second stage of the Marshall Islands Women's Health survey involved the examination of 1,419 women aged 15-59 years from the urban centres of Majuro and Ebeye (Kwajalein), and from the outer (rural) atolls of Wotje and Ailinglaplap. The urban populations examined were from a systematic 1 in 3 household sample from the most urbanized part of Majuro, and all of Ebeye. For the rural atolls, all eligible women from the main islet were invited to attend the survey. The response rates were 80-90% in the urban areas and 85-95% in the rural atolls.

A questionnaire was administered to all women who attended the survey and information on reproductive history and current practices was obtained. Several indices of fertility and mortality were calculated from this data. The women were then examined physically: this included anthropometric measurements, blood pressure and pelvic examination. Various tests were performed including haemoglobin level (for anaemia), plasma glucose concentration (for diabetes), serological tests for syphilis, culture for gonorrhoea, and cervical cytology. A resumé of the results is set out in the attached summary statistics.

A household questionnaire was also completed for all houses included in the samples. Information was obtained on the demographic composition of the household, the structure of the household and sanitary arrangements. Recall data concerning illnesses and deaths were also obtained. Some of the findings are set out in the summary table.

The major conclusions of the Marshall Islands womens health survey are:

- Although limited, the morbidity and mortality data suggest that, while health problems characteristic of developing countries (infections, respiratory illness and prematurity) are still important, the non-communicable diseases (cardiovascular disease, diabetes and cancer), also constitute serious problems.
- Marshallese women have a high fertility rate. There is a large number of high-risk pregnancies and there also appears to be a high stillbirth rate.
- The infant mortality rate (IMR) is around 35-40 deaths per 1.000 live births, which is similar to that of most other Pacific island countries. The outer islands had a higher IMR (around 50) than the urban islands (around 30).
- Menstruation is a problem for many women. This may reflect cultural attitudes or lack of understanding of the normal menstrual process.
- Most women breastfeed their infants for an average 12 months.

- Contraception is used by only one-third of women "at risk" of pregnancy. Non-reversible methods of contraception were more frequently used than reversible methods. More than half the women not using contraception expressed a wish to do so.

- There appeared to be a lack of understanding about the uses of contraception, and a lack of information on this subject available to Marshallese women.

- Non-specific pain symptoms and renal problems were common self-reported health problems.

- Overweight and obesity were very common: observations suggested that the local diet contained too many foods composed of simple carbohydrates and fat, and too few foods consisting of complex carbohydrates and fresh produce.

- Hypertension was uncommon in urban and rural groups. The obese had a higher prevalence of hypertension than the non-obese.

- Diabetes prevalence was high, even in women of normal weight. Diabetes was more common in the urban areas than in the outer islands.

- Severe anaemia did not appear to be a significant problem, although mild-moderate anaemia was found, especially in the outer island groups.

- Sexually transmitted diseases (gonorrhoea and syphilis) were common, affecting mainly the youngest age groups.

- Breast disease was uncommon. Pelvic abnormalities were found more frequently, particularly abnormalities of the cervix and uterus.

- Abnormal vaginal discharges on examination were less common than self-reports by women suggested, indicating a lack of understanding of what constitutes a normal vaginal discharge.

- Cytological abnormalities of the cervix were uncommon, and no cases of pre-invasive or invasive carcinoma were detected.

- Urbanisation was associated with increasing numbers of childless households and larger living area per inhabitant. This was tempered in Ebeye by the high population density per available land.

- Ebeye had the most developed sanitation infrastructure for both water supply and waste disposal, whereas Ailinglaplap and Wotje still had traditional systems.

- Kitchen facilities and household appliances were fairly modernized in the urban centers.

- Overall, the survey locations showed a wide spectrum of household environmental conditions, from a traditional pattern in Ailinglaplap and Wotje, common to many Pacific islands, to a very modernized patterns in Ebeye.

The major recommendations arising from the study include:

- Improvement in the collection and reporting of morbidity and mortality data.
- Development of comprehensive health services for women.
- Improvement of family planning services.
- Strengthening of programs for prevention and control of obesity, diabetes and hypertension.
- Regular screening for cervical cancer in high-risk groups.
- Community education concerning sexually transmitted diseases and routine syphilis screening in pregnant women.

Summary statistics, Marshall islands women's health survey 1985

I. From routinely collected statistics (Stage I of health survey)

- Life expectancy and infant mortality estimates 1979-1981 from reported deaths adjusted for a presumed under enumeration of 40%.

- Life expectancy at birth

Life expectancy at birth	Males	58.4 years
	Females	62.9 years

- Infant mortality rate: 44.8 per 1 000 births.

- Major causes of death 1977-1981, proportional mortality (%)

Cause	%
Diseases of the heart	10
Diarrhoeal and intestinal disease	13
Cancer	11
Prematurity	10
Pneumonia and influenza	9
Perinatal causes	5

- Major causes of hospital morbidity %

Cause	%
Infections	14
Respiratory diseases	12
Complications of pregnancy and childbirth	6

- Major causes of outpatient clinic visits %

Cause	%
Respiratory diseases	25
Skin diseases	11
Intestinal infections	10
Asthma and allergies	8

II. Marshall Islands women's survey 1985 (Stage II)

	Majuro	Ebeye	Wotje-Ailinglaplap
• Number examined	613	621	185
• Response rate (%)	79	90	87-96
• Prevalence of women ever pregnant (age-adjusted) (%)	80	84	92
• Mean number of pregnancies (age-adjusted)			
per woman	4.2	4.8	5.3
per woman ever-pregnant	5.3	5.7	6.0
• Mean number of live births (age-adjusted)			
per woman	3.7	4.3	4.7
per woman ever pregnant	4.6	5.1	5.3
• Stillbirth (per 1 000 total births)	26.1	52.5	35.4
• Pregnancy outcome (per 1 000 pregnancies)			
stillbirths	3.3	4.9	3.2
miscarriages	9.3	6.4	8.7

Summary statistics (cont'd)

	Majuro	Ebeye	Wotje-Ailinglaplap
• Birth spacing < 2 years (%)	36	36	31
• Infant mortality rate (per 1 000 births) 1980-84 (from maternal history)	29.8	25.8	54.7
• Current contraceptive use (%)	36	31	35
• Major types of contraception amongst users (%)			
Tubal ligation	62	38	33
Pill	12	9	2
Rhythm	11	18	9
Breast feeding	1	16	26
Vasectomy	4	8	2
• Major reasons for not using contraceptives (%)			
No information available	32	43	222
Want to have children	15	20	19
Pregnant now	8	9	13
Contraceptive not available	1	1	12
• Desire to use contraception among non-users (%)	63	61	55
• Mean body mass index, age-adjusted (Kg/m^2)	27.1	27.1	25.5
• Mean blood pressure, age-adjusted (mmHg)			
Systolic	110.7	101.7	102.9
Diastolic	65.4	65.5	64.4
• Hypertension prevalence, age-adjusted (%) (>=160 systolic and/or >=95 diastolic)	4.0	2.2	2.8
• Diabetes prevalence, age-adjusted (%) (plasma glucose >= 200mg/dl>=2hrs after a meal or >= 250gm/dl<2hrs after a meal)	9.9	8.9	5.0
• Anaemia prevalence (%)			
Non-pregnant, age-adjusted			
Mild (10-11.9g/dl)	7.0	6.8	13.7
Moderate-severe (<9.9g/dl)	1.2	1.2	3.7
Pregnant			
Mild (10.0-10.9 g/dl)	10.9	17.3	23.1
Moderate-severe (8.0-9.9g/dl)	6.5	3.8	15.4
• Gonorrhoea positive cervical culture (%)	1.1	1.5	3.4
• Syphilis serology positive (FTA-ABS) (%)	7.1	7.9	3.2

Summary statistics (cont'd)

	Majuro	Ebeye	Wotje-Ailinglaplap
• Abnormalities of pelvic examination (%)			
Cervix	9.0	5.5	1.1
Uterus	3.4	1.5	4.4
Vaginal discharge	10.9	7.2	5.5
• Cervical cytology (%)			
Grade II	3.3	2.0	2.2
Grade III	0.1	0.3	0.0
• Trichomonas (from pap smears) (%)	4.2	3.5	3.9
• Mean number of persons per household	12.2	12.8	10.8
• Crude death rate (per 1 000) per year (from 1 year recall data)	4.4	4.9	7.3
• Mean household area (sq.meters)	73	52	46
• Mean occupant density (persons per $10m^2$)	2.0	2.8	3.3
• Drinking water supply (%)			
Piped	62	90	1
Roof catchment	51	66	94
Well	3	16	16
• Toilet facilities (%)			
None	8	3	52
Pit	64	5	48
Flush	27	92	0
• Cooking facilities, outside only (%)	6	5	37

Produced by Richard Taylor, Epidemiologist
and François Bach, Health Surveys Technician

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