CHAPTER 1   INTRODUCTION

1.1   HISTORY, GEOGRAPHY AND ECONOMY

1.1.1   History

Ancestors of modern-day Tuvaluans most likely came from Samoa by way of Tokelau, while others came from Tonga and Uvea (Wallis Island). These early settlers to Tuvalu were all Polynesians, with the exception of Nui Island, which was later settled by Micronesians. According to linguistic evidence, Tuvalu was first settled 2,000 years ago, although traditional stories and genealogies go back only 300 years. Tuvalu's history is passed down from generation to generation through legends, chants and the traditional song and dance of Tuvalu, the *fatele*.

The first European sighting of Tuvalu was in 1568 by Alvaro de Mendaña de Neira from Spain. It wasn't until the late 1700s, however, that the next European explorers reached the area. By the early 1800s, whalers and other seafarers were traversing the Pacific although stops at Tuvalu were infrequent because of the difficulties of landing ships on the atolls. However, during the mid-1800s, the islands were raided by slave raiders, called 'blackbirders', who forcibly recruited plantation workers for South America, Fiji, Hawaii, Tahiti, and Australia. Tuvalu was one of the hardest-hit of the Pacific Islands with over 400 people taken from Funafuti and Nukulaelae, none of whom returned.

In 1892 the islands became part of the British protectorate known as the Ellice Islands, which was later incorporated into the Gilbert and Ellice Islands Colony in 1916. Between 1943 and 1945, Tuvalu was used as an operations base for Allied forces battling the Japanese in the Pacific. Thousands of marines were stationed there.

In 1974, ethnic differences within the colony between the Polynesians (Ellice Islanders) and Micronesians (Gilbert Islanders) resulted in the Polynesians voting to secede from the colony. The following year the Ellice Islands became the separate British colony of Tuvalu. Tuvalu became an Independent Constitutional monarchy and the 38th (special) member of the Commonwealth on 1 October 1978. In 2000, Tuvalu became a full member of the Commonwealth and the 189th member of the United Nations.

1.1.2   Geography

Tuvalu is a 580 km-long chain of nine coral islands lying between latitudes 5ºS and 11ºS, just west of the International Date Line. Tuvalu's total land area is 26 km^2, which is relatively evenly distributed across the nine atolls. Six out of the nine atolls have lagoons that are open to the ocean; these are Nanumea, Nui, Vaitupu, Nukufetau, Funafuti and Nukulaelae. Nanumaga and Niutao have landlocked lagoons while Niulakita has no lagoon at all. All of Tuvalu's islands are low-lying, the highest being only 4 m or 5 m above sea level. As a result, Tuvalu is at great risk of becoming one of the first nations to succumb to the effects of climate change and sea level rise. Tuvalu's limited land area is generally of low quality with poor fertility and thus is unsuitable for agriculture.

1.1.3   Economy

According to a report by the United Nations Development Programme (UNDP 2006), Tuvalu's economy is 'small, fragmented and highly vulnerable to external economic influences'. As a result, Tuvalu is heavy dependent on outside development assistance. The economy is unusual in that a substantial amount of both government revenues and private incomes are generated from overseas. Government revenues come primarily from the Tuvalu Trust Fund, the Internet domain name of 'dot TV', and fishing license fees paid for by foreign fishing vessels, while family incomes are derived mainly from remittances from overseas seafarers.

Between 1996 and 2002, GDP averaged 6% per year (UNDP 2006). Recent economic performances are largely because of the 11% average annual increase in the government's

contribution to GDP. The government is the largest sector in the economy and the largest employer. This has increased government's share of GDP from 24% in 1996 to 30% in 2002. The private sector domestic economy is small and accounts for only about 31% of GDP in 2002, down from around 44% in 1996 (UNDP 2006).

The subsistence sector steadily declined between 1996 and 2002. The declining level of subsistence production indicates broader economic trends, including the growing importance of cash to meet daily needs, and the steady decline of outer island populations (excluding Funafuti and Vaitupu). With this is an associated shift in the population structure of the outer islands, where the economically active population (aged 15–54) supports an increasing dependent population of young and old people (UNDP 2006).

Remittances from seafarers (and other less formal remittances) make a significant contribution to Tuvalu's economy in general, and to individual families in particular. n 2002, over one-third of households received income from remittances (UNDP 2006).

1.2   POPULATION GROWTH

Population censuses have been carried out in Tuvalu since 1921, mostly at 10-year intervals. Table 1.1 provides a summary of the basic demographic indicators available for Tuvalu from the census data for 1921–2002. Tuvalu's population has increased three times since 1921, from around 3,000 in 1921 to over 9,000 in 1991. The population grew rapidly between 1931 and 1979 (reaching a growth rate of 3.8% in 1979), but the population growth rate subsequently slowed to 1.7% in 1991 and to 0.5% in 2002.

Table 1.1: Basic demographic indicators, selected demographic indicators, Tuvalu 1921-2002

	1921	1931	1947	1963	1968	1973	1979	1991	2002
Total population	3457	3994	4487	5444	5782	5887	7349	9043	9561
Intercensal growth rate (in %)	-	0.2	0.7	1.3	1.1	0.3	3.8	1.7	0.5
Density (population/sq km)	133	154	173	209	222	226	283	348	373
Percent urban	-	-	-	-	-	-	29	43	42
Life expectancy									
Male	-	-	-	-	-	-	-	64	62
Female	-	-	-	-	-	-	-	70	65
Total	-	-	-	-	-	-	59	67	64

- Equals to unknown (not available)

Source: SPC Statistical Bulletin

Tuvalu's population density has increased significantly from 133 people/km^2 in 1921 to 373 people/km^2 in 2002. Life expectancy declined by about three years between 1991 and 2002. Female life expectancy (65 years) in 2002 was higher than male life expectancy (62 years).

1.3   SURVEY OBJECTIVES

The principal objective of the 2007 Tuvalu Demographic and Health Survey (2007 TDHS) was to provide current and reliable data on fertility and family planning behaviour, child mortality, adult and maternal mortality, children's nutritional status, use of maternal and child health services, and knowledge of HIV and AIDS. Specific survey objectives were to:

▪   collect data at the national level, which will allow the calculation of key demographic rates;

▪   analyse the direct and indirect factors that determine the level and trends of fertility;

- measure the level of contraceptive knowledge and practice among women and men by method, place of residence, and region;
- collect high-quality data on family health, including immunisation coverage among children, prevalence and treatment of diarrhoea and other diseases among children under 5 years, and maternity care indicators (including antenatal visits, assistance at delivery, and postnatal care);
- collect data on infant and child mortality;
- obtain data on child feeding practices, including breastfeeding, and collect 'observation' information to use in assessing the nutritional status of women and children;
- collect data on knowledge and attitudes of women and men about sexually transmitted infections, HIV and AIDS and evaluate patterns of recent behaviour regarding condom use; and
- collect data on support to mentally ill persons and information on the incidence of suicide.

This information is essential for informed policy decisions, planning, monitoring, and evaluating programmes on health in general and reproductive health in particular, at both the national level and in urban Funafuti and the rural outer islands. A long-term objective of the survey is to strengthen the technical capacity of government organisations to plan, conduct, process, and analyse data from complex national population and health surveys. Moreover, the 2007 TDHS provides national, rural and urban estimates on population and health that are comparable to data collected in similar surveys in other Pacific DHS pilot countries and other developing countries.

1.4   SURVEY ORGANISATION

The 2007 TDHS was carried out under the Asian Development Bank (ADB)/Secretariat of the Pacific Community (SPC) Pacific Regional Pilot DHS Project, and was executed by the Tuvalu Central Statistics Office in collaboration with the Ministry of Health (MOH). Macro International Inc. provided technical assistance through its MEASURE DHS project. The survey was funded by ADB.

A steering committee was formed to be responsible for coordination, oversight, advice, and decision-making on all major aspects of the survey. The steering committee comprised representatives from various ministries and key stakeholders, including MOH and Central Statistics Division (CSD). A technical advisory committee and technical subcommittee were also formed.

1.4.1   Sample design

The 2007 TDHS used a two-stage stratified, random sample design. The strata were the eight islands comprising Tuvalu, excluding the smallest island of Niulakatia (which comprises only 0.4% of the population). For the purposes of this DHS, Funafuti is considered to be an urban area, while all other islands are considered to be rural. The sample design required a minimum sample size of 545 households: 225 households in Funafuti and 320 in the outer islands, with an assumed response rate of close to 100%.

The sampling frame for the TDHS consisted of a list of all households residing in the country, including foreigners. The original list, created in 2005, was updated in December 2006 for Funafuti, while an update for the outer islands was done later by the rural development staff on each island. Households were listed in an orderly fashion from one end of the island to the other with village names. Foreigners residing in Funafuti for less than one year and non-resident staff of consular offices in Funafuti were excluded from the list.

The number of sample households in Funafuti was fixed, while the number in the outer islands was adjustable, depending on the shipping schedule and the expected workload of the survey teams. The sample allocation is given below:

Funafuti   - 225

Nanumea   - 40–70

Nanumaga - 40–70

Niutao   - 40–70

Nui   - 60–110

Vaitupu   - 40–70

Nukufetau - 60–110

Nukulaelae - 40–70

For Funafuti, systematic random sampling was employed to select sample households. For the seven outer islands, systematic random sampling was initially used to draw the allocated number of sample households, and simple random sampling was used to draw the additional sample households. The additional list of households was intended to be covered while the team was waiting for the ship to arrive.

All women aged 15–49 who slept in the sampled households on the night prior to the interview date were eligible for to be interviewed for the women's questionnaire, as well as for anthropometric measurements (i.e. weight, height, waist and hip circumference), blood pressure and haemoglobin measurements. Half of the sampled households were sub-selected for the male survey using systematic random sampling. All men aged 15 years and over in sub-selected households were eligible to be interviewed for the men's questionnaire, and for anthropometric and haemoglobin measurements, and blood pressure. All children aged 0–5 years were eligible for anthropometric measurements, and those age 6d months to 5 years were also eligible for anaemia testing.

1.4.2   Questionnaires

Tuvalu's Central Statistics Division initiated the organisation of the DHS Steering Committee, which was responsible for identifying data needs and providing guidance in conducting the survey. The DHS Steering Committee reviewed the DHS Pacific core questionnaires, which were based on model questionnaires developed by the MEASURE DHS program at Macro International. Separate meetings were organised by CSD with the Departments of Women, Education and Health to discuss relevant sections of the DHS questionnaires. Finally, the Steering Committee reviewed the Tuvalu DHS draft questionnaires, which reflected the changes resulting from the various consultative meetings, as well as the Tuvaluan translations that were done by MOH staff.

Three questionnaires — a household questionnaire, a women's questionnaire and a men's questionnaire — were used in the survey. The household questionnaire was used to list all the usual members and visitors in the selected households. Some basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of the household. The main purpose of the household questionnaire was to identify women and men who were eligible for the individual interview. The household questionnaire also collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor, roof, and walls of the house, and ownership of various durable goods. In addition, this questionnaire was also used to record the results of anthropometric and other biomarker measurements for women and children.

The women's questionnaire was used to collect information from all women aged 15–49 on:

- background characteristics (education, residential history, media exposure, etc.);
- reproductive history and child mortality;
- knowledge and use of family planning methods;
- fertility preferences;

4

- antenatal and delivery care;
- breastfeeding and infant feeding practices;
- vaccinations and childhood illnesses;
- marriage and sexual activity;
- women's work and husband's background characteristics;
- infant and child feeding practices;
- awareness and behaviour about AIDS and other sexually transmitted infections (STIs); and
- domestic violence.

The men's questionnaire collected similar information, but was shorter because it did not contain questions on reproductive history, contraceptive calendar, maternal and child health, nutrition, and domestic violence.

All three questionnaires were pretested. The pretest team included two CSD staff and six interviewers — three men and three women — who were expected to become team supervisors and field editors during the main enumeration. In addition, three nurses and/or health technicians were trained to accurately and reliably record the various measurements. Pretest training, including practice interviews in the field, was undertaken from 15–28 May 2007 for pretest interviewers as well as for nurses and/or health technicians who joined the field practice for two days.

Pretest training for the interviewers consisted of classroom lectures, demonstration interviews, front-of-class interviews, mock interviews, quizzes and tests, and field practice. Instructional materials included the household questionnaire, the women's questionnaire, the men's questionnaire, the four DHS control forms, and various PowerPoint presentations. A blackboard, an electronic projector and a laptop computer were also used during the pretest training. The pretest resulted in revision of some translations and some skip and filter instructions.

1.4.3   Training

CSD staff recruited field staff in several ways. Announcements were made through the radio and print media. CSD also prepared publicity materials to inform residents about the importance of the upcoming TDHS, to assure them of the confidentiality of the information collected, and to seek their support and cooperation. The publicity material was also released through the Tuvalu Media Corporation. Applicants were assessed through a written test designed by CSD for the TDHS and further screened through panel interviewing by CSD and other representatives of the Ministry of Finance.

The three-week training for the main enumeration took place 4–23 June 2007. Trainees consisted of the six proposed team supervisors and field editors who participated in the pretest and 13 new trainees. Two nurses and one reserve nurse also joined the first week of interviewer training where three half-days were devoted to measurements. The nurses also joined the teams in the field practice. The same training techniques, materials and equipment were used as in the pretest.

1.4.4   Fieldwork

Two teams were used to collect data, with each team comprising one supervisor, one field editor, four female interviewers, two male interviewers, and one nurse/health technician. One senior CSD staff who was designated as DHS manager also acted as field coordinator. Data collection started on 25 June 2007 in Funafuti. On 21 July, one team left for the outer islands. Data collection continued until 18 October 2007.

1.4.5   Data processing

Completed questionnaires were returned periodically from the field to the CSD office in Vaiaku, Funafuti. Training on the computer package, CSPro, and on setting up the data processing system

was held from 16 July to 3 August 2007. Training was conducted for CSD staff and data encoders by a data processing specialist at SPC.

Data processing began on 23 July and was completed on 15 December 2007. The data processing staff consisted of one supervisor from CSD, one questionnaire administrator/coding clerks, and three data entry operators. Data were entered using the CSPro computer package. All data were entered twice (100% verification). The concurrent processing of data was a distinct advantage for data quality, since TDHS staff were able to advise field teams of errors detected during data entry.

Final editing was undertaken in the last week of February 2008 by CSD staff with technical assistance from data processing specialists from both SPC and Macro. Because the selected sample size was extremely small, secondary editing was finished within one day. Other answers of selected questions were recoded and a final raw formatted data set was produced. After finalising the data sets and including sampling weights, a program was developed to run preliminary tables. Recoding raw format data into a standard recode format was also started at this time and a meeting with several stakeholders was held, in which all the preliminary tables were explained and discussed.

1.5   RESULTS OF SURVEY INTERVIEWS

1.5.1   Response rates

Table 1 shows response rates for the 2007 TDHS. In total, 767 households were selected in the sample, of which 740 were found occupied at the time of the fieldwork. The shortfall is largely due to vacant dwellings or addresses that were not households. Of the existing households, 739 were successfully interviewed, yielding a household response rate of almost 100%.

Table 1.2: Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Tuvalu 2007

	Residence		
Result	Funafuti	Outer islands	Total
Household interviews			
Households selected	229	538	767
Households occupied	222	518	740
Households interviewed	222	517	739
Household response rate[1]	100.0	99.8	99.9
Interviews with women aged 15–49			
Number of eligible women	402	490	892
Number of eligible women interviewed	381	470	851
Eligible women response rate[2]	94.8	95.9	95.4
Interviews with men aged 15+			
Number of eligible men	263	337	600
Number of eligible men interviewed	242	316	558
Eligible men response rate	92.0	93.8	93.0

[1] Households interviewed/households occupied.
[2] Respondents interviewed/eligible respondents.

From the households interviewed, 892 eligible women aged 15–49 were identified, of whom 851 were successfully interviewed, yielding a response rate of 95%. With regard to men, 600 eligible men aged 15 and over were identified, of whom 558 were successfully interviewed, yielding a response rate of 93%. Response rates for women and men are very slightly lower in Funafuti than in the outer islands. The principal reason for non-response among eligible women and men was refusal to be interviewed and the respondent's being incapacitated (e.g. ill, deaf, mentally unfit).

CHAPTER 2   HOUSEHOLD POPULATION AND HOUSING CHARACTERISTICS

In the following chapters, a number of demographic and health-related topics (e.g. respondent characteristics, fertility, contraceptive behaviour, infant and child mortality) are viewed across different population subgroups. One focus of this chapter is to describe the environment in which survey respondents live. This description shows general characteristics of the population such as age-sex structure, education, household arrangements (e.g. headship, size) and housing facilities (e.g. sources of water supply, sanitation facilities, dwelling characteristics and household possessions). A distinction is made between urban Funafuti and the rural outer islands where many of these indicators usually differ.

Besides providing a background for better understanding many of the social and demographic phenomena discussed in the following chapters, this general description is useful for assessing the level of economic and social development of the population.

2.1   HOUSEHOLD POPULATION BY AGE AND SEX

The 2007 TDHS included a household questionnaire that was used to elicit information on the socioeconomic characteristics of usual residents and visitors who had spent the previous night in the selected households. Table 2.1 shows the reported distribution of the household population in five-year age groups, by sex and place of residence. The data show that there are equal numbers of men (2,082) and women (2,082), with both sexes constituting 50% of the population. The sex composition of the population does not show significant variation by place of residence; in fact, the proportions were the same at 51% for men and 49% for women.

Table 2.1: Household population by age, sex, and residence

Percent distribution of the de facto household population by five-year age groups, according to sex and residence, Tuvalu 2007

Age	Funafuti[1] Male	Female	Total	Outer islands Male	Female	Total	Total Male	Female	Total
<5	12.4	12.7	12.5	11.2	10.9	11.1	11.8	11.8	11.8
5–9	13.0	10.9	12.0	13.4	10.7	12.0	13.2	10.8	12.0
10–14	9.7	9.6	9.6	14.8	10.2	12.4	12.1	9.9	11.0
15–19	10.3	7.9	9.1	7.9	4.1	6.0	9.1	6.0	7.6
20–24	10.5	10.8	10.6	6.8	5.8	6.3	8.8	8.3	8.5
25–29	9.2	8.2	8.7	4.8	6.0	5.4	7.1	7.1	7.1
30–34	4.6	5.8	5.2	3.6	4.9	4.3	4.1	5.4	4.8
35–39	5.9	5.3	5.6	5.1	4.9	5.0	5.5	5.1	5.3
40–44	5.0	5.7	5.3	7.3	7.3	7.3	6.1	6.5	6.3
45–49	6.3	8.4	7.3	6.5	7.1	6.8	6.4	7.8	7.1
50–54	4.3	5.3	4.8	5.3	9.2	7.3	4.8	7.2	6.0
55–59	3.8	2.9	3.4	3.6	5.2	4.4	3.7	4.0	3.9
60–64	1.7	2.3	2.0	2.7	4.0	3.3	2.2	3.1	2.7
65–69	0.9	2.3	1.6	2.9	3.8	3.4	1.8	3.1	2.5
70–74	1.1	1.2	1.1	1.8	2.0	1.9	1.4	1.6	1.5
75–79	0.9	0.3	0.6	1.1	2.4	1.8	1.0	1.3	1.2
80+	0.4	0.4	0.4	0.8	1.3	1.1	0.6	0.8	0.7
Don't know/ missing	0.1	0.0	0.1	0.2	0.1	0.1	0.2	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	1,092	1,042	2,135	990	1,039	2,029	2,082	2,082	4,164

[1]For this report, Funafuti is considered to be only an urban area.

The table further depicts Tuvalu as having a young population, with a large proportion of the population being in the younger age groups. The population under age 20 constitutes 42% of the total population. The older age groups are very small in comparison, as can be seen in the population pyramid in Figure 2.1. In general, the population pyramid reflects a broad-base pattern, characteristic of Tuvalu with about half of its population being young. This type of age structure has a built-in momentum for the growth of the country's population. When the young population eventually reaches reproductive age, the result will be a high population growth rate for some years to come. Figure 2.1 also reflects a rapid decrease in the population in the middle age groups; this is due to people moving out of the country for employment.

Figure 2.1: Percentage distribution of de facto household population by age and sex, Tuvalu 2007
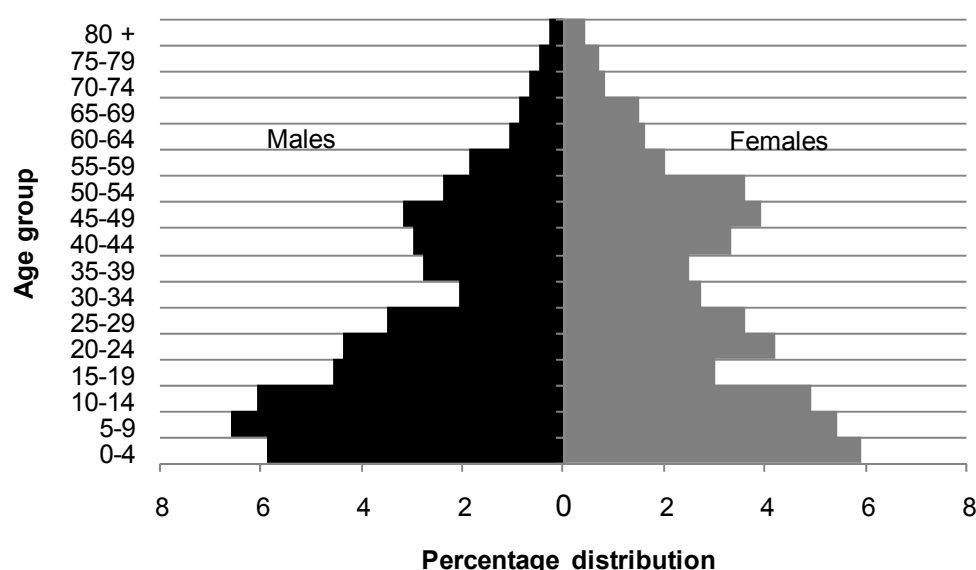
2.2 HOUSEHOLD COMPOSITION

Table 2.2 presents the headship and composition of households in Tuvalu. About 3 in 10 households are headed by women while more than 7 in 10 households are headed by men. The proportion of female-headed households is slightly lower in Funafuti than in the outer islands (22% and 28%, respectively).

About 1 in every 15 households has 1−2 members. One or two member households are more likely to be found in the outer islands (19.1%) than in Funafuti (7.7%). Excluding households with seven and eight people, the outer islands have consistently higher percentages of households with three to six people than Funafuti. In Funafuti, about 31% of households have nine or more members compared with 6% in the outer islands, indicating the need for housing in Funafuti and the need for the outer islands to limit people moving to Funafuti. Table 2.2 also shows that the mean household size is 5.6 people. This is slightly lower than 6, which was the number recorded from the 2002 Population and Housing Census (Central Statistics Division 2002). The mean household size is larger in Funafuti (7.1 people) than in the outer islands (4.6 people).

2.3 FOSTERHOOD AND ORPHANHOOD

In Tuvalu, a person younger than age 18 years is defined as a child. Information on fosterhood and orphanhood of children is presented in Table 2.2. About 4 in 10 Tuvaluan households included

one or more children who were staying with neither their natural father nor their natural mother. There was a higher percentage of households with foster children in Funafuti (37.4%) than in the outer islands (35.6%). Almost 1 in 10 Tuvaluan households has orphans. There are more households with single[2] orphans (8%) than with double orphans (1%). There are no major variations between the outer islands and Funafuti regarding households with orphans.

Table 2.2: Household composition

Percent distribution of households by sex of head of household and by household size; mean size of household, and percentage of households with orphans and foster children under age 18 years, according to residence, Tuvalu 2007

| Characteristic | Residence | | |
	Funafuti	Outer islands	Total
Household headship			
Male	77.9	71.9	74.3
Female	22.1	28.1	25.7
Total	100.0	100.0	100.0
Number of usual members			
1	1.4	7.3	4.9
2	6.3	11.8	9.6
3	5.4	17.3	12.5
4	10.8	17.2	14.6
5	12.2	14.7	13.7
6	10.8	11.1	11.0
7	9.9	7.9	8.7
8	12.6	6.3	8.9
9+	30.6	6.4	16.2
Total	100.0	100.0	100.0
Mean size of households	7.1	4.6	5.6
Percentage of households with orphans and foster children under age 18 years			
Foster children[1]	37.4	35.6	36.3
Double orphans	0.9	1.5	1.3
Single orphans	9.9	6.8	8.1
Foster and/or orphan children	40.5	39.1	39.7
Number of households	300	439	739

Note: Table is based on de jure household members (i.e. usual residents).
[1] Foster children are those under age 18 years living in households with neither their mother nor their father present.

The distribution of *de jure* children under age 18 years by living arrangements and survival status of parents and related information is presented in Table 2.3. About 6 out of 10 (55%) Tuvaluan children younger than age 18 years live with both parents; 17% live with their mother and not with their father even though the father is alive somewhere. Female children aged 0–9 years living in the outer islands are more likely to be found living with their mothers than those in Funafuti. Children living with their mothers are almost equally distributed in all lower wealth quintiles. In contrast, those children aged younger than 18 years living with their fathers account for 1.6%.These children are likely to be aged 15–17 years, live in Funafuti, and come from the middle to the highest household wealth quintiles. There is very little difference in the number of boys and girls in this living arrangement.

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[2] A single orphan is a child who only has one parent, which could be a mother or a father.

Table 2.3: Children's living arrangements and orphanhood

Percent distribution of de jure children under age 18 years by living arrangement and survival status of parents, percentage of children not living with a biological parent, and percentage of children with one or both parents dead, according to background characteristics, Tuvalu 2007

Background characteristic	Living with both parents	Living with mother but not with father		Living with father but not with mother		Not living with either parent					Total	Percentage not living with a biological parent	Percentage with one or both parents dead	Number of children
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead	Missing information on father or mother				
Age														
0–4	56.2	22.9	1.0	1.5	0.0	17.1	0.8	0.0	0.3	0.3	100.0	18.1	2.0	492
..<2	54.8	28.1	1.3	1.9	0.0	12.2	1.3	0.0	0.0	0.4	100.0	13.4	2.6	211
..2–4	57.1	19.0	0.7	1.2	0.0	20.9	0.4	0.0	0.5	0.2	100.0	21.7	1.6	280
5–9	59.4	15.0	1.9	1.4	0.2	19.7	0.7	0.3	1.0	0.4	100.0	21.6	4.0	499
10–14	54.7	14.3	3.6	1.9	1.2	21.1	1.2	0.6	0.5	0.9	100.0	23.4	7.1	458
15–17	38.9	8.5	8.4	1.4	1.3	30.2	2.6	3.5	2.2	3.1	100.0	38.4	17.9	157
Sex														
Male	55.6	15.4	3.0	1.8	0.6	20.5	0.6	0.5	0.9	1.1	100.0	22.4	5.6	863
Female	54.5	17.9	2.4	1.3	0.4	20.2	1.6	0.7	0.6	0.4	100.0	23.0	5.7	742
Residence														
Funafuti	56.7	18.5	2.5	2.0	0.3	17.0	1.2	0.8	0.7	0.3	100.0	19.7	5.5	818
Outer islands	53.4	14.6	3.0	1.1	0.7	23.8	0.9	0.4	0.8	1.2	100.0	25.9	5.8	787
Wealth quintile														
Lowest	55.1	14.1	2.4	1.6	0.9	24.5	0.4	0.2	0.3	0.4	100.0	25.4	4.2	325
Second	59.6	14.3	3.7	2.0	0.4	16.7	0.6	0.9	1.1	0.7	100.0	19.3	6.8	325
Middle	52.7	18.1	2.3	0.4	0.4	23.4	1.1	0.4	1.0	0.2	100.0	25.9	5.1	339
Fourth	54.4	18.6	3.0	1.3	0.9	15.7	2.6	0.7	1.3	1.7	100.0	20.2	8.3	318
Highest	53.5	18.0	2.3	2.7	0.0	21.2	0.5	0.9	0.0	0.9	100.0	22.6	3.6	297
Total <15	56.8	17.5	2.1	1.6	0.4	19.3	0.9	0.3	0.6	0.5	100.0	21.0	4.3	1,448
Total <18	55.1	16.6	2.7	1.6	0.5	20.3	1.0	0.6	0.7	0.8	100.0	22.7	5.6	1,605

Note: Table is based on *de jure* members (i.e. usual residents).

Table 2.3 also shows that Tuvaluan children aged younger than 18 years not living with either parent constitute less than one-quarter (20.3 %) of all children. These are likely to be between the ages of 2 and 17 years and live in the outer islands and in lowest to middle wealth quintile households. There is very little variation by sex.

Overall, 22.7% of children do not live with biological parents; this figure is likely to increase as the age of the child increases and is likely to be more common in the outer islands. The variation by wealth quintile ranges from 19% to 26%. Either one or both of the parents of about 6% of these Tuvaluan children are dead.

2.4   HOUSING CHARACTERISTICS

Increased access to safe drinking water results in improved health outcomes in the form of reduced cases of water-borne diseases such as dysentery and cholera. Information was collected in the 2007 TDHS about certain characteristics of household drinking water, including source of drinking water, time taken to collect water, the person who usually collects the water, water treatment prior to drinking, and type of sanitation facility.

Table 2.4 shows that 98% of households use improved water sources[3]. In both Funafuti and the outer islands, almost all households (98% and 97%, respectively) have access to an improved water source. Piped water into the dwelling/yard/plot (97%) is by far the most common source of water to all households. Only a minimal number of households (1.1%) have access to tube well or borehole and 0.4% *reportedly use bottled water as a source for cooking and washing*. These results complement those of the 2002 Population and Housing Census.

Regarding the amount taken to collect water, findings show minor urban and rural differences. In Funafuti, 1.8% of households take less than 30 minutes to obtain drinking water, compared with 2.1% of outer island households. On the other hand, most households in Funafuti (1.4%) take more than 30 minutes to make a round trip to and from the drinking water source compared with only 0.5% in the outer islands.

The 2007 TDHS findings show that most of the burden of fetching drinking water rests on men over age 15. Women usually collect water in only 0.5% of households. Both Funafuti and the outer islands have the same (0.5%) of women involved in collecting water for their households. Tuvaluan children (girls and boys under age 15 years) are less likely to fetch water (less than 1% of households). It should be noted that households could report more than one person who usually collects water. There is no significant difference in the time it takes for men to collect water in Funafuti (1.4%) and in the outer islands (1.2%) because most households have water on the premises.

Water from an improved source can be contaminated at collection, during transportation, and during storage. Information was collected on whether or not water was treated prior to drinking. The majority of households (94%) use an appropriate treatment method on their drinking water while only 6% of Tuvaluan households use no treatment. The most commonly reported method of treatment is boiling. Nine in every ten households boil water prior to drinking. This method is practiced by almost equal numbers of households in both Funafuti (94%) and the outer islands (93%).

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[3] Improved water sources include piped water, public tap, tube well or borehole, protected dug well, and rainwater. The definition of improved water sources used in Tuvalu differs from the international definition used in this report in that it excludes rainwater.

Table 2.4: Household source of drinking water

Percent distribution of households and de jure population by source, time to collect, and person who usually collects drinking water; and percentage of households and the de jure by treatment of drinking water, according to residence, Tuvalu 2007

Characteristic	Households			Population		
	Funafuti	Outer islands	Total	Funafuti	Outer islands	Total
Source of drinking water						
Improved source	98.2	97.2	97.6	98.6	97.2	97.9
Piped water into dwelling/ yard/plot	96.4	96.6	96.5	96.9	96.8	96.9
Tube well or borehole	1.8	0.6	1.1	1.7	0.5	1.1
Bottled water, non-improved source for cooking/washing[1]	0.0	0.6	0.4	0.0	0.5	0.3
Other sources	0.0	0.2	0.1	0.0	0.2	0.1
Missing	1.8	2.0	1.9	1.4	2.1	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using any improved source of drinking water	98.2	97.2	97.6	98.6	97.2	97.9
Time to obtain drinking water (round trip)						
Water on premises	96.8	97.4	97.2	97.6	97.7	97.7
Less than 30 minutes	1.8	2.1	2.0	1.5	2.0	1.7
30 minutes or longer	1.4	0.5	0.9	0.9	0.3	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Person who usually collects drinking water						
Adult females aged 15+	0.5	0.5	0.5	0.3	0.5	0.4
Adult males aged 15+	1.4	1.2	1.3	1.1	1.3	1.2
Female child under age 15	0.9	0.0	0.4	0.6	0.0	0.3
Male child under age 15	0.5	0.5	0.5	0.3	0.3	0.3
Other	0.0	0.3	0.2	0.0	0.2	0.1
Water on premises	96.8	97.4	97.2	97.6	97.7	97.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Water treatment prior to drinking[2]						
Boiled	94.1	93.0	93.4	93.8	93.2	93.5
Bleach/chlorine added	0.5	0.0	0.2	0.6	0.0	0.3
Strained through cloth	2.3	0.0	0.9	1.9	0.0	1.0
Ceramic, sand or other filter	3.6	1.4	2.3	3.4	1.4	2.4
Other	0.5	0.0	0.2	0.6	0.0	0.3
No treatment	5.0	6.6	5.9	5.3	6.5	5.9
Percentage using an appropriate treatment method[3]	95.0	93.4	94.1	94.7	93.5	94.1
Number	300	439	739	2,124	2,032	4,156

[1] Because the quality of bottled water is not known, households using bottled water for drinking are classified as using an improved or non-improved source according to their water source for cooking and washing.

[2] Respondents may report multiple treatment methods so the sum of treatment may exceed 100%.

[3] Appropriate water treatment methods include boiling, bleaching, straining, filtering, and solar disinfecting.

Poor sanitation coupled with unsafe water sources increases the risk of water-borne diseases and illnesses due to poor hygiene. This has contributed immensely to Tuvalu's disease burden. Households without proper toilet facilities are more exposed to the risk of diseases such as dysentery, diarrhoea, and typhoid fever than those with improved sanitation facilities. Table 2.5 shows that about 8 in 10 households use improved toilet or latrine facilities compared with about 2 in 10 households that use non-improved toilet or latrine facilities. About 69% of households have improved toilet facilities that flush or pour to a piped sewer system, with most of these (80%) being in Funafuti. About 11% of households have flush or pour flush facilities that flow to a septic tank, and these are more likely to be in the outer islands (15%). Overall, only 5.1% of households

in Tuvalu have no toilet facilities of any kind. This problem is more common in the outer islands, where about 7% of the households have no toilet facilities, than in Funafuti, where only 2% of households have no toilet facilities. The 2007 TDHS results show a tremendous decrease in the number of households with no toilet facilities compared with what was reported in the 2002 Population and Housing Census (5.1% in Funafuti, 13% in the outer islands).

Table 2.5: Household sanitation facilities

Percent distribution of households and de jure population by type of toilet/latrine facilities, according to residence, Tuvalu 2007

Type of toilet/latrine facility	Households			Population		
	Funafuti	Outer islands	Total	Funafuti	Outer islands	Total
Improved, not shared facility						
Flush/pour flush to piped sewer system	80.2	61.6	69.1	80.6	63.0	72.0
Flush/pour flush to septic tank	4.1	15.1	10.6	3.8	15.0	9.2
Flush/pour flush to pit latrine	0.0	0.1	0.1	0.0	0.0	0.0
Composting toilet	0.0	0.1	0.1	0.0	0.1	0.1
Non-improved facility						
Any facility shared with other households	8.6	5.2	6.5	9.2	4.4	6.8
Pit latrine without slab/open pit	3.2	9.2	6.7	2.7	8.8	5.7
Bucket	1.4	0.5	0.9	1.1	0.6	0.9
No facility/bush/field	1.8	7.4	5.1	1.5	7.3	4.3
Other	0.9	0.8	0.8	1.1	0.8	0.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	300	439	739	2,124	2,032	4,156

Table 2.6 provides information relating to other dwelling characteristics, such as whether or not the household has electricity, the main construction materials used for the floor, the number of rooms used for sleeping, the type of power or fuel used for cooking, and the location where food is cooked.

About 97% of Tuvaluan households have access to electricity. This result is similar but at a higher level than what was found in the 2002 Population and Housing Census. Access to electricity is almost universal in Tuvalu with 99% of households in Funafuti and 95% in the outer islands. Findings further show that only 3.3% of households do not have access to electricity, of which 5% are in the outer islands. The type of floor material used in a dwelling may be viewed as an indicator of the quality of housing (a wealth dimension) as well as an indicator of health risk. Some floor materials, such as earth and sand, pose a health problem because they can act as breeding grounds for pests and may be a source of dust. They are also more difficult to keep clean.

Overall, over 8 out of every 10 Tuvaluan households (85%) have floors made of the following materials: parquet or polished wood, ceramic tiles or cement. In general, these materials are almost equally used by urban households, whereas outer island households are more likely to use cement as a floor material. On the other hand, 8% of outer island households have earth or sand floors compared with 0% in Funafuti.

The number of rooms used for sleeping is an indication of the extent of crowding in households. Crowding in one sleeping room increases the risks of infection by diseases. In Tuvalu, a room for sleeping used by more than two people is considered to be overcrowded. Overall, almost half of all households (43%) use only one room for sleeping. Households in the outer islands are more likely (59%) to use only one room for sleeping, compared with households in Funafuti (20%). Households in Funafuti are more likely to use two or more rooms for sleeping than households in the outer islands.

Smoke from solid fuels used for cooking — such as charcoal, wood, and other biomass fuels — is a major cause of respiratory infections. The type of fuel used for cooking, the location where food is cooked, and the type of stove used are all related to indoor air quality and the degree to which

household members are exposed to the risk of respiratory infections and other diseases. Half of all Tuvaluan households cook in the same house that they live and sleep in, over one-third (39%) of households use a separate building, while about one in ten household (9%) cook outdoors. Outer islands households are more likely to cook in a separate building (49%) or outdoors, while households in Funafuti are more likely to cook inside the same house (71%).

Cooking fuel affects air quality for household members. Clean fuel is generally not affordable and most households resort to using solid fuels that emit a lot of smoke. As a result, household members are likely to be exposed to air pollution. Reducing the proportion of the population that relies on solid fuels is a Millennium Development Goal (MDG). In Tuvalu, the proportion of households using solid fuel for cooking is 21%.

Table 2.6: Household characteristics

Percent distribution of households and de jure population by housing characteristics and percentage using solid fuel for cooking; and among those using solid fuels, percent distribution by type of fire/stove, according to residence, Tuvalu 2007

Housing characteristic	Households			Population		
	Funafuti	Outer islands	Total	Funafuti	Outer islands	Total
Electricity						
Yes	98.6	95.3	96.7	99.1	96.6	97.9
No	1.4	4.7	3.3	0.9	3.4	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Flooring material						
Earth, sand	0.0	7.8	4.6	0.0	7.8	3.8
Wood/planks	9.5	2.3	5.2	7.9	2.0	5.0
Palm/bamboo	0.0	1.3	0.8	0.0	1.4	0.7
Parquet or polished wood	14.0	1.8	6.7	13.9	1.5	7.9
Vinyl or asphalt strips	0.0	0.6	0.4	0.0	0.9	0.4
Ceramic tiles	10.8	3.9	6.7	9.5	4.5	7.1
Cement	60.8	79.7	72.0	64.7	79.3	71.9
Carpet	0.9	0.7	0.8	0.3	0.9	0.6
Other	4.1	1.8	2.7	3.6	1.6	2.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Rooms used for sleeping						
One	19.8	59.0	43.1	16.5	55.0	35.3
Two	34.2	28.1	30.6	30.3	31.0	30.7
Three or more	45.9	12.7	26.2	53.2	14.0	34.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Place for cooking						
In the house	71.2	37.6	51.2	69.3	36.6	53.3
In a separate building	23.4	49.3	38.8	25.4	51.4	38.1
Outdoors	5.0	12.1	9.2	5.2	11.3	8.2
Missing	0.5	1.0	0.8	0.1	0.8	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Cooking fuel						
Electricity	0.9	0.5	0.7	0.8	0.6	0.7
LPG	44.1	11.8	25.0	43.5	12.9	28.6
Kerosene	52.7	52.7	52.7	54.0	51.2	52.6
Wood	0.5	22.7	13.7	0.3	23.3	11.5
Coconut parts	1.4	11.7	7.5	1.3	11.9	6.5
No food cooked in household	0.5	0.5	0.5	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using solid fuel for cooking[1]	1.8	34.4	21.2	1.6	35.2	18.0
Number of households/population	300	439	739	2,124	2,032	4,156

Table 2.6 (continued)

Housing characteristic	Households			Population		
	Funafuti	Outer islands	Total	Funafuti	Outer islands	Total
Type of fire/stove among households using solid fuel[1]						
Closed stove with chimney	*	1.3	1.2	(0.0)	1.7	1.7
Open fire/stove with chimney	*	7.5	7.3	(0.0)	7.6	7.3
Open fire/stove with hood	*	14.1	13.6	(0.0)	15.3	14.6
Open fire/stove without chimney or hood	*	77.1	77.9	(100.0)	75.3	76.4
Total		100.0	100.0	(100.0)	100.0	100.0
Number of households/ population using solid fuel[1]	5	151	157	34	715	749

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed (meaning results not shown). Figures in parentheses are based on 25–49 cases.
LPG = liquid petroleum gas/natural gas/biogas
[1] Includes wood and coconut parts.

Table 2.6 shows that kerosene is by far the most commonly used fuel for cooking (used by 53% of households), while LPG is used by 25% of households. Wood is used by 13.7% of households, electricity is used by 0.7% and coconut parts 7.5%.

Chimneys help reduce the exposure of household members to smoke from cooking fires. The 2007 TDHS results show that 78% of households use open fires or stoves without chimneys for cooking, which wastes energy and exposes household members to harmful smoke.

2.5   HOUSEHOLD ASSETS

The 2007 TDHS collected information on household ownership of selected assets, which are believed to be strongly associated with poverty levels. Some of these assets can be used to measure household welfare (when combined with other indicators) to generate a wealth index. Information was collected on household ownership of radios and televisions as a measure of access to mass media; telephones (both mobile and non-mobile) as an indicator of access to an efficient means of communication; refrigerators as an indication of the capacity for hygienic food storage; and means of transportation (bicycle, motorcycle, boat with or without a motor, private car or truck) as a measure of the level of access to public services and markets as well as exposure to developments in other areas. In addition, ownership of agricultural land shows a household's access to means of production.

Table 2.7 shows that almost 80% of Tuvaluan households own a radio, with no major variation between Funafuti (81%) and the outer islands (78%). Overall, 13% of all households own a television set and, as expected, households in Funafuti (26%) are more likely to own a television set than households in the outer islands (4.5%). About 27% of households own a mobile telephone while 28% own a non-mobile telephone; almost all of these telephones are likely to be owned by urban households. Regarding transport, 61% of households own bicycles and these are more likely to be found in the outer islands households (75%) than in Funafuti (39%). Meanwhile, 23% of Funafuti households own cars or trucks compared with 2% of outer islands households. Similarly, 24% of Funafuti households own boats with a motor compared with 23% of outer island households. Similarly, 70% of outer island households own fishing gear compared with 60% of Funafuti households, and about 70% of outer island households own fishing gear compared with 60% of Funafuti households.

Over three-quarters of all households (78%) own agricultural land, with outer island households constituting 96% of this and Funafuti households 51%. As expected, outer island households are more likely than Funafuti households to own land, agricultural or farm equipment, and livestock. The use of land for commercial purposes is less common (28%) in all Tuvaluan households.

Table 2.7: Household durable goods

Percentage of households and de jure population possessing various household effects, means of transportation, agricultural land and livestock or farm animals by residence, Tuvalu 2007

Possession	Households			Population		
	Funafuti	Outer islands	Total	Funafuti	Outer islands	Total
Household effects						
Radio	80.6	77.7	78.9	80.5	80.3	80.4
Television	26.1	4.5	13.3	23.9	5.2	14.7
Mobile telephone	64.4	1.5	27.1	67.7	2.2	35.7
Non-mobile telephone	53.2	10.9	28.1	54.0	11.6	33.2
Refrigerator	59.9	28.8	41.5	57.0	29.1	43.3
Deep freezer	58.1	54.2	55.8	63.1	59.2	61.2
Gas stove	70.3	32.9	48.1	71.5	34.2	53.3
Kerosene stove	88.3	88.2	88.2	91.6	88.3	90.0
Microwave oven	8.6	3.3	5.5	6.6	3.6	5.2
Electric jug/kettle	51.4	32.8	40.3	52.6	36.7	44.9
Rice cooker	35.6	19.1	25.8	34.0	19.9	27.1
Blender	21.6	11.5	15.6	20.9	12.9	17.0
Sewing machine	61.7	65.1	63.7	63.5	67.4	65.4
CD/cassette player	63.1	53.4	57.3	63.1	58.1	60.7
Video or DVD player	78.8	61.3	68.4	82.0	65.3	73.8
Electric water pump	44.6	9.0	23.5	43.1	9.8	26.8
Washing machine	78.8	61.6	68.6	79.6	65.5	72.7
Computer	33.3	6.4	17.3	34.1	7.8	21.2
Electric fan	82.0	60.0	68.9	84.5	62.9	74.0
Air conditioner	5.9	0.9	2.9	4.5	1.1	2.8
Bed	84.7	68.6	75.2	84.9	70.0	77.6
Table	89.6	76.9	82.0	90.2	79.8	85.1
Chair	82.4	66.4	72.9	81.4	67.5	74.6
Sofa	32.0	15.6	22.2	30.6	15.5	23.2
Food safe	73.4	92.9	85.0	78.9	94.0	86.3
Cupboard	54.1	22.4	35.3	56.0	23.0	39.8
Clock	59.9	37.4	46.5	59.6	38.3	49.2
Generator	2.7	2.4	2.6	2.9	2.7	2.8
Solar power	2.7	15.5	10.3	3.4	15.6	9.4
Hand cart	28.8	38.0	34.3	33.0	38.4	35.7
Fishing gear	60.4	70.4	66.3	66.6	73.4	69.9
Means of transport						
Bicycle	39.2	75.2	60.6	44.4	78.2	60.9
Motorcycle/scooter	64.0	54.1	58.1	65.9	58.0	62.0
Car/truck	23.4	2.1	10.7	26.5	2.2	14.7
Boat with a motor	24.3	22.6	23.3	25.7	22.6	24.2
Boat	22.5	21.2	21.7	24.8	22.0	23.5
Canoe	12.6	22.4	18.5	15.6	25.1	20.3
Ownership of residential land	61.7	98.5	83.5	67.3	98.8	82.7
Ownership of commercial land	26.6	28.3	27.6	26.9	29.2	28.0
Ownership of agricultural land	50.5	96.3	77.7	55.3	97.2	75.8
Number	300	439	739	2,124	2,032	4,156

2.6   WEALTH QUINTILES

The 2007 TDHS did not collect information on household income or consumption. However, information on household assets was used to create an index representing the wealth of the households interviewed. The wealth index is a proxy for the household's long-term standard of living. The household assets used to calculate the wealth index include consumer items such as refrigerators, televisions and cars; dwelling characteristics such as floor material; type of drinking water source; toilet facilities; and other characteristics that are related to wealth status.

To construct the wealth index, each household asset for which information was collected is assigned a weight or factor score generated through principal components analysis[4]. The resulting asset scores are standardised in relation to a standard normal distribution with a mean of zero and a standard deviation of one.

Each household is assigned a standardised score for each asset, where the score differs depending on whether or not the household owns that asset (or, in the case of sleeping arrangements, the number of people per room). These scores are summed by household, and individuals are ranked according to the total score of the household in which they reside. The sample is then divided into population quintiles (i.e. five groups with the same number of individuals in each). The 20% of the population with the lowest total asset scores become the individuals in the lowest wealth quintile, the next 20% become the members of the second wealth quintile, and so forth. At the national level, approximately 20% of the household population is in each wealth quintile.

In other words, the wealth index measures the standard of living of a household relative to other households in Tuvalu. The wealth quintile of a household does not indicate whether or not the household lives in poverty according to international definitions of poverty. Rather, it indicates that an individual living in a household in the second wealth quintile has a better socioeconomic status than someone in the lowest wealth quintile and a worse socioeconomic status than someone in the middle wealth quintile.

In defining wealth quintiles, a single asset index is developed on the basis of data from the entire country sample and used in all the tabulations presented. Separate asset indices are not prepared for outer island and Funafuti population groups on the basis of rural or urban data, respectively.

Wealth quintiles are expressed in terms of quintiles of individuals in the population, rather than quintiles of individuals at risk for any one health or population indicator. Thus, for example, the quintile rates for infant mortality refer to the infant mortality rates per 1,000 live births among all people in the population quintile concerned, as distinct from quintiles of live births or newly born infants, who constitute the only members of the population at risk of mortality during infancy.

The assets index has been found to be highly comparable with both poverty rates and GDP per capita for India, and against expenditure data from household surveys in Nepal, Pakistan and Indonesia (Filmer and Pritchett 1998) and Guatemala (Rutstein 1999).

Table 2.8: Wealth quintiles

Percent distribution of the de jure population by wealth quintiles, and the Gini coefficient according to residence and region, Tuvalu 2007

Residence/region	Wealth quintile					Total	Number of population
	Lowest	Second	Middle	Fourth	Highest		
Residence							
Funafuti	4.8	10.9	20.9	26.9	36.5	100.0	2,124
Outer islands	35.9	29.5	19.0	12.7	2.9	100.0	2,032
Total	20.0	20.0	20.0	20.0	20.0	100.0	4,156

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[4] An analysis that identifies patterns in data and expresses data in such a way as to highlight their similarities and differences.

Table 2.8 shows the distribution of the *de jure* household population into five wealth levels (quintiles) based on the wealth index by residence. These distributions indicate the degree to which wealth is evenly (or unevenly) distributed by geographic areas. The findings indicate that wealth is concentrated in Funafuti, which is not surprising because it is Tuvalu's capital and has all the characteristics of an urban area. About 37% of Funafuti's population is in the highest wealth quintile, compared with 3% of the population in the outer islands. About 63% of Funafuti's population is in the top two (i.e. fourth and highest) wealth quintiles, whereas about 65% of people from the outer islands are likely to be in the second and lowest household wealth quintiles. These results further confirm other findings that show that poverty is more concentrated in Tuvalu's outer islands than in Funafuti.

2.7   BIRTH REGISTRATION

It is a human right for a child to know who its parents are and to have a nationality through registration. The registration system in Tuvalu is adequate but needs considerable quality control checks to improve recording and maintenance. Coverage is good on some atolls but in others more efforts are necessary to improve the capture of vital demographic processes. The registration of births is being undertaken on all atolls countrywide. Apart from being the first legal acknowledgment of a child's existence, the registration of births is fundamental to the realisation of a number of rights and practical needs, including but not limited to, the provision of access to health care and the provision of access to immunisation. Birth registration in a well- established and functioning system ensures that the country has an up-to-date and reliable database for planning. This is as useful for national-level planning as it is for local government agencies that are responsible for maintaining education, health and other social services for the community.

Table 2.9 shows that half (50%) of Tuvaluan children are registered. There is a significant difference in the proportion of children registered in Funafuti than those registered in the outer islands (60% for Funafuti, 38% for the outer islands). Similarly, birth registration within the household wealth quintiles, is higher in the fourth and highest quintiles compared with the lower wealth quintiles.

Table 2.9: Birth registration of children under age 5 years

Percentage of de jure children under age 5 years whose births are registered with the civil authorities, according to background characteristics, Tuvalu 2007

Background characteristic	Percentage of children whose births are registered			Number of children
	Had a birth certificate	Did not have a birth certificate	Total registered	
Age				
<2	6.2	47.3	53.5	211
2–4	3.6	43.5	47.1	280
Sex				
Male	3.1	46.1	49.2	248
Female	6.4	44.2	50.6	244
Residence				
Funafuti	3.0	56.6	59.6	268
Outer islands	6.8	31.5	38.2	224
Wealth quintile				
Lowest	4.6	34.4	38.9	89
Second	5.5	37.3	42.9	100
Middle	3.8	34.2	38.0	112
Fourth	4.7	55.0	59.6	86
Highest	5.2	65.4	70.6	104
Total	4.7	45.1	49.9	492

2.8   EDUCATIONAL LEVEL OF HOUSEHOLD POPULATION

Education affects many aspects of life, including individual demographic and health behaviour. Studies have shown that educational level is strongly associated with contraceptive use, fertility, and the general health status, morbidity, and mortality of children. In each household, for all persons aged 5 years or older, data were collected on the highest level of education attained and the highest grade completed at that level. Table 2.10 shows the distribution of female household members and Table 2.11 shows the distribution of male household members aged 6 years and older by the highest level of education attained and the median number of years of education completed, according to background characteristics.

As shown in Tables 2.10 and 2.11, the vast majority of Tuvaluans have attended school, although many did not complete primary school (about 39% for females and 35% for males). The proportion of those who have never attended school was approximately the same for females and males (about 3%). Gender gaps in educational attainment are narrow in all categories. In general, males aged 40 and older are less likely to have no education than females aged 40 and older. In contrast, the proportion of individuals aged 6–39 with no education is similar for males and females.

Overall, levels of educational attainment are higher in Funafuti than in the outer islands, especially for some secondary, completed secondary, and more than secondary. Below these levels, attainment is higher in the outer islands than in Funafuti. Similarly, the median number of years of schooling is higher in Funafuti than in the outer islands.

Table 2.10: Educational attainment of the female household population

Percent distribution of the de facto female household population aged 6 and over by highest level of schooling attended or completed, and median grade completed, according to background characteristics, Tuvalu 2007

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number	Median years completed
Age										
6–9	13.1	86.9	0.0	0.0	0.0	0.0	0.0	100.0	190	1.4
10–14	0.9	84.8	8.6	4.6	0.0	0.0	1.0	100.0	206	5.5
15–19	0.5	4.3	10.7	60.0	19.1	5.4	0.0	100.0	126	10.0
20–24	0.8	2.3	7.5	46.4	25.3	17.7	0.0	100.0	173	10.7
25–29	1.1	1.5	1.4	47.5	18.5	30.0	0.0	100.0	148	11.1
30–34	0.0	5.0	26.1	29.8	17.0	22.0	0.0	100.0	112	10.5
35–39	2.8	10.9	40.1	23.2	8.3	14.7	0.0	100.0	106	7.9
40–44	2.5	14.8	43.1	22.8	8.6	8.2	0.0	100.0	136	7.8
45–49	2.3	20.5	46.2	15.4	6.3	9.4	0.0	100.0	161	7.6
50–54	6.4	45.2	29.5	10.9	4.5	3.6	0.0	100.0	151	6.4
55–59	3.2	60.9	21.9	8.1	0.0	5.9	0.0	100.0	84	5.7
60–64	0.9	68.4	21.2	1.3	4.1	4.1	0.0	100.0	65	5.6
65+	5.1	78.2	12.9	3.4	0.0	0.4	0.0	100.0	143	5.2
Residence										
Funafuti	2.4	33.6	14.4	23.9	13.0	12.6	0.0	100.0	892	7.9
Outer islands	4.3	43.7	23.9	18.1	4.2	5.5	0.3	100.0	909	7.1
Wealth quintile										
Lowest	3.9	50.4	25.7	13.5	3.9	2.6	0.0	100.0	378	6.2
Second	2.6	39.9	25.0	23.0	5.6	3.6	0.2	100.0	360	7.3
Middle	4.3	36.4	20.3	22.0	9.4	7.4	0.2	100.0	326	7.5
Fourth	3.9	35.1	16.2	25.5	9.8	9.1	0.4	100.0	353	7.6
Highest	2.3	31.4	9.2	21.4	14.1	21.6	0.0	100.0	384	9.5
Total	3.4	38.7	19.2	21.0	8.6	9.0	0.2	100.0	1,801	7.4

[1] Completed 8th grade at the primary level.
[2] Completed 4th grade at the secondary level.

In Tuvalu, as a result of free and compulsory education up to the primary level there is little variation among the different levels of educational attainment. The likelihood of completing a secondary and 'more than secondary' level of education increases as the household wealth quintile increases. For example, among females, a combined 10% of those from the two poorest households would have completed secondary education while 14% of females from the wealthiest households have completed secondary education. Similar differences by wealth are also large among males, where 7% of males from the two poorest households have completed secondary education compared with 12% of males from the wealthiest households.

The likelihood of reaching 'more than secondary' level of education is much greater among the wealthiest Tuvaluans than those from poorer households. About 26% of males from the wealthiest households have 'more than secondary' level of education compared with 6% of males from the two lowest wealth quintiles. A similar pattern is observed for women, with 22% of females from the wealthiest households and a combined 6% of those from the lowest two less wealthy households having attained 'more than secondary level of education'.

Table 2.11: Educational attainment of the male household population

Percent distribution of the de facto male household population aged 6 and over by the highest level of schooling attended or completed, and median grade completed, according to background characteristics, Tuvalu 2007

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number	Median years completed
Age										
6–9	10.7	88.2	0.0	0.0	0.0	0.0	1.2	100.0	233	1.4
10–14	0.5	82.7	11.4	4.9	0.0	0.0	0.5	100.0	252	5.7
15–19	1.4	3.7	16.1	59.3	16.1	3.3	0.0	100.0	191	9.5
20–24	1.8	1.5	7.4	61.8	15.8	11.6	0.0	100.0	183	9.8
25–29	1.8	2.3	4.8	56.2	11.6	23.2	0.0	100.0	148	10.0
30–34	0.0	5.9	36.0	25.0	9.6	22.6	1.0	100.0	86	8.9
35–39	1.2	9.4	32.0	23.8	9.9	22.7	1.2	100.0	115	9.4
40–44	4.3	12.6	53.6	15.8	6.5	7.3	0.0	100.0	126	7.6
45–49	1.0	23.4	35.6	19.3	3.5	17.1	0.0	100.0	133	7.7
50–54	2.2	34.5	25.3	25.2	2.2	10.7	0.0	100.0	100	7.5
55–59	0.0	39.0	25.9	15.8	2.8	16.6	0.0	100.0	78	7.4
60–64	1.3	41.9	29.1	10.7	4.6	12.5	0.0	100.0	45	7.2
65+	6.0	51.5	18.1	13.3	4.8	6.3	0.0	100.0	100	5.7
Residence										
Funafuti	3.0	29.9	13.2	29.6	9.7	14.1	0.4	100.0	931	8.4
Outer islands	2.7	40.2	25.2	22.7	3.5	5.1	0.6	100.0	862	7.3
Wealth quintile										
Lowest	2.9	46.4	24.3	20.4	2.9	3.2	0.0	100.0	352	7.0
Second	3.4	36.8	25.3	26.5	4.2	3.1	0.8	100.0	348	7.4
Middle	4.4	36.3	19.7	26.6	4.8	7.0	1.1	100.0	371	7.4
Fourth	3.0	30.2	15.6	30.5	10.1	10.0	0.7	100.0	383	8.1
Highest	0.6	24.7	9.8	27.2	11.6	26.2	0.0	100.0	339	9.8
Total	2.9	34.9	19.0	26.3	6.7	9.7	0.5	100.0	1,794	7.6

[1] Completed 8th grade at the primary level.
[2] Completed 4th grade at the secondary level.

2.8.1 PRIMARY SCHOOL ATTENDANCE RATIOS

Tuvalu uses an 8-4-4 formal education system, which means eight years of primary school, four years of secondary school, and four years of post secondary/university/tertiary schooling. The official age ranges for these levels are 6–13 years, 14–17 years, and 18–24 years, respectively.

The net attendance ratio (NAR) for primary level is the percentage of the primary school-aged population (ages 6–13) that is attending primary school. Overall, the primary school NAR is 98% in Tuvalu (see Table 2.12). In Funafuti, 96% of children aged 6–13 attend primary school compared with 99% of children from the outer islands. There is virtually little difference in the primary NAR by sex (99% for females, 97% for males).

Table 2.12: School attendance ratios

The net attendance ratio (NAR) and gross attendance ratio (GAR) for the de facto household population by sex and level of schooling; and the gender parity index (GPI), according to background characteristics, Tuvalu 2007

Background characteristic	Net attendance ratio[1]				Gross attendance ratio[2]			
	Male	Female	Total	GPI	Male	Female	Total	GPI[3]
Primary School								
Residence								
Funafuti	95.9	99.3	97.5	1.03	100.7	100.0	100.4	0.99
Outer islands	98.4	98.9	98.7	1.01	107.2	105.0	106.3	0.98
Wealth quintile								
Lowest	98.8	99.3	99.0	1.01	108.8	104.8	107.0	0.96
Second	95.8	100.0	97.6	1.04	102.0	106.8	104.0	1.05
Middle	100.0	98.0	99.2	0.98	102.5	99.5	101.3	0.97
Fourth	92.6	97.9	94.8	1.06	100.2	101.1	100.6	1.01
Highest	100.0	100.0	100.0	1.00	110.6	100.0	104.2	0.90
Total	97.3	99.1	98.1	1.02	104.2	102.5	103.5	0.98
Secondary School								
Residence								
Funafuti	43.4	53.7	47.9	1.24	69.8	92.7	79.8	1.33
Outer islands	24.7	37.5	29.9	1.52	29.9	37.5	33.0	1.26
Wealth quintile								
Lowest	13.2	16.0	14.3	1.21	20.8	16.0	18.8	0.77
Second	12.1	28.8	20.3	2.38	24.2	28.8	26.5	1.19
Middle	44.6	43.2	44.1	0.97	51.0	64.9	56.1	1.27
Fourth	45.1	69.5	55.6	1.54	56.4	104.2	77.0	1.85
Highest	50.0	64.3	55.6	1.29	90.9	114.3	100.0	1.26
Total	34.7	46.7	39.8	1.35	51.2	69.0	58.7	1.35

[1] The NAR for primary school is the percentage of the primary school age population (aged 6–13) that is attending primary school. The NAR for secondary school is the percentage of the secondary school aged population (aged 14–17) that is attending secondary school. By definition the NAR cannot exceed 100%.
[2] The GAR for primary school is the total number of primary school students, expressed as a percentage of the official primary school-age population. The GAR for secondary school is the total number of secondary school students, expressed as a percentage of the official secondary school-age population. If there are significant numbers of overage and underage students at a given level of schooling, the GAR can exceed 100%.
[3] The GPI for primary school is the ratio of the primary school NAR (GAR) for females to the NAR (GAR) for males. The GPI for secondary school is the ratio of the secondary school NAR (GAR) for females to the NAR (GAR) for males.

There is very little variation in the NAR by wealth quintiles. The NAR is lowest among school-age children in the fourth wealth quintile households (95 %) and the highest NAR is observed for children in the highest wealth quintile (100%). The NAR for children for all other wealth quintiles falls between 98% and 99%. Given that primary education is free and compulsory it is not surprising that the NAR does not increase with increasing wealth quintiles (i.e. from the poorest to wealthiest households).

The gross attendance ratio (GAR) measures attendance irrespective of the official age at each level. The GAR for primary school is the total number of primary school students (aged 6–24) expressed as a percentage of the official primary school-age population (aged 6–13). A major contributing factor to high GAR is children starting primary school later than the recommended age of 6 years. Overall, the primary school GAR is 104, with the highest GAR found in the lowest wealth quintile (107), followed by 106 in the outer islands. There are no notable differences by sex.

The gender parity index (GPI) is a measure of the ratio of females to males attending school, regardless of age. For primary school NAR, the GPI is 1.02, indicating that the number of female and male students is almost the same, with females slightly outnumbering males. The GPI for primary school GAR is 0.98, indicating that the number of female and male students is almost the same, with males slightly outnumbering females. There is, however, not much variation in the GPI for the primary school GAR by background characteristics, although the ratios are below the national average for the lowest, middle, through to the highest wealth quintiles.

2.8.2. Secondary school attendance ratios

The concept of the NAR at the secondary level is similar to that at the primary level, being the percentage of the secondary school-age population (aged 14–17) that is attending secondary school. Overall, only 40 out of 100 children who are of secondary school age attend secondary school. The secondary NAR for males is 35% and the NAR for females is 47%.

The secondary school NAR is better in Funafuti than in the outer islands (48% versus 30%). This pattern is the same for boys and girls. As regards wealth quintile, the secondary school NAR rises with wealth from about 14% in the lowest wealth quintile to 56% in the wealthiest quintiles. This finding suggests that poverty and factors related to poverty play an important role in whether children are sent to secondary school, given that there are fees for attending secondary school in Tuvalu.

The secondary GAR is 59 for the nation as a whole, and is substantially higher in Funafuti than in the outer island (80% compared with 33%). This same pattern is observed for males and females. Similar to the NAR, the secondary GAR increases sharply as wealth increases, and is 100 among youth in the wealthiest households and only 19 among youth in the poorest households.

The GPI for the secondary school GAR is 1.35, indicating that, among students of all ages, for every five male students in secondary school there are six to seven female students. This ratio is higher than the GPI for the primary school GAR (0.98), and there is little variation by background characteristics. Male students are outnumbered by female students in both Funafuti and the outer islands, and in all wealth quintiles, except the lowest where female students are outnumbered by male students. The GPI for the secondary school GAR is especially low in the lowest wealth quintile households, indicating an extreme gender gap in favour of males. Perfect gender balance in secondary school GAR is not observed or noticeable.

Table 2.13: Grade repetition and dropout rates

Repetition and dropout rates for the de facto household population aged 5–24 who attended primary school in the previous school year by school grade, according to background characteristics, Tuvalu 2007

Background characteristic	School grade				
	2	3	6	7	8
Repetition Rate[1]					
Sex					
Male	5.2	0.0	3.0	0.0	56.1
Female	0.0	2.2	0.0	2.4	39.8
Residence					
Funafuti	4.2	2.2	0.0	2.3	18.7
Outer islands	2.0	0.0	2.8	0.0	64.3
Wealth quintile					
Lowest	0.0	0.0	0.0	0.0	84.3
Second	5.2	0.0	0.0	0.0	62.8
Middle	0.0	0.0	8.2	0.0	30.8
Fourth	9.7	0.0	0.0	4.6	15.4
Highest	0.0	5.5	0.0	0.0	40.0
Total	3.2	1.2	1.6	1.1	49.9

Table 2.13 (continued)

Background characteristic	School grade				
	2	3	6	7	8
Dropout Rate[2]					
Sex					
Male	1.4	0.0	0.0	0.0	11.9
Female	0.0	0.0	0.0	0.0	8.4
Residence					
Funafuti	0.0	0.0	0.0	0.0	6.2
Outer islands	2.0	0.0	0.0	0.0	12.5
Wealth quintile					
Lowest	4.2	0.0	0.0	0.0	8.8
Second	0.0	0.0	0.0	0.0	18.9
Middle	0.0	0.0	0.0	0.0	13.8
Fourth	0.0	0.0	0.0	0.0	0.0
Highest	0.0	0.0	0.0	0.0	20.0
Total	0.9	0.0	0.0	0.0	10.5

[1] The repetition rate is the percentage of students in a given grade in the previous school year who repeat that grade in the current school year.
[2] The dropout rate is the percentage of students in a given grade in the previous school year who do not attend school.

By asking about the grade that children were attending during the previous school year, it is possible to calculate dropout rates and repetition rates. Table 2.13 indicates that repetition rates are high in Grade 2 (3%), which may be related to a teacher's decision to ensure a more uniform preparedness before promoting children to Grade 3. Repetition rates for grades 1, 4 and 5 are missing because of low numbers, and no one repeated those grades (i.e. repetition rate equals 0). The repetition rate of Grade 8 for the outer islands is high (64%) compared with Funafuti (19%). It is possible that students who repeat a grade have nowhere else to go and so must wait for a place in secondary school. It may also be an interpretation problem with the questionnaire.

The second part of Table 2.13 shows dropout rates for the de facto household population aged 5–24 who attended primary school. About 1% of children drop out of school after having attended Grade 1 compared with a dropout rate of 11% for Grade 8. Notable is that the dropout rate at Grade 8 is higher for boys than for girls, and the repetition rate at Grade 8 is similarly higher for boys (12%) than for girls (8%); that is, boys are more likely than girls to repeat Grade 8. Children from the outer islands are more likely to drop out at Grade 8 than children in Funafuti. Findings further suggest that children from the wealthiest households are more likely to dropout at Grade 8 than children from lower wealth quintile households.

2.8.3 Age-specific attendance rates

Figure 2.2 presents information on school attendance among youth aged 5–24, by age, and includes students who attended primary school, secondary school, or higher education during the 2007 school year.

By age 6–12, the vast majority of children in Tuvalu attend primary school (over 90%), with females more likely to attend primary school than males. Attendance rates range from 95–100 %. Starting at age 14, attendance rates decline noticeably for all children. For instance, the attendance rate among 18-year olds is 25% among males and 44% among females. By age 21, only 5% of males and 4% of females attend school.

Figure 2.2 also shows that approximately one-third (29%) of children aged 5 attend school. It should be noted that children aged 5 at the time the household was interviewed may still be in pre-school and have not yet entered primary education. It is therefore expected that not all 5 year-olds attend school. However, all children aged 6 and 7 should have attended primary school during the 2007 school year as a result of compulsory education in Tuvalu

Figure 2.2: Tuvalu age-specific school attendance rates of the *de facto* population aged 5–24 years
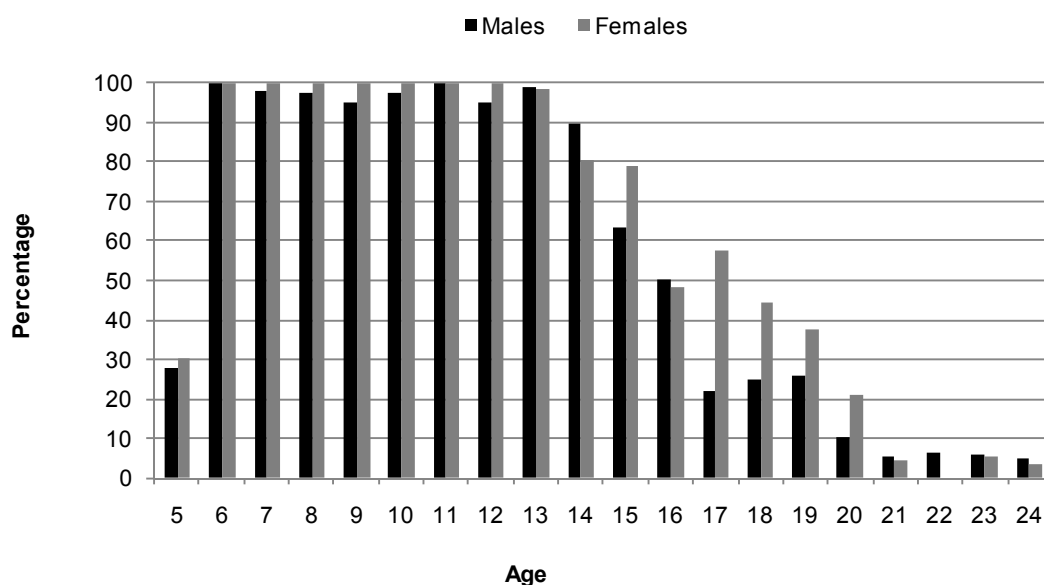
2.9   KEY RESULTS

The following are the major findings identified in this chapter and are based on the characteristics of the household population and housing of the survey respondents.

- Results of the 2007 TDHS show that Tuvalu's population is made up of slightly equal number of women and men. Regarding the total population structure, an estimated of 42% are less than age 20, and less than 3% are aged 70 and older. This indicates a young population structure and a very low life expectancy.

- Seven out of ten households in Tuvalu are headed by men. About one in five households have more than nine people who are usual members, indicating overcrowding in these households. The average household size is six.

- About one in five children under the age of 18 are not living with a biological parent, 17% live with their mother only (even though the father is alive), and both parents of about 1% of children under age 18 years are dead.

- The median number of years for completing an education in Nauru is the same for both females and males (seven years). Even though primary education is free in Tuvalu, only 19% of both females and males completed a primary education level (eight years). Secondary education on the other hand, is achieved by 9% of all females and 7% of all males. The low number completing a secondary education can be attributed to limited opportunities and costs of a secondary education.

- The NAR for primary level education is the percentage of primary school-age children (aged 6–12) attending primary school. This measure also applies to secondary level education. The NAR is higher for primary (98%) school than for secondary school (40%), implying there are less secondary-age children attending secondary education.

- Age-specific attendance rates among youth aged 5–24 show that there is a high rate of attendance, ranging from 90–100%, among males and females aged 7–14. Starting at age 7, attendance rates slightly decline for male children and dramatically decline for female children at age 15.

- About 97% of households reported using an improved source of drinking water. About 6% reported not using any appropriate treatment method for their drinking water. One in every five households reported using a non-improved facility.

- Almost all households (97%) had electricity, about three-quarters of all households had cement flooring (72%), 43% had one room for sleeping, 39% used a separate building for cooking, 21% used solid fuel for cooking, and 77% cooked on an open fire or stove without a chimney.

- Of the total households surveyed, 79% had a radio, 58% owned a motorcycle and 78% owned agricultural land.

- About 37% of Funafuti's population is in the highest wealth quintile compared with only 3% in the outer islands.

- Half of the children (50%) under age 5 years are reported to be officially registered with the civil authorities. Registration took place mostly when children were less than 2 years of age (53%).

CHAPTER 3   CHARACTERISTICS OF RESPONDENTS

This chapter provides a demographic and socioeconomic profile of respondents interviewed in the 2007 TDHS. Such background information is essential to the interpretation of findings and for understanding the results presented later in this report. Basic characteristics collected include age, marital status, place of usual residence, island of residence, education, wealth, religion and ethnicity. Exposure to mass media and literacy status were examined, and detailed information was collected on employment status, occupation and earnings. In addition, the survey also collected data on knowledge and attitudes concerning tuberculosis and the use of tobacco.

3.1   CHARACTERISTICS OF SURVEY RESPONDENTS

The background characteristics of respondents of both men and women between the ages of 15 and 49 (inclusive) are shown in Table 3.1. In the 2007 TDHS, 850 women and 428 men in this age group were interviewed. This table provides background information that can be used for interpreting survey findings.

The population distribution of women and men by age reflects economic and health effects. Men have a better chance of finding overseas employment than women, but tend to have lower life expectancy than women. Opportunity to work as seafarers on German and other foreign-flagged vessels are only available to men. The age group with the highest percentage of women interviewed is 20–24 with 17.1% and for men the age group is 15–19 at 21.3%. The age group with the lowest percentage of women and men interviewed is between 30 and 39 with 11.1–11.4% for women and 8.9–9.7% for men. This scenario is seen in both the 1991 and 2002 Housing and Population Census, and is explained by both the out-migration of youth to Australia, New Zealand and Fiji because of overseas employment and by the absence of overseas seafarers.

The majority of surveyed respondents (70.3% women, 52.5% men) are either married or living together. The proportion not currently married varies by gender. Two out of ten surveyed women say they are not married compared with five out of ten men. On the other hand, women are twice as likely to be divorced or separated (4.4%) than men (2.1%).

Place of residence is regarded as the key fundamental information for planning and policy purposes in Tuvalu. Place of residence determines access to governmental and non-governmental organisation services and exposure to information pertaining to reproductive health and other aspects of life. The 2007 TDHS reveals an almost equal proportion of the population lives in both Funafuti (urban) and the outer islands (rural). Nearly 57% of male respondents are in Funafuti compared with 47% in the outer islands. The situation is different for women, where about 49% are in Funafuti and 51% are in the outer islands.

Table 3.1: Background characteristics of respondents

Percent distribution of women and men aged 15–49 by selected background characteristics, Tuvalu 2007

Background characteristic	Women Weighted percent	Weighted	Unweighted	Men Weighted percent	Weighted	Unweighted
Age						
15–19	13.1	111	109	21.3	91	90
20–24	17.1	145	148	17.2	74	74
25–29	15.8	134	128	14.6	62	58
30–34	11.4	97	99	8.9	38	36
35–39	11.1	94	98	9.7	41	41
40–44	15.2	129	126	13.7	59	58
45–49	16.4	140	143	14.7	63	62
Marital status						
Never married	22.6	193	189	45.3	194	192
Married	70.3	598	594	52.2	223	215
Living together	0.0	0	0	0.3	1	2
Divorced/separated	4.4	37	43	2.1	9	9
Widowed	2.7	23	25	0.2	1	1
Residence						
Funafuti	48.6	414	381	52.6	225	192
Outer islands	51.4	437	470	47.4	203	227
Region						
Nanumea	7.0	59	86	6.5	28	44
Nanumaga	6.4	54	52	6.4	27	25
Niutao	7.0	59	94	6.7	29	42
Nui	5.6	48	79	4.9	21	38
Vaitupu	19.3	164	78	18.3	78	47
Nukufetau	6.2	53	81	4.7	20	31
Funafuti	48.6	414	381	52.6	225	192
Education						
Less than secondary	33.1	282	307	33.0	141	144
Secondary	51.3	437	422	52.2	223	220
More than secondary	15.6	132	122	14.7	63	55
Wealth quintile						
Lowest	17.9	152	198	17.7	75	93
Second	21.0	179	196	22.0	94	103
Middle	19.8	169	150	20.7	89	83
Fourth	20.4	173	145	17.2	74	60
Highest	20.9	177	162	22.4	96	80
Religion						
Ekalesia Kerisiano	86.8	738	742	90.0	385	380
Seventh Day Adventist	2.3	19	19	1.6	7	6
Jehovah's witness	1.5	13	11	0.3	1	1
Bahai	2.3	20	21	2.5	11	11
Brethren	3.3	28	26	1.6	7	6
Roman Catholic	1.3	11	11	1.0	4	4
Other	2.5	22	21	3.0	13	11
Ethnicity						
Tuvaluan	92.3	786	777	93.5	400	394
Part Tuvaluan	4.3	36	43	4.9	21	19
I-Kiribati	2.0	17	19	0.3	1	1
Other	1.4	12	12	1.1	5	4
Don't know	0.0	0	0	0.1	1	1
Total 15–49	100.0	851	851	100.0	428	419
50+	na	na	na	na	130	139
Total men aged 15+	na	na	na	na	558	558

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.
na = not applicable

For the outer islands, the majority of respondents are from Vaitupu where 18.9% of all respondents usually live. Next highest is Niutao where 6.88% of all respondents live. Tuvaluans are predominantly Christians with low numbers of Bahai and Brethren.

The majority of respondents have some formal schooling. About 67% of all respondents have completed either a secondary or tertiary education. This is an increase of 11% — from 57% in the 2002 Housing and Population Census — and a 17% increase from 49% in the 2004/2005 Household Income and Expenditure Survey (2004/2005 HIES) for the same age group (15–49).[5] Overall, there is an increase in the number of people completing secondary and tertiary studies in the 15–49 age group. In the 2002 Population and Housing Census, 54% of women in the 15–45 age group had completed secondary school. In the 2007 TDHS, 51% of women in the same age group completed secondary school, which is a decrease of 3%. However, when comparing results of the 2007 TDHS to the 2004/2005 HIES, there is an increase of 2% — from 49% in the HIES to 51% in the 2007 TDHS — completing secondary school in the 15–49 age group. Because both surveys have standard errors (sample and non-sample) compared with the 2002 Housing and Population Census with none, and because both surveys have the same sample coverage of the population (~30%), it is conclusive that the percentage of women completing secondary school is increasing. A slightly higher percentage of men have completed secondary school (52%) than women (51%).

3.2   EDUCATION ATTAINMENT

Tables 3.2 and 3.3 present a detailed distribution of educational attainment according to background characteristics. The general pattern evident in Table 3.2 indicates a decrease in the proportion of women who have completed 4th grade from the youngest to the oldest cohorts. Women in the 15–19 age group are an exception mainly because of the small sample in this age cohort. More women have access to a secondary education in recent years. Urban (Funafuti) women are more educated than rural (outer islands) women. About 18.4% of Funafuti women in the 15–49 age group have completed 4th grade in secondary school compared with only 8.7% of women from the outer islands. The median grade completed by women in the 15–49 age group is higher in Funafuti than in the outer islands.

Educational attainment rises dramatically with wealth quintile. Nearly 15% of all women in the 15–49 age group and in the lowest wealth quintile have completed primary school, while only 4.9% of women in the same age group and in the highest quintile have completed primary school. The percentage of women who have completed more than a secondary level education increases from 7.6% in the lowest quintile to 35% in the highest quintile. The pattern of variation in educational attainment (by province and wealth quintile) among men is similar to that of women.

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[5] Data analysed using the 2002 Housing and Population Census and 2004/2005 HIES from 'raw data'.

Table 3.2: Educational attainment — Women

Percent distribution of women aged 15–49 by highest level of schooling attended or completed, and median grade completed, according to background characteristics, Tuvalu 2007

Background characteristic	Highest level of schooling						Total	Median years completed	Number of women
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15–24	0.2	1.8	7.9	54.8	22.3	12.9	100.0	10.2	257
..15–19	0.0	2.6	9.9	63.0	17.5	7.0	100.0	10.0	111
..20–24	0.4	1.2	6.4	48.5	26.0	17.5	100.0	10.8	145
25–29	0.0	1.3	1.4	51.2	15.0	31.1	100.0	10.9	134
30–34	0.0	3.8	29.5	32.4	15.3	19.1	100.0	10.3	97
35–39	0.7	12.5	37.9	28.2	5.3	15.5	100.0	8.0	94
40–44	0.0	13.8	44.5	26.0	7.6	8.2	100.0	7.8	129
45–49	0.0	20.2	49.2	15.8	5.1	9.8	100.0	7.6	140
Residence									
Funafuti	0.0	7.1	17.1	37.8	18.4	19.7	100.0	10.5	414
Outer islands	0.3	8.8	32.5	38.1	8.7	11.6	100.0	9.2	437
Wealth quintile									
Lowest	0.0	14.9	39.8	30.2	7.6	7.6	100.0	7.9	152
Second	0.7	9.4	30.4	42.2	11.8	5.6	100.0	9.2	179
Middle	0.0	5.1	27.6	41.2	15.1	11.0	100.0	9.7	169
Fourth	0.0	6.3	20.4	42.4	13.4	17.4	100.0	10.0	173
Highest	0.0	4.9	8.8	33.0	18.4	35.0	100.0	11.5	177
Total	0.1	8.0	25.0	37.9	13.4	15.6	100.0	9.7	851

[1] Completed 8th grade at the primary level.
[2] Completed 4th grade at the secondary level.

Table 3.3: Educational attainment — Men

Percent distribution of men aged 15–49 by highest level of schooling attended or completed, and median grade completed, according to background characteristics, Tuvalu 2007

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Total	Median years completed	Number of men
Age									
15–24	0.0	0.0	10.2	67.7	15.4	6.8	100.0	9.8	164
..15–19	0.0	0.0	14.4	63.1	19.3	3.3	100.0	9.7	91
..20–24	0.0	0.0	4.9	73.4	10.5	11.2	100.0	9.8	74
25–29	0.0	1.0	3.3	57.9	6.7	31.2	100.0	9.9	62
30–34	(0.0)	(0.0)	(48.1)	(26.3)	(3.1)	(22.6)	(100.0)	(8.6)	38
35–39	(0.0)	(24.3)	(31.9)	(11.5)	(18.1)	(14.2)	(100.0)	(7.8)	41
40–44	2.0	10.3	63.6	16.3	0.0	7.8	100.0	7.6	59
45–49	0.0	33.8	23.2	17.9	3.7	21.3	100.0	7.7	63
Residence									
Funafuti	0.5	6.3	13.5	46.4	13.0	20.3	100.0	9.8	225
Outer islands	0.0	11.8	35.4	38.8	5.5	8.6	100.0	8.4	203
Wealth quintile									
Lowest	0.0	17.1	33.9	39.1	3.2	6.7	100.0	7.9	75
Second	0.0	8.6	29.9	46.3	9.1	6.1	100.0	9.1	94
Middle	1.3	13.3	33.0	39.2	5.4	7.7	100.0	8.3	89
Fourth	0.0	3.2	14.7	44.2	14.3	23.6	100.0	10.0	74
Highest	0.0	3.0	8.6	44.4	14.7	29.3	100.0	10.9	96
Total men aged 15–49	0.3	8.9	23.9	42.8	9.5	14.7	100.0	9.4	428
50+	0.0	44.8	23.1	18.8	1.4	12.0	100.0	7.2	130
Total men aged 15+	0.2	17.3	23.7	37.2	7.6	14.1	100.0	9.1	558

Note: Figures in parentheses are based on 25–49 cases.
[1] Completed 8th grade at the primary level.
[2] Completed 4th grade at the secondary level.

3.3 LITERACY ACHIEVEMENT

Table 3.4 shows that nine in out of ten Tuvaluan women in the 15–49 age group are literate. Literacy is associated with access to education. In general, younger age groups are more likely to be literate than older groups. Illiteracy decreases from 4.6% for women in the 45–49 age group to1.0% in the 15–19 age group. However, illiteracy is higher in the 40–44 age group than in the surrounding age cohorts. As seen in Table 3.4, these women are less likely to have attended school than the age cohorts before and after them. About 3% of outer islands women in the 15–49 age group are illiterate whereas only 1.6% of Funafuti women are illiterate. Illiteracy decreases with women's wealth status with 5.6% of women in the lowest quintile being illiterate compare with 0.6% of women in the highest quintile.

Table 3.5 shows that a similar proportion of men are literate (95%). Very few men (4%) cannot read at all when tested during the survey, which is common among men in the outer islands and those in the lowest wealth quintile.

Table 3.4: Literacy — Women

Percent distribution of women aged 15–49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Tuvalu 2007

| Background characteristic | Secondary school or higher | No schooling or primary school | | | | | Total | Percentage literate[1] | Number of women |
		Can read a whole sentence	Can read part of a sentence	Cannot read at all	Blind/visually impaired	Missing			
Age									
15–19	87.5	8.4	3.2	1.0	0.0	0.0	100.0	99.0	111
20–24	92.0	5.5	2.1	0.5	0.0	0.0	100.0	99.5	145
25–29	97.3	1.8	0.5	0.5	0.0	0.0	100.0	99.5	134
30–34	66.8	12.8	18.7	1.7	0.0	0.0	100.0	98.3	97
35–39	49.0	25.8	22.2	3.0	0.0	0.0	100.0	97.0	94
40–44	41.7	27.7	24.3	4.7	0.8	0.8	100.0	93.7	129
45–49	30.7	32.6	29.8	4.6	0.0	2.3	100.0	93.1	140
Residence									
Funafuti	75.9	15.5	6.3	1.6	0.3	0.5	100.0	97.6	414
Outer islands	58.4	16.8	21.3	2.9	0.0	0.5	100.0	96.6	437
Wealth quintile									
Lowest	45.3	21.5	27.0	5.6	0.0	0.7	100.0	93.7	152
Second	59.5	19.2	17.4	3.9	0.0	0.0	100.0	96.1	179
Middle	67.3	19.7	11.3	0.4	0.0	1.2	100.0	98.4	169
Fourth	73.2	13.2	11.5	1.4	0.6	0.0	100.0	98.0	173
Highest	86.3	8.1	4.4	0.6	0.0	0.6	100.0	98.8	177
Total	66.9	16.2	14.0	2.3	0.1	0.5	100.0	97.1	851

[1] Refers to women who attended secondary school or higher and women who can read a whole sentence or part of a sentence.

Table 3.5: Literacy — Men

Percent distribution of men aged 15–49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Tuvalu 2007

| Background characteristic | Secondary school or higher | No schooling or primary school | | | | | Total | Percentage literate[1] | Number of men |
		Can read a whole sentence	Can read part of a sentence	Cannot read at all	Blind/visually impaired	Missing			
Age									
15–19	85.6	2.0	9.8	2.6	0.0	0.0	100.0	97.4	91
20–24	95.1	1.6	1.7	1.7	0.0	0.0	100.0	98.3	74
25–29	95.7	2.2	1.0	1.1	0.0	0.0	100.0	98.9	62
30–34	(51.9)	(35.5)	(9.5)	(3.1)	(0.0)	(0.0)	(100.0)	(96.9)	38
35–39	(43.8)	(30.3)	(18.6)	(4.5)	(2.8)	(0.0)	(100.0)	(92.7)	41
40–44	24.1	51.6	20.2	4.1	0.0	0.0	100.0	95.9	59
45–49	43.0	22.1	19.1	14.7	1.1	0.0	100.0	84.2	63
Residence									
Funafuti	79.7	14.6	2.6	2.6	0.5	0.0	100.0	96.9	225
Outer islands	52.9	20.6	19.7	6.5	0.3	0.0	100.0	93.2	203
Wealth quintile									
Lowest	49.0	15.4	22.5	11.5	1.6	0.0	100.0	87.0	75
Second	61.5	18.5	15.1	4.2	0.7	0.0	100.0	95.1	94
Middle	52.3	29.8	12.0	5.8	0.0	0.0	100.0	94.2	89
Fourth	82.1	14.0	3.8	0.0	0.0	0.0	100.0	100.0	74
Highest	88.5	9.1	1.2	1.2	0.0	0.0	100.0	98.8	96
Total men aged 15–49	67.0	17.4	10.7	4.4	0.4	0.0	100.0	95.1	428
50+	32.1	23.1	29.4	7.2	5.0	3.1	100.0	84.7	130
Total men aged 15+	58.8	18.8	15.1	5.1	1.5	0.7	100.0	92.7	558

Note: Figures in parentheses are based on 25–49 cases.
[1] Refers to men who attended secondary school or higher and men who can read a whole sentence or part of a sentence.

3.4 ACCESS TO MEDIA

The 2007 TDHS collected information on the exposure of respondents to both broadcast and print media. This information is important because it provides an indication of the exposure of women and men to mass media that can be used to disseminate family planning, health and other information. Access to media is relatively high for women in the 15–49 age group, especially radio. Nearly 88% of women in the 15–49 age group listen to radio at least once a week. Nearly 43% of women read a newspaper once a week, and it is assumed that these newspapers are mostly foreign language newspapers because Tuvalu does not have its own newspaper. Television is the media least used by women in the 15–49 age group, and 21% of women use at least all three media types at least once a week.

Table 3.6: Exposure to mass media — Women

Percentage of women aged 15–49 who are exposed to specific media on a weekly basis, by background characteristics, Tuvalu 2007

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	All three media at least once a week	No media at least once a week	Number
Age						
15–19	46.6	45.9	87.3	22.7	4.6	111
20–24	44.2	43.3	84.4	26.0	10.2	145
25–29	52.2	43.5	87.6	28.9	7.5	134
30–34	51.7	30.0	92.0	22.5	6.9	97
35–39	38.9	28.2	86.0	16.6	11.7	94
40–44	38.1	28.0	91.7	18.0	5.8	129
45–49	30.7	23.4	86.9	11.4	10.6	140
Residence						
Funafuti	52.0	40.7	86.6	24.9	6.6	414
Outer islands	34.3	29.4	89.0	17.2	9.8	437
Education						
Less than secondary	24.4	24.8	84.7	12.6	13.1	282
Secondary	44.4	35.0	88.2	18.8	6.9	437
More than secondary	77.5	56.1	93.3	45.8	2.6	132
Wealth quintile						
Lowest	22.4	17.0	78.7	9.7	17.9	152
Second	37.0	23.3	84.5	16.8	10.6	179
Middle	45.6	29.7	92.1	16.3	4.9	169
Fourth	49.5	46.0	92.9	25.7	3.4	173
Highest	57.6	56.1	90.2	34.6	5.5	177
Total	42.9	34.9	87.9	21.0	8.2	851

There is no strong trend in access to the three media types by age. The youngest group of women (aged 15–19) is most likely to access each form of media, particularly television and radio. However, women in older age groups are not necessarily the least likely group to access media. Women in the 45–49 age group are least likely (11.4%) to use any form of media, and to read a newspaper at least once a week (30.7%) or watch television (23.4%).

Residence, on the other hand, is associated with clear differences in media exposure. Women on Funafuti have better access to television and newspapers (but not radio) than women in the outer islands. Due to lower literacy levels and availability of newspapers, outer islands women are much less likely to read a newspaper (34.3%) than Funafuti women (52.0%).

Media exposure increases with both educational level and wealth quintile. For example, 58% of women read a newspaper at least once a week in the highest wealth quintile compare with 24% in the lowest wealth quintile. About 63% of women with more than a secondary education watch television once a week compared with 48% of women with less than a secondary education. A comparison between Tables 3.6 and 3.7 indicate that women are somewhat more likely than men to not have access media once a week (8.2% women, 7.3% men). This difference is explained by men having greater access to television than

women (52% men, 35% women). There has been an increase in the number of people gaining access to television since the introduction of SKY Pacific into Tuvalu in 2006.

Table 3.7: Exposure to mass media — Men

Percentage of men aged 15–49 who are exposed to specific media on a weekly basis, by background characteristics, Tuvalu 2007

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	All three media at least once a week	No media at least once a week	Number
Age						
15–19	30.3	63.9	83.7	21.7	11.1	91
20–24	47.8	48.1	90.4	31.3	8.0	74
25–29	54.1	58.5	89.6	34.3	4.8	62
30–34	(59.8)	(62.1)	(92.1)	(27.5)	(3.1)	38
35–39	(52.1)	(49.8)	(86.2)	(38.0)	(8.3)	41
40–44	52.9	46.0	87.0	31.3	8.2	59
45–49	43.7	46.6	81.9	25.2	9.6	63
Residence						
Funafuti	59.9	58.9	83.9	39.1	9.4	225
Outer islands	31.8	48.4	90.3	18.1	6.5	203
Education						
Less than secondary	35.9	47.6	85.9	21.2	9.2	141
Secondary	42.6	55.3	87.5	28.2	9.0	223
More than secondary	84.3	63.2	87.0	50.1	1.9	63
Wealth quintile						
Lowest	16.7	48.2	89.5	10.6	8.2	75
Second	35.8	49.5	84.4	21.7	11.9	94
Middle	49.9	49.3	88.1	28.8	7.2	89
Fourth	67.8	64.9	89.5	48.1	4.8	74
Highest	61.2	58.5	84.1	36.7	7.4	96
Total men aged 15–49	46.6	53.9	86.9	29.1	8.0	428
50+	41.7	44.3	91.4	26.5	5.1	130
Total men aged 15+	45.4	51.7	87.9	28.5	7.3	558

Note: Figures in parentheses are based on 25–49 cases.

3.5 EMPLOYMENT

In 2007 TDHS, respondents were asked a number of questions regarding their employment status, including whether they did any work in the seven days preceding the survey, and if not, whether they had work in the 12 months before the survey. The results for women and men are presented in Tables 3.8 and 3.9.

Figure 3.1: Women's employment status in the 12 months preceding the survey

Currently employed, 48.6%

Not employed in the 12 months preceding the survey, 48.8%

Not currently employed, 2.6%
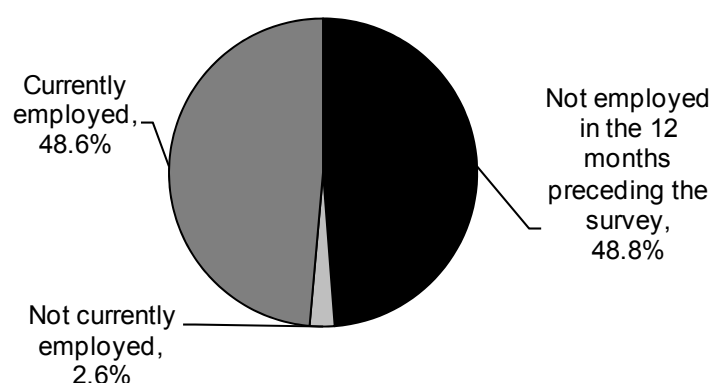
At the time of the survey, 48% of women were currently employed and an additional 3% were not employed but had worked sometime during the preceding 12 months (Fig. 3.1). About 63% of women in the 25–29 age group are currently employed. Women who are divorced, separated or widowed are more likely to be employed than any other women. Women on Funafuti are more likely to be employed (59%) than women from the outer islands (40%).

Women with more than a secondary education and those in the highest wealth quintile are least likely to have worked in the 12 months preceding the survey.

The proportion of men who are currently employed is higher than that of women (75% men, 49% women). About 17% of men from the outer islands were employed in the 12 months preceding the survey (17%) compared with 12% of men in Funafuti. The case is different for women, however. About 59% of women from the outer islands were employed in the 12 months preceding compared with 37% of women in Funafuti

Table 3.8: Employment status — Women

Percent distribution of women aged 15–49 by employment status, according to background characteristics, Tuvalu 2007

| | Employed in the 12 months preceding the survey | | | | |
Background characteristic	Currently employed[1]	Not currently employed	Not employed in the 12 months preceding the survey	Total	Number of women
Age					
15–19	15.9	0.0	84.1	100.0	111
20–24	46.4	3.7	49.8	100.0	145
25–29	63.0	4.0	33.0	100.0	134
30–34	57.7	4.1	38.2	100.0	97
35–39	53.3	2.3	44.4	100.0	94
40–44	53.3	1.6	45.1	100.0	129
45–49	50.2	2.3	47.4	100.0	140
Marital status					
Never married	31.9	1.7	66.4	100.0	193
Married or living together	53.5	3.2	43.4	100.0	598
Divorced/separated/widowed	56.0	0.0	44.0	100.0	60
Number of living children					
0	36.8	3.6	59.6	100.0	289
1–2	58.1	2.7	39.2	100.0	235
3–4	53.2	1.5	45.4	100.0	223
5+	51.4	2.1	46.5	100.0	105
Residence					
Funafuti	58.5	4.2	37.3	100.0	414
Outer islands	39.5	1.1	59.4	100.0	437
Education					
Less than secondary	40.7	1.2	58.1	100.0	282
Secondary	45.1	3.9	51.1	100.0	437
More than secondary	78.1	1.6	20.3	100.0	132
Wealth quintile					
Lowest	40.5	0.5	59.1	100.0	152
Second	41.7	0.6	57.7	100.0	179
Middle	49.8	5.7	44.5	100.0	169
Fourth	45.8	3.8	50.5	100.0	173
Highest	65.0	2.4	32.6	100.0	177

[1] 'Currently employed' is defined as having done work in the past seven days, and.includes people who did not work in the past seven days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

Table 3.9: Employment status — Men

Percent distribution of men aged 15–49 by employment status, according to background characteristics, Tuvalu 2007

Background characteristic	Employed in the 12 months preceding the survey		Not employed in the 12 months preceding the survey	Total	Number of men
	Currently employed[1]	Not currently employed			
Age					
15–19	57.1	11.3	31.6	100.0	91
20–24	70.3	8.5	21.1	100.0	74
25–29	83.1	9.3	7.6	100.0	62
30–34	(84.7)	(12.3)	(3.1)	(100.0)	38
35–39	(92.5)	(5.8)	(1.6)	(100.0)	41
40–44	79.3	11.5	9.2	100.0	59
45–49	82.7	8.0	9.3	100.0	63
Marital status					
Never married	68.0	9.2	22.7	100.0	194
Married or living together	82.9	10.4	6.7	100.0	224
Divorced/separated/widowed	*	*	*	*	9
Number of living children					
0	68.9	10.6	20.5	100.0	224
1–2	82.8	7.9	9.3	100.0	85
3–4	87.9	7.2	4.9	100.0	72
5+	(77.6)	(12.3)	(10.1)	(100.0)	46
Residence					
Funafuti	75.5	7.8	16.7	100.0	225
Outer islands	76.2	11.7	12.1	100.0	203
Education					
Less than secondary	81.0	8.2	10.8	100.0	141
Secondary	67.6	12.5	19.9	100.0	223
More than secondary	93.5	2.7	3.7	100.0	63
Wealth quintile					
Lowest	71.6	10.5	17.8	100.0	75
Second	69.0	11.4	19.7	100.0	94
Middle	83.0	9.5	7.5	100.0	89
Fourth	78.4	8.9	12.7	100.0	74
Highest	77.3	8.0	14.7	100.0	96
Total men aged 15–49	75.8	9.6	14.5	100.0	428
50+	74.0	8.2	17.8	100.0	130
Total men aged 15+	75.4	9.3	15.3	100.0	558

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. Figures in parentheses are based on 25–49 cases.
[1] 'Currently employed' is defined as having done work in the past seven days, and includes people who did not work in the past seven days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

3.6   OCCUPATION

Respondents who were currently employed or had worked in the 12 months preceding the survey were asked to specify their occupation. Tables 3.10 and 3.11 show data on occupation of employed women and men. Most employed women are in professional/technical/managerial sector where over one-quarter (30%) of women in the 15–49 age group are employed. This is not the case for men, however, who are mostly employed men in the agriculture sector (37%). The next most common occupation sector for employed women is clerical, where one-sixth of women are employed. For men, the next most common occupation is professional/technical/managerial at 18%. About 12% of employed women in the 15–49 age group are in unskilled manual labour sector at 1.5%. About 4% of employed women in the 15–49 age group are in the agricultural sector.

Residence has a significant impact on occupation type. Women and men are likely to be involved in agricultural activities in the outer islands. Those with less education and in the lower wealth quintiles are more likely to work in agriculture activities.

Table 3.10: Occupation — Women

Percent distribution of women aged 15–49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Tuvalu 2007

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total	Number of women
Age										
15–19	*	*	*	*	*	*	*	*	*	18
20–24	21.5	29.9	25.7	0.0	7.4	10.8	0.0	4.6	100.0	73
25–29	42.4	36.8	7.2	0.0	6.7	5.6	1.4	0.0	100.0	90
30–34	40.9	27.5	6.4	0.0	12.9	9.1	2.2	1.0	100.0	60
35–39	36.1	7.4	8.3	4.1	14.4	21.1	8.6	0.0	100.0	52
40–44	24.8	15.9	24.2	1.5	12.9	16.4	4.4	0.0	100.0	71
45–49	20.3	6.7	18.4	3.0	22.9	20.2	8.5	0.0	100.0	74
Marital status										
Never married	30.3	23.7	18.8	1.7	5.3	16.6	2.7	1.0	100.0	65
Married or living together	32.0	21.8	14.7	1.0	12.8	12.4	4.3	1.0	100.0	339
Divorced/separated/ widowed	(13.6)	(11.5)	(17.9)	(6.4)	(19.3)	(27.5)	(3.7)	(0.0)	(100.0)	34
Number of living children										
0	33.3	32.9	14.1	0.9	7.7	9.0	1.5	0.6	100.0	117
1–2	29.9	22.6	20.2	0.0	9.3	13.4	2.8	1.9	100.0	143
3–4	33.5	10.4	13.5	2.7	13.5	18.7	7.7	0.0	100.0	122
5+	18.7	17.4	11.1	3.9	26.1	17.4	4.3	1.1	100.0	56
Residence										
Funafuti	25.5	25.1	17.6	2.5	9.2	17.6	2.5	0.0	100.0	260
Outer islands	37.4	15.8	12.5	0.0	16.6	9.3	6.2	2.2	100.0	178
Education										
Less than secondary	6.7	6.2	22.3	2.8	25.1	30.7	6.3	0.0	100.0	118
Secondary	21.5	31.1	18.6	1.0	10.1	11.6	4.4	1.5	100.0	214
More than secondary	74.7	18.4	1.7	1.0	2.0	1.0	0.6	0.6	100.0	106
Wealth quintile										
Lowest	32.8	5.3	11.1	0.0	22.6	21.9	6.3	0.0	100.0	62
Second	24.7	11.9	17.7	0.0	25.9	13.7	2.6	3.6	100.0	76
Middle	23.5	27.7	18.5	1.2	8.3	13.3	7.6	0.0	100.0	94
Fourth	26.1	26.1	15.1	3.8	8.7	14.7	4.0	1.5	100.0	86
Highest	41.0	27.2	14.5	1.8	3.6	10.9	0.9	0.0	100.0	120
Total	30.4	21.3	15.5	1.5	12.2	14.2	4.0	0.9	100.0	437

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. Figures in parentheses are based on 25–49 cases.

Table 3.11: Occupation — Men

Percent distribution of men aged 15–49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Tuvalu 2007

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total	Number of men
Age										
15–19	0.0	0.0	0.0	21.4	17.1	7.5	52.1	1.9	100.0	62
20–24	6.1	5.2	6.1	14.2	22.3	4.0	40.1	2.0	100.0	58
25–29	23.5	3.1	0.0	11.3	25.2	9.3	27.6	0.0	100.0	58
30–34	(24.6)	(0.0)	(1.7)	(19.0)	(29.5)	(4.9)	(20.3)	(0.0)	(100.0)	37
35–39	(24.9)	(5.8)	(7.0)	(5.7)	(27.0)	(1.7)	(28.0)	(0.0)	(100.0)	41
40–44	7.8	0.0	2.1	9.9	28.1	2.5	49.7	0.0	100.0	53
45–49	30.3	2.2	6.2	12.4	15.4	7.4	26.1	0.0	100.0	57
Marital status										
Never married	5.5	1.2	2.3	14.9	22.0	5.9	46.6	1.6	100.0	150
Married or living together	23.6	2.9	3.5	13.1	23.4	5.5	28.0	0.0	100.0	209
Divorced/separated/ widowed	*	*	*	*	*	*	*	*	*	6
Number of living children										
0	8.1	2.7	2.0	15.1	21.7	5.6	43.4	1.3	100.0	178
1–2	22.9	3.3	3.7	10.7	29.5	7.1	22.8	0.0	100.0	78
3–4	23.0	1.6	1.9	11.6	20.1	3.4	38.4	0.0	100.0	69
5+	(23.2)	(0.0)	(9.6)	(15.8)	(20.1)	(6.2)	(25.2)	(0.0)	(100.0)	41
Residence										
Funafuti	18.8	1.9	2.5	12.5	30.0	8.8	24.4	1.3	100.0	188
Outer islands	12.6	2.8	3.9	14.7	15.4	2.2	48.3	0.0	100.0	178
Education										
Less than secondary	6.4	1.4	4.1	13.3	29.0	5.4	40.4	0.0	100.0	126
Secondary	5.7	2.5	2.9	16.4	22.8	6.9	41.4	1.3	100.0	179
More than secondary	64.8	3.9	1.9	5.8	10.4	1.9	11.3	0.0	100.0	61
Wealth quintile										
Lowest	16.2	2.8	0.0	6.9	26.0	7.3	40.7	0.0	100.0	62
Second	8.0	1.7	4.6	13.4	23.5	5.5	43.3	0.0	100.0	76
Middle	5.8	2.4	5.7	16.6	28.7	7.1	33.7	0.0	100.0	82
Fourth	17.2	0.0	1.8	12.8	25.5	7.3	35.5	0.0	100.0	64
Highest	31.5	4.3	2.9	16.4	12.1	1.4	28.5	2.9	100.0	82
Total men aged 15–49	15.8	2.3	3.2	13.6	22.9	5.6	36.0	0.6	100.0	366
50+	25.1	0.0	4.3	9.7	20.4	2.2	38.3	0.0	100.0	107
Total men aged 15+	17.9	1.8	3.4	12.7	22.3	4.8	36.6	0.5	100.0	473

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. Figures in parentheses are based on 25–49 cases.

3.7 EARNINGS, EMPLOYERS AND CONTINUITY OF EMPLOYMENT

Table 3.12 shows the percent distribution of employed women by type of earnings and employment characteristics. Results for agricultural work or not discussed because there were less than 25 respondents in this category. Almost all employed women are doing non-agricultural work, and nearly all of these (85%) are paid by cash and are employed by non-family members (68%). More than 68% of employed women continue to work through the year doing non-agricultural work.

Table 3.12: Type of employment — Women

Percent distribution of women aged 15–49 employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment, according to type of employment (agricultural or non-agricultural), Tuvalu 2007

Employment characteristic	Agricultural work	Nonagricultural work	Total
Type of earnings			
Cash only	*	84.9	83.3
Cash and in-kind	*	9.3	9.4
In-kind only	*	2.1	2.4
Not paid	*	3.8	4.5
Missing	*	0.0	0.5
Total	*	100.0	100.0
Type of employer			
Employed by family member	*	9.4	10.4
Employed by non-family member	*	67.8	65.1
Self-employed	*	22.2	23.6
Missing	*	0.5	1.0
Total		100.0	100.0
Continuity of employment			
All year	*	68.7	67.2
Seasonal	*	20.3	21.0
Occasional	*	10.5	10.9
Missing	*	0.5	1.0
Total	*	100.0	100.0
Number of women employed during the last 12 months	18	416	437

Note: Total includes four women with missing information on type of employment who are not shown separately. An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed.

3.8 HEALTH INSURANCE COVERAGE

The 2007 TDHS asked respondents if they were covered by a specific type of health insurance. In Tuvalu there are a limited number of companies offering such services. In general, the government of Tuvalu prefers not to have health insurance for two reasons: 1) All medical service are free within the country. If medical treatment is not available within Tuvalu, then a patient can go to either Fiji or New Zealand for treatment, where medical costs are funded by the government of either New Zealand or Tuvalu (there is, therefore, no incentive for residents to have health insurance); 2) Only a limited number of companies in Tuvalu offer health insurance services and because people cannot access these services because of their location (particularly true in the outer islands). Two main institutions offered some form of health insurance: Colonial and the Tuvalu National Provident Fund. About 92% of both men and women do not have health insurance. About 4% of women and 6% of men in the 15–49 age group have privately purchased commercial health insurance. Other employer-based insurance is the next common type of health insurance for men and women in the 15–49 age group. Social security type is the least common health insurance.

Table 3.13: Health insurance coverage — Women

Percentage of women aged 15–49 with specific types of health insurance coverage, according to background characteristics, Tuvalu 2007

Background characteristic	Social security	Other employer based insurance	Privately purchased commercial insurance	Other	None	Number of women
Age						
15–19	0.0	0.0	2.0	0.0	98.0	111
20–24	0.4	1.5	6.4	0.0	91.6	145
25–29	3.9	5.8	1.8	0.8	89.2	134
30–34	1.8	2.2	3.1	2.2	90.6	97
35–39	0.0	1.4	0.7	0.0	97.9	94
40–44	0.8	1.6	3.4	0.8	93.3	129
45–49	2.0	0.8	8.6	0.0	88.6	140
Residence						
Funafuti	1.3	2.4	4.5	1.0	90.8	414
Outer islands	1.4	1.6	3.6	0.0	93.9	437
Education						
Less than secondary	0.8	1.6	3.6	0.0	93.9	282
Secondary	0.9	1.8	3.8	0.0	94.0	437
More than secondary	4.1	3.2	5.3	3.3	84.1	132
Wealth quintile						
Lowest	0.7	0.9	3.5	0.0	94.9	152
Second	0.7	2.5	5.3	0.0	91.4	179
Middle	2.5	2.5	3.0	0.6	92.6	169
Fourth	1.6	1.3	2.8	0.0	94.4	173
Highest	1.2	2.4	5.3	1.8	89.2	177
Total	1.4	2.0	4.0	0.5	92.4	851

Table 3.14: Health insurance coverage — Men

Percentage of men aged 15–49 with specific types of health insurance coverage, according to background characteristics, Tuvalu 2007

Background characteristic	Social security	Other employer based insurance	Privately purchased commercial insurance	None	Number of men
Age					
15–19	2.6	0.0	2.6	97.4	91
20–24	0.0	3.2	6.4	93.6	74
25–29	3.8	7.5	17.7	78.6	62
30–34	(0.0)	(0.0)	(3.1)	(96.9)	38
35–39	(0.0)	(0.0)	(11.3)	(88.7)	41
40–44	2.0	0.0	1.1	96.9	59
45–49	1.9	1.0	7.5	91.5	63
Residence					
Funafuti	3.1	3.1	12.0	86.5	225
Outer islands	0.0	0.3	1.1	98.6	203
Education					
Less than secondary	1.7	0.0	0.8	98.3	141
Secondary	1.0	2.9	5.2	93.9	223
More than secondary	3.7	1.9	26.0	72.2	63

Table 3.14 (continued)

Background characteristic	Social security	Other employer based insurance	Privately purchased commercial insurance	None	Number of men
Wealth quintile					
Lowest	1.6	0.0	0.9	97.6	75
Second	2.5	1.2	5.5	94.5	94
Middle	1.3	0.7	1.3	98.0	89
Fourth	0.0	3.2	12.7	87.3	74
Highest	2.5	3.7	13.5	84.1	96
Total men aged 15–49	1.6	1.8	6.8	92.2	428
50+	0.9	2.3	4.4	94.3	130
Total men aged 15+	1.5	1.9	6.3	92.7	558

Note: Figures in parentheses are based on 25–49 cases.

3.9 KNOWLEDGE AND ATTITUDES CONCERNING TUBERCULOSIS

Tuberculosis (TB) is a leading cause of death in the world and a major health concern in the developing world. TB is caused the bacteria *Mycobacterium tuberculosis* whose transmission is mainly airborne through droplets that are coughed or sneezed by infected people. The infection primarily concentrates in the lungs but in some cases it can be transmitted to other parts of the body. The very young, the very old and people with a suppressed immune system are especially prone to contracting the disease when exposed to it. The 2007 TDHS collected information on men's and women's level of TB awareness. Specifically, they were asked whether they have heard of the disease, how it spreads from one person to another, whether it can be cured, and whether they would want to keep it secret that a family member had TB. This information is useful in designing programmes to combat and limit the spread of this disease.

Tables 3.15 and 3.16 show the percentage of women and men who have heard of TB, and of those who have heard it, their knowledge and attitudes concerning TB, according to background characteristics. Knowledge of TB is almost universal among women (96%) and men (95%) in Tuvalu. There is very little variation in awareness by background characteristics, although knowledge of women who have heard of TB increases somewhat with educational attainment. For example, 95% of women with less than a secondary education have heard of TB compared with 98% with a secondary education or higher.

Three out of five women (61%) who have heard of TB reported that it spreads through the air by coughing or sneezing. Knowledge of how TB is spread differs among age groups and wealth quintiles. Women in the 15–19 age group and women in the second lowest quintile are the least aware of how TB is spread.

More women from the outer islands have heard of TB (98%) than women on Funafuti (93%). However, more women on Funafuti (70%) than in the outer islands (53%) correctly answered that TB is spread through the air by coughing.

Wanting to keep a family member's illness secret is a sign of stigma against people with TB. The 2007 TDHS revealed that 17% of all women in the 15–49 age group would keep it secret that a family member has TB. Younger women and women living in Funafuti are slightly more likely to want to keep the illness a secret.

Table 3.15: Knowledge and attitude concerning tuberculosis — Women

Percentage of women aged 15–49 who have heard of tuberculosis (TB), and among women who have heard of TB, the percentage who know that TB is spread through the air by coughing, the percentage who believe that TB can be cured, and the percentage who would want to keep it secret that a family member has TB, by background characteristics, Tuvalu 2007

Background characteristic	Among all women:		Among women who have heard of TB:			
	Percentage who have heard of TB	Number	Percentage who report that TB is spread through the air by coughing	Percentage who believe that TB can be cured	Percentage who would want a family member's TB kept secret	Number of women
Age						
15–19	91.4	111	51.2	79.1	31.4	102
20–24	97.0	145	62.7	87.3	21.0	141
25–29	97.9	134	68.9	90.3	19.0	131
30–34	93.7	97	57.3	83.8	12.2	91
35–39	95.5	94	59.3	87.3	14.0	90
40–44	94.9	129	62.3	95.7	11.3	123
45–49	96.9	140	59.1	92.5	10.4	136
Residence						
Funafuti	92.9	414	69.5	90.4	18.1	385
Outer islands	98.0	437	52.7	86.8	16.0	428
Education						
Less than secondary	94.6	282	53.0	86.9	14.7	266
Secondary	95.3	437	61.6	87.9	20.8	416
More than secondary	98.4	132	73.0	93.5	9.3	130
Wealth quintile						
Lowest	97.1	152	57.4	85.4	17.3	148
Second	94.5	179	48.7	81.9	15.1	169
Middle	94.9	169	69.4	91.3	14.2	160
Fourth	96.9	173	59.2	92.1	20.6	168
Highest	94.5	177	68.6	91.6	17.5	168
Total	95.5	851	60.6	88.5	17.0	813

Table 3.16: Knowledge and attitude concerning tuberculosis — Men

Percentage of men aged 15–49 who have heard of tuberculosis (TB), and among men who have heard of TB, the percentage who know that TB is spread through the air by coughing, the percentage who believe that TB can be cured, and the percentage who would want to keep it secret that a family member has TB, by background characteristics, Tuvalu 2007

Background characteristic	Among all men:		Among respondents who have heard of TB:			
	Percentage who have heard of TB	Number	Percentage who report that TB is spread through the air by coughing	Percentage who believe that TB can be cured	Percentage who would want a family member's TB kept secret	Number of men
Age						
15–19	92.9	91	52.9	81.7	15.1	84
20–24	91.4	74	50.5	83.6	10.1	67
25–29	95.2	62	57.6	96.1	10.9	59
30–34	(95.3)	38	(67.2)	(97.0)	(7.9)	36
35–39	(100.0)	41	(64.2)	(97.2)	(4.4)	41
40–44	98.1	59	44.7	95.7	6.4	58
45–49	98.1	63	62.2	95.2	0.0	62
Residence						
Funafuti	94.3	225	55.8	91.7	10.5	212
Outer islands	96.6	203	55.9	90.3	6.2	196

Table 3.16 (continued)

	Among all men:		Among respondents who have heard of TB:			
Background characteristic	Percentage who have heard of TB	Number	Percentage who report that TB is spread through the air by coughing	Percentage who believe that TB can be cured	Percentage who would want a family member's TB kept secret	Number of men
Education						
Less than secondary	98.0	141	57.0	92.7	6.1	138
Secondary	93.9	223	52.4	88.0	11.8	210
More than secondary	94.5	63	65.3	98.0	1.8	60
Wealth quintile						
Lowest	94.6	75	50.9	90.6	10.3	71
Second	94.4	94	51.1	90.1	6.3	89
Middle	96.1	89	56.3	93.5	5.1	85
Fourth	96.8	74	57.8	92.1	12.4	71
Highest	95.1	96	62.3	89.2	9.0	91
Total men aged 15–49	95.4	428	55.9	91.0	8.4	408
50+	96.8	130	52.8	94.3	1.4	126
Total men aged 15+	95.7	558	55.1	91.8	6.8	534

Note: Figures in parentheses are based on 25–49 cases.

3.10   TOBACCO USE

Smoking and other uses of tobacco affect women's and men's health, and may adversely affect children's health, especially in terms of vulnerability to respiratory illnesses. In addition, tobacco use during pregnancy increases the risk of having a small baby or low birth weight baby. Women and men interviewed in the 2007 TDHS were asked about their smoking habits. Tables 3.17 and 3.18 show the percentage of women who use various types of tobacco and the percent distribution of cigarettes smoked in the preceding 24 hours, according to background characteristics.

Overall, about 72% of women and 42% of men do not use tobacco. About 24% of women and 55% of men smoke cigarettes. Among pregnant women, 22% use some form of tobacco and most of these women smoke cigarettes (20%). Tobacco use varies greatly by background characteristics. Older women and men are much more likely to use tobacco than younger ones. About 30% of women in the 45–49 age group smoke other tobacco (most probably 'sului'[6]) compared with 12% in the 15–19 age group.

Women and men with little education and those in lower wealth quintiles are more likely to use tobacco. About 32% of women in the outer islands smoke some form of tobacco compared with 25% on Funafuti. About 64% of men in the outer islands smoke tobacco compared with 53% on Funafuti. Women with less than a secondary education are more likely to smoke tobacco (65%) compared with women with a secondary and tertiary level education. Similarly, men with less than a secondary education are more likely to smoke tobacco (35%) compared to men with more than a secondary education.

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[6] A local traditionally made 'cigarette'.

Table 3.17: Tobacco use — Women

Percentage of women aged 15–49 who smoke cigarettes or a pipe or use other tobacco products and the percent distribution of cigarette smokers by number of cigarettes smoked in preceding 24 hours, according to background characteristics and maternity status, Tuvalu 2007

Background characteristic	Uses tobacco					Number of cigarettes in the last 24 hours						Number of cigarette smokers
	Cigarettes	Pipe	Other tobacco	Do not use tobacco	Number of women	1–2	3–5	6–9	10+	Do not know/ missing	Total	
Age												
15–19	25.5	0.0	11.5	73.4	111	(61.3)	(29.7)	(4.3)	(4.7)	(0.0)	(100.0)	28
20–24	24.8	1.4	14.6	73.6	145	(36.0)	(40.1)	(9.0)	(14.9)	(0.0)	(100.0)	36
25–29	12.6	0.0	7.1	86.0	134	*	*	*	*	*	*	17
30–34	18.0	1.1	18.4	76.9	97	*	*	*	*	*	*	17
35–39	27.6	1.2	21.9	61.8	94	*	*	*	*	*	*	26
40–44	27.8	3.3	23.4	67.5	129	(58.1)	(20.6)	(12.5)	(8.9)	(0.0)	(100.0)	36
45–49	31.2	1.2	29.7	61.7	140	(28.5)	(28.4)	(17.9)	(25.2)	(0.0)	(100.0)	44
Residence												
Funafuti	23.4	1.3	10.0	75.1	414	25.8	39.3	15.7	19.1	0.0	100.0	97
Outer islands	24.6	1.1	25.7	68.5	437	62.4	20.1	4.1	12.9	0.6	100.0	108
Education												
Less than secondary	26.3	2.5	26.3	65.0	282	44.4	34.0	10.8	10.0	0.8	100.0	74
Secondary	24.9	0.7	16.7	72.6	437	46.1	25.9	8.1	19.9	0.0	100.0	109
More than secondary	16.4	0.0	5.1	83.1	132	*	*	*	*	*	*	22
Maternity status												
Pregnant	19.9	0.0	16.8	78.9	51	*	*	*	*	*	*	10
Breastfeeding (not pregnant)	15.9	0.0	12.6	80.8	123	56.7	25.5	3.3	14.5	0.0	100.0	19
Neither	25.8	1.5	19.2	69.5	677	44.3	28.8	10.8	15.7	0.3	100.0	175
Wealth quintile												
Lowest	21.6	0.4	28.2	68.8	152	(47.4)	(29.2)	(7.6)	(15.8)	(0.0)	(100.0)	33
Second	22.7	1.2	23.9	70.7	179	(42.8)	(38.4)	(4.2)	(14.6)	(0.0)	(100.0)	41
Middle	32.4	1.3	21.3	65.2	169	(46.1)	(26.8)	(7.1)	(18.9)	(1.1)	(100.0)	55
Fourth	25.1	1.2	13.4	73.5	173	(54.6)	(22.9)	(12.5)	(10.0)	(0.0)	(100.0)	43
Highest	18.4	1.8	5.0	79.7	177	(31.6)	(29.9)	(18.6)	(19.9)	(0.0)	(100.0)	33
Total	24.0	1.2	18.1	71.7	851	45.1	29.2	9.6	15.8	0.3	100.0	204

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. Figures in parentheses are based on 25–49 cases.

Table 3.18: Tobacco use — Men

Percentage of men aged 15–49 who smoke cigarettes or a pipe or use other tobacco products and the percent distribution of cigarette smokers by number of cigarettes smoked in preceding 24 hours, according to background characteristics, Tuvalu 2007

Background characteristic	Uses tobacco					Number of cigarettes in the last 24 hours							Number of cigarette smokers
	Cigarettes	Pipe	Other tobacco	Do not use tobacco	Number of men	0	1–2	3–5	6–9	10+	Do not know/ missing	Total	
Age													
15–19	47.2	0.0	46.0	51.4	91	(4.6)	(17.1)	(27.0)	(11.3)	(37.4)	(2.6)	(100.0)	43
20–24	55.8	1.5	53.2	42.7	74	(6.9)	(12.8)	(31.5)	(19.8)	(29.1)	(0.0)	(100.0)	41
25–29	51.7	0.0	47.0	46.3	62	(0.0)	(12.3)	(21.8)	(9.4)	(56.5)	(0.0)	(100.0)	32
30–34	(50.6)	(0.0)	(48.8)	(45.1)	38	*	*	*	*	*	*	*	19
35–39	(65.9)	(0.0)	(57.4)	(34.1)	41	(2.0)	(14.2)	(26.2)	(12.8)	(44.8)	(0.0)	(100.0)	27
40–44	60.5	0.0	62.3	32.8	59	(12.5)	(20.1)	(5.2)	(8.5)	(53.6)	(0.0)	(100.0)	35
45–49	61.4	0.0	56.1	35.6	63	(13.5)	(6.5)	(35.6)	(7.4)	(37.1)	(0.0)	(100.0)	38
Residence													
Funafuti	52.6	0.0	44.3	47.4	225	1.0	9.9	24.8	11.9	52.5	0.0	100.0	118
Outer islands	58.3	0.5	61.5	36.1	203	11.7	17.5	25.0	10.5	34.3	0.9	100.0	118
Education													
Less than secondary	60.3	0.0	62.8	34.7	141	10.9	13.9	23.8	7.7	43.7	0.0	100.0	85
Secondary	56.4	0.5	52.7	41.8	223	4.5	14.6	24.6	14.0	41.4	0.9	100.0	126
More than secondary	40.3	0.0	28.4	59.7	63	*	*	*	*	*	*	*	25
Wealth quintile													
Lowest	57.4	0.0	58.5	40.8	75	5.4	15.2	18.9	12.5	45.5	2.5	100.0	43
Second	60.8	1.2	59.3	36.2	94	10.1	15.2	32.2	7.4	35.1	0.0	100.0	57
Middle	60.9	0.0	66.7	31.2	89	(7.5)	(20.6)	(13.7)	(6.4)	(51.8)	(0.0)	(100.0)	54
Fourth	55.1	0.0	48.0	44.9	74	(4.1)	(6.1)	(25.5)	(15.6)	(48.6)	(0.0)	(100.0)	41
Highest	43.3	0.0	31.1	56.7	96	(2.8)	(8.5)	(35.1)	(17.0)	(36.6)	(0.0)	(100.0)	41
Total men aged 15–49	55.3	0.3	52.4	42.1	428	6.3	13.7	24.9	11.2	43.4	0.5	100.0	237
50+	53.6	0.0	56.8	39.2	130	14.9	24.0	19.8	10.9	30.4	0.0	100.0	70
Total men aged 15+	54.9	0.2	53.4	41.4	558	8.3	16.1	23.7	11.1	40.5	0.4	100.0	306

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. Figures in parentheses are based on 25–49 cases.

3.11 KEY RESULTS

This section provides a summary of key issues regarding men and women in the reproductive age group of 15–49, and identifies issues that enhance women's empowerment.

1. According to the 2007 TDHS, there are about twice as many women as men (850 women and 428 men) in Tuvalu. This pattern reflects the fact that more men are working overseas as seafarers. More than 70% of women are reported to be married compared with 52% of men.

2. The proportion of both women and men in Tuvalu are evenly distributed across different wealth quintiles. The most common church in Tuvalu is the Ekalesia Kerisiano. More than 80% of women and men claim to be Tuvaluans.

3. Very few women and men have no education. One in every four (about 25%) women and 24% of men have completed a primary level of education. There is a decline in the proportion of both women and men having completed secondary education and almost the same proportion of women and men (16% women, 15% men) have completed higher than secondary. More women and men are reported to have some secondary education.

4. Access to media is relatively high for women in the 15–49 age group, especially radio. Nearly 88% of women in the 15–49 age group listen to radio at least once a week, and about 43% reading a newspaper once a week.

5. More women (49%) than men (15%) reported not being employed in the 12 months preceding the survey. These women are more likely to be in the lowest wealth quintile with and have limited (secondary or primary) education. Women are more likely to hold professional/technical /managerial and clerical jobs than are men. The majority of women work for cash only in non-agricultural work, are employed by non-family members, and are more likely to work throughout the year.

6. The majority of women and men do not have health insurance, reflecting the fact that health insurance services are limited in the country. However less than 10% of women and men have privately purchased commercial health insurance.

7. Knowledge of TB is almost universal among women and men in Tuvalu (96% and 95%, respectively). There is very little variation in awareness by background characteristics, although the number of women who have heard of TB increases somewhat with educational attainment. Cigarette smoking is twice as high among men (55%) than among women (24%).

CHAPTER 4   FERTILITY

The 2007 TDHS collected information on current, past and cumulative fertility. Drawing on birth history information collected in the survey, this chapter describes current fertility and differentials in fertility by background characteristics, and trends in fertility, which permits an examination of changes in age-specific fertility rates by specific time periods going back 20 years before the survey.

This chapter also presents information on the cumulative fertility of female respondents. Cumulative fertility tables are derived from a sequence of questions about the number of sons and daughters that a woman has had who are living in the household, who are living elsewhere, and who have died. The information on cumulative fertility is presented in terms of the mean number of children ever born and the mean number of surviving children to women classified by five-year age groups.

The chapter also presents information on birth intervals for births in the five years preceding the survey, age at first birth for five-year age groups of women, and information on teenage pregnancy and motherhood by single year of age for youngest survey respondents (i.e. women aged 15–19). These data are important because they indicate the beginning of a woman's reproductive life.

4.1   DEFINITIONS, METHODOLOGY AND ASSESSMENT OF DATA QUALITY

Fertility measures or indicators presented in this chapter are defined as follows.

Age specific fertility rate (ASFR): The number of births per women for each specific age group. The ASFR is calculated by taking the total number of births of women for each age group over that total number of women in that same age group.

Total fertility rate (TFR): The average number of children that would be born to a woman by the time she ended childbearing if she were to pass through all her childbearing years conforming to the age-specific fertility rate of a given year.

General fertility rate (GFR): The number of live births per 1,000 women aged 15–49 in a given year.

Crude birth rate (CBR): The total number of births per 1,000 population.

Fertility information is collected using the women's questionnaire, which contains questions regarding the birth history of every eligible woman aged 15–49. The birth history captures the total number of all living and dead children a woman has given birth to, children's date of birth, current age (if alive) and age at death (if dead), and whether the children are living with the mother or not. Although birth history tries to capture all births, the data obtained might be subject to various types of errors such as:

- under-reporting of births, particularly the omission of children living elsewhere and those births that died very young (at birth or several hours after births), which could resulted in underestimation of births;

- misreporting of date of birth, and/or age, in particular, the tendency in rounding off dates of birth or ages which could resulted in under- or over-estimation of fertility at certain ages and/or certain periods of time; and

- selective bias — the questions were posed only to women who survived, and assumed that the fertility level for women who died prior to the survey differed from that of survivors; the fertility level obtained from the survey, therefore, might be slightly biased.

Other types of errors could be:

- very young women (teenagers) did not state the birth of their child;
- unmarried women did not state the birth of their child;
- women whose child died shortly after birth did not state the birth of the child;
- women did not state the birth of a child from different father than their present husband;
- women who had multiple births (either twins or triplets), or had two births during the 12-month period before the census, only recorded one birth;
- women temporarily absent from their permanent household were counted, but their fertility status was not recorded, and/or wrongly assumed to be zero;
- older women (who already had many children) did not remember the exact date of birth of their last child;
- inclusion of adopted or foster children as own biological children; and
- errors during data recording and/or processing

4.2   CURRENT FERTILITY

The current fertility level is the most important topic in this chapter because of its direct relevance to population policies and programmes. Table 4.1 shows estimates of current fertility levels for Tuvalu as a whole, and for Funafuti and the outer islands. To reduce sampling errors and avoid any possible problems of displacement of births for a period of five to six years before the survey, a three-year TFR is computed to provide the most recent estimates of current fertility levels.[7]

The TFR is 3.9, which means that Tuvaluan women have, on average, 3.9 children by the end of their reproductive period, assuming that fertility levels remain constant at the level observed in the three-year period before the survey. The 2002 Tuvalu population census reported a TFR of 3.7 for the period 2000–2003.

The TFR in Funafuti (4.2) is considerably higher than the rate observed in the rural outer islands (3.7). The ASFR in Table 4.1 and Figure 4.1 show higher rates of childbearing in the 20–24 and 30–39 age groups in Funafuti than in the outer islands. This pattern is associated with a low median age at first marriage and a low median age at first intercourse among women and men in the outer islands compared with urban Funafuti. Also, young women are more likely to enter a marital union than men. However, caution is recommended when interpreting these fertility rates because the number of women interviewed in the 2007 TDHS is small (i.e. based on less than 1,000 women in the reproductive age group).

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[7] Numerators of the ASFR are calculated by summing the number of live births that occurred in the period 1–36 months preceding the survey (determined by the date of interview and the date of birth of the child) and classifying them by the age (in five-year age groups) of the mother at the time of birth (determined by the mother's date of birth). The denominators of the rates are the number of woman-years lived in each of the specified five-year groups during the 1–36 months preceding the survey.

Table 4.1: Current fertility

Age-specific fertility rate and total fertility rate, the general fertility rate, and the crude birth rate for the three years preceding the survey, by residence, Tuvalu 2007

| Age group | Residence | | Total |
	Funafuti	Outer islands	
15–19	31	62	42
20–24	216	170	195
25–29	226	252	240
30–34	176	150	163
35–39	152	59	96
40–44	36	37	37
45–49	10	5	7
TFR (15–49)	4.2	3.7	3.9
GFR	135	117	126
CBR	32.0	21.0	26.2

Notes: Age-specific fertility rates are per 1,000 women. Rates for the 45–49 age group may be slightly biased due to truncation. Rates are for the period 1–36 months prior to interview.
TFR = total fertility rate expressed per woman
GFR = general fertility rate expressed per 1,000 women
CBR = crude birth rate, expressed per 1,000 population

Figure 4.1: Age-specific fertility rates by residence
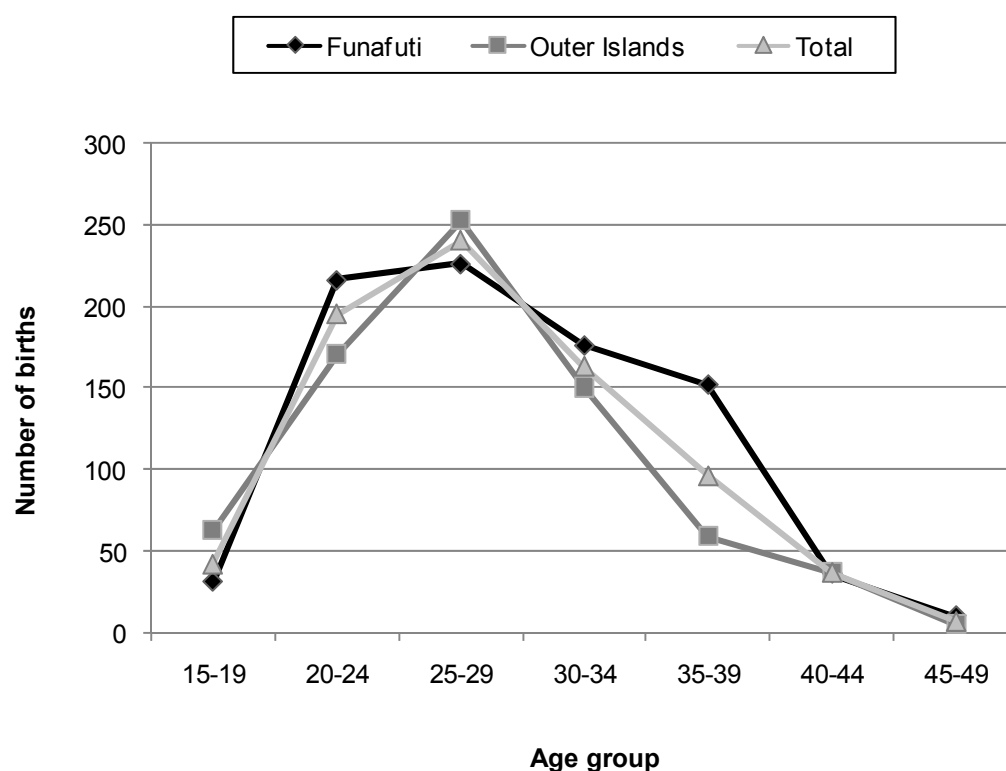
4.3   FERTILITY BY BACKGROUND CHARACTERISTICS

Fertility varies by a woman's place of residence, educational attainment, and other background characteristics. Table 4.2 shows several indicators of fertility, mainly the TFR, the mean number of births to women aged 40–49, and the percentage of currently pregnant women. The mean number of births to women aged 40–49 is an indicator of cumulative fertility, and reflects the fertility performance of older women who are nearing the end of their reproductive period. If fertility remains stable over time, two fertility measures — TFR and children ever born — tend to be very similar. Although this approach may be biased because of understatement of parity reported by older women, a comparison of completed fertility among women aged 40–49 with the TFR provides an indication of fertility change. The percentage of pregnant women provides a useful additional measure of current fertility, although it is recognised that it may not capture all pregnancies in an early stage.

The TFR is estimated to be 3.9, the percentage of women aged 15–49 who are currently pregnant is about 6%, and the mean number of children ever born to women aged 40–49 is estimated to be about 3.4.

As noted earlier, urban fertility is higher than rural fertility. However, there is a higher percentage of women aged 15–49 in the outer islands who were pregnant during the survey. There was a difference of 0.5 children in the mean number of children ever born to women aged 40–49 between women residing in urban Funafuti (3.7) and the outer islands (3.2).

Results of the 2007 TDHS show that women with a higher education have a lower fertility rate (2.8) than women with less than a secondary education (3.5). On the other hand, the percentage of women aged 15–49 who are currently pregnant increases with education level. For example, about 2.5% of women with less than a secondary education are pregnant compared with 11.6% who have more than a secondary education. Completed fertility declines with higher education levels. While women with less than a secondary education had a mean number of 3.4 children, women with more than a secondary education had only a mean number of 2.5 children.

Women in the second and third wealth quintiles showed higher fertility levels (4.3 and 5.5 children, respectively) than women in all other wealth quintiles. Women in the highest wealth quintile had the lowest number of children (2.8).

Table 4.2: Fertility by background characteristics

Total fertility rate for the three years preceding the survey, the percentage of women aged 15–49 currently pregnant, and mean number of children ever born to women aged 40–49, by background characteristics, Tuvalu 2007

Background characteristic	Total fertility rate	Percentage women aged 15–49 currently pregnant	Mean number of children ever born to women aged 40–49
Residence			
Funafuti	4.2	5.2	3.7
Outer islands	3.7	6.6	3.2
Education			
Less than secondary	3.5	2.5	3.4
Secondary	4.3	6.5	3.7
More than secondary	2.8	11.6	2.5
Wealth quintile			
Lowest	3.6	7.0	3.3
Second	4.3	6.6	3.3
Middle	5.5	7.2	3.5
Fourth	3.3	4.5	3.5
Highest	2.8	4.7	3.4
Total	3.9	6.0	3.4

Note: Total fertility rates are for the period 1–36 months prior to interview.

4.4   FERTILITY TRENDS

Age-specific fertility rates (ASFRs) obtained from the 2007 TDHS reflect recent changes in fertility trends. Fertility trends and patterns are an indication of the availability, use and effectiveness of methods of fertility control in the country such as family planning (reproductive health) programmes. Fertility decline is also an indicator of a woman's empowerment and decision-making in controlling her fertility.

Fertility trends can be established using retrospective data from a single survey such as the 2007 TDHS. Women's birth history is the main source of data in producing fertility trends. The two main components of producing fertility trends (women's age at birth with the number of children ever born) are recorded for each woman in their respective birth history. Tables 4.3 and 4.4 show trends in the ASFR by five-year periods, by mother's age at the time of the survey. In interpreting the results, it is important to keep in mind some limitations in data capturing (see list of errors shown on first page of this chapter).

Table 4.3: Trends in age-specific fertility rates

Age-specific fertility rates for the five-year period preceding the survey, by mother's age at the time of the birth, Tuvalu 2007

| Mother's age at birth	Number of years preceding survey			
	0–4	5–9	10–14	15–19
15–19	44	37	34	62
20–24	202	210	199	156
25–29	215	198	201	190
30–34	149	166	167	[140]
35–39	92	115	[150]	
40–44	36	[33]		
45–49	[6]			

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates exclude the month of interview.

Table 4.4: Calculation of period total fertility from truncated maternity-history data (see Table 4.3)

Mother's age at birth	Number of years proceeding the survey			
	0–4	5–9	10–14	15–19
	44	37	34	62
20–24	202	210	199	156
25–29	215	198	201	190
30–34	149	166	167	[140]
35–39	92	115	[150]	137
40–44	36	[33]	34	31
45–49	[6]	6	6	6
TFR	3.72	3.83	3.96	3.61

Table 4.4 shows the estimated TFR based on the truncated maternity history data displayed in Table 4.3. While fertility levels with a TFR of 3.6 seem to have been lower 15–19 years ago compared with recent estimates of 3.7, there generally seems to have been a slight decreasing trend during the 15 years prior to the survey.

Figure 4.2: Trends in age-specific fertility rates
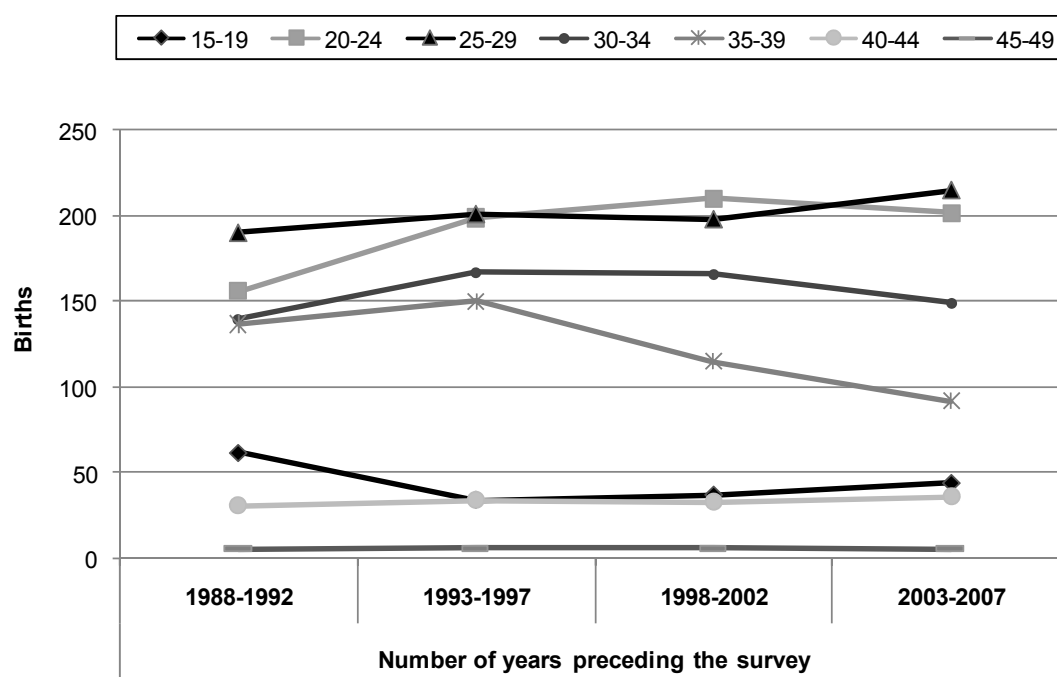
Tables 4.3 and 4.4 and Figure 4.2 show the different fertility trends for each age group during the 20 years prior the survey (1988–2007). For example, fertility levels of women aged 15–19 were highest between 1998 and 1992, decreasing to almost half of this between 1993 and 1997 before increasing again. In the 20–24 age group, fertility trends initially showed a slightly increasing trend between1992 and, then declining to its current level. However, in conjunction with the overall little change of Tuvalu's fertility level during the last 20 years, the age pattern of fertility also shows little change.

Fertility trends in Tuvalu during the past 20 years show very little improvement, implying that fertility control measure have not been successfully implemented. This is supported by the very low rate of contraception use (at about 31%) by currently married women using any method to control their fertility. Further discussion is found in the family planning chapter of this report.

4.5   CHILDREN EVER BORN AND LIVING

The number of children ever born and living is presented, both for all women and for currently married women. From the 2007 TDHS questionnaire, the total number of children ever born (lifetime fertility) has been determined by a sequence of questions designed to maximise recall. Experience suggests that, even among high fertility and illiterate populations, omissions of births can be kept to a low level, except perhaps for the oldest women in the sample.

Lifetime fertility information is useful in examining the momentum of childbearing in a population and for estimating the proportion of childless women in a population. The age-specific mean number of children ever born provides fertility level comparisons between different age groups in a population.

Table 4.5 shows the percent distribution of all women and currently married women by the number of children ever born, mean number of children ever born, and the mean number of living children, according to age group. Among all women, about one out of three do not have children. Childlessness among older women aged 40–44 and 45–49 was 9.7% and 13.2%, respectively. About 18% of all married women did not have children.

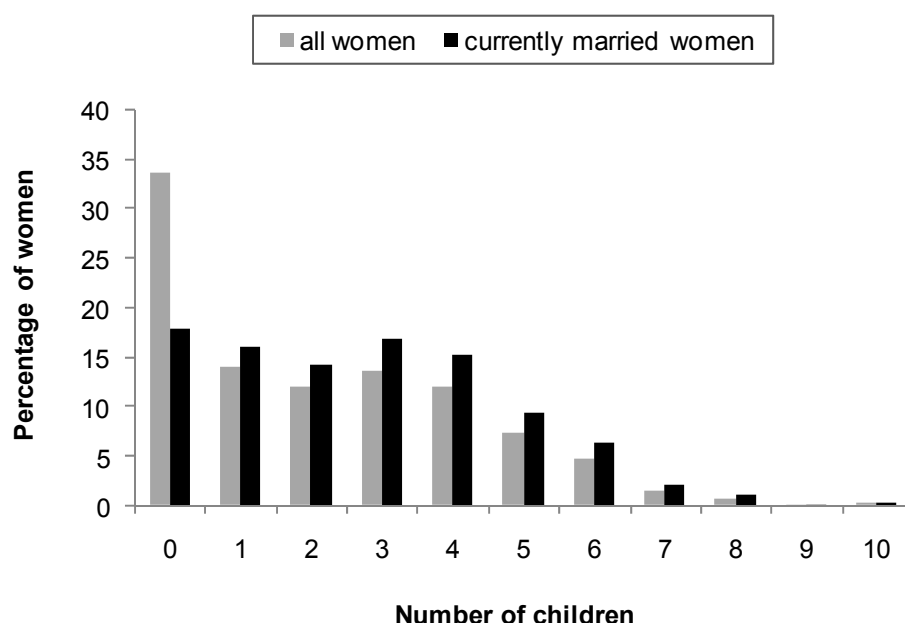**Figure 4.3: Children ever born for all women and currently married women**

Figure 4.3 clearly shows that fertility levels of married women are higher than that of unmarried women because the percentage of women with children (by number of children) is higher than that of all women. Furthermore, Table 4.4, in the column labelled 'Mean number of children ever born', shows higher numbers of children ever born to married women compared with all women for every age group. Overall, the mean number of children ever born was 2.13 children for all women and 2.73 for currently married women.

The proportion of all women as well as currently married women with children aged 15–19 is very low. This could be partly due to the high proportion of these young women still in school. Also, the law sets the minimum legal age at first marriage at 18 years.

Among currently married women, data show that after having had three children at age 35–39, the average number of children does not increase significantly for older women, indicating that women currently prefer having about three to four children.

Table 4.5: Children ever born and living

Percent distribution of all women and currently married women by number of children ever born, mean number of children ever born, and mean number of living children, according to age group, Tuvalu 2007

Age	Number of children ever born											Total	Number of women	Mean number of children ever born	Mean number of children living
	0	1	2	3	4	5	6	7	8	9	10+				
All Women															
15–19	93.2	5.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	111	0.08	0.08
20–24	58.5	26.0	8.9	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	145	0.64	0.63
25–29	28.5	20.1	20.2	20.2	8.4	2.6	0.0	0.0	0.0	0.0	0.0	100.0	134	1.68	1.61
30–34	15.5	12.4	18.0	18.6	17.5	11.5	5.9	0.6	0.0	0.0	0.0	100.0	97	2.72	2.67
35–39	14.3	11.7	11.5	11.3	20.3	15.4	12.5	2.3	0.0	0.0	0.7	100.0	94	3.27	3.14
40–44	9.7	10.1	12.0	15.3	20.3	13.3	9.6	5.0	3.8	0.0	0.8	100.0	129	3.59	3.35
45–49	13.2	8.8	12.2	21.8	19.6	11.3	7.5	2.8	1.6	0.8	0.5	100.0	140	3.22	3.02
Total	33.6	14.0	12.0	13.6	11.9	7.3	4.7	1.5	0.8	0.1	0.3	100.0	851	2.13	2.03
Currently Married Women															
15–19	38.8	46.6	14.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	9	0.76	0.76
20–24	39.1	38.0	12.1	10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	78	0.94	0.93
25–29	25.5	20.4	23.1	18.7	10.0	2.2	0.0	0.0	0.0	0.0	0.0	100.0	112	1.74	1.68
30–34	15.4	12.8	17.7	18.3	16.0	12.6	6.5	0.7	0.0	0.0	0.0	100.0	89	2.74	2.69
35–39	14.0	9.6	12.2	11.9	21.3	14.7	12.8	2.6	0.0	0.0	0.8	100.0	84	3.34	3.19
40–44	6.0	9.3	9.1	16.4	22.1	14.7	11.2	5.8	4.4	0.0	1.0	100.0	111	3.92	3.66
45–49	10.4	7.7	11.2	23.0	20.3	12.5	8.1	3.4	1.9	0.9	0.6	100.0	116	3.45	3.22
Total	17.8	16.0	14.3	16.8	15.3	9.5	6.4	2.2	1.2	0.2	0.4	100.0	598	2.73	2.60

4.6   BIRTH INTERVALS

A birth interval is defined as the length of time between two live births. The study of birth intervals is important in understanding the health status of young children. Research has shown that short birth intervals are closely associated with poor health of children, especially during infancy. Children born too close to a previous birth, especially if the interval between the births is less than two years, are at increased risk of health problems and dying at an early age. Longer birth intervals on the other hand contribute to the improved health status of both mother and child. The length of birth intervals also influences the overall level of fertility in a country because close birth intervals enable couples to have more children during their reproductive years

The study of birth intervals is done using two measures: the median birth interval and the proportion of non-first births that occur within an interval of 24 months or more after the previous birth. Table 4.6 presents the distribution of second and higher-order births in the five years preceding the survey by the number of months since the previous birth, according to background characteristics. The table also presents the median number of months since the preceding birth.

Generally, the median length of birth interval is estimated to be 31 months. The results show that about one out of three births (32.3%) occur within an interval of less than 24 months after the previous births, 27% of births occur 24–35 months after the previous birth, and 17% occur 36–47 months after the previous birth. Younger mothers have shorter birth intervals than older mothers: on average 25 months for mothers aged 20–29 compared with 48 months for mothers aged 40–49.

Birth intervals increase with birth order. In addition, birth intervals are shorter when the previous birth was a female child, a possible indication of a preference for male children in Tuvalu. Birth intervals do not vary with the survival of births.

Mothers residing in Funafuti are more likely to have short birth intervals than women from the outer islands. For instance, the birth interval for women in Funafuti is 27.6 months compared with 35.2 months for rural women.

A similar pattern is observed among when examining mothers' educational background and wealth status. Mothers with a less education have longer birth intervals than mothers with more education. Similarly, mothers in the lower wealth quintiles have longer birth intervals than mothers living in higher wealth quintiles.

Table 4.6: Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, and median number of months since preceding birth, according to background characteristics, Tuvalu 2007

Background characteristic	Months since preceding birth						Total	Number of non-first births	Median number of months since preceding birth
	7–17	18–23	24–35	36–47	48–59	60+			
Age									
15–19	*	*	*	*	*	*	*	1	13.0
20–29	25.4	21.1	30.2	14.2	6.4	2.6	100.0	130	24.7
30–39	7.2	18.5	29.0	16.5	9.4	19.3	100.0	143	33.4
40–49	1.4	8.5	12.8	26.7	15.2	35.3	100.0	46	48.2
Birth order									
2–3	18.9	18.3	27.3	14.0	7.8	13.7	100.0	161	28.3
4–6	9.8	17.2	27.9	18.5	10.7	16.0	100.0	145	33.2
7+	*	*	*	*	*	*	*	14	36.5
Sex of preceding birth									
Male	13.1	17.4	25.0	19.1	6.7	18.6	100.0	168	32.9
Female	15.3	18.8	29.4	14.6	11.5	10.3	100.0	151	28.6
Survival of preceding birth									
Living	13.6	18.5	26.9	17.1	8.8	15.1	100.0	311	30.6
Dead	*	*	*	*	*	*	*	8	30.0
Residence									
Funafuti	17.0	24.1	25.5	16.3	5.7	11.3	100.0	153	27.6
Outer islands	11.5	12.5	28.5	17.6	12.0	17.8	100.0	166	35.2
Education									
Less than secondary	7.1	10.5	22.1	23.7	9.2	27.3	100.0	90	38.7
Secondary	18.1	20.3	27.2	13.4	9.7	11.4	100.0	181	28.5
More than secondary	(12.6)	(23.8)	(36.1)	(18.0)	(5.9)	(3.6)	(100.0)	48	28.7
Wealth quintile									
Lowest	10.4	14.4	22.3	20.4	10.9	21.6	100.0	57	36.5
Second	14.4	14.6	22.6	20.1	12.5	15.8	100.0	73	35.4
Middle	13.4	11.3	36.6	16.5	9.4	12.8	100.0	84	30.8
Fourth	(13.5)	(26.3)	(27.9)	(8.3)	(2.2)	(21.9)	(100.0)	50	25.9
Highest	19.6	29.6	22.8	17.8	7.9	2.4	100.0	55	24.2
Total	14.2	18.1	27.1	17.0	9.0	14.7	100.0	320	30.6

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth. An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. Figures in parentheses are based on 25–49 cases.

4.7   AGE AT FIRST BIRTH

The onset of childbearing is an important demographic indicator. In many countries, postponing a first birth, which reflects a rise in age at marriage, has made a significant contribution to the overall fertility decline. The proportion of women who become mothers before age 20 also is a measure of the magnitude of adolescent fertility, which is often regarded as a health and social problem in many countries.

Table 4.7: Age at first birth

Percentage of women aged 15–49 who gave birth by exact ages, percentage who have never given birth, and median age at first birth, according to current age, Tuvalu 2007

Current age	Percentage who gave birth by exact age					Percentage who have never given birth	Number of women	Median age at first birth
	15	18	20	22	25			
15–19	0.0	na	na	na	na	93.2	111	a
20–24	0.0	3.2	16.6	na	na	58.5	145	a
25–29	0.0	2.3	18.2	38.5	62.5	28.5	134	23.5
30–34	1.1	6.4	19.7	42.0	71.6	15.5	97	22.5
35–39	0.0	3.2	24.8	44.1	66.1	14.3	94	22.6
40–44	0.8	4.8	16.1	39.9	64.7	9.7	129	23.0
45–49	0.0	4.7	12.4	28.9	58.0	13.2	140	24.3
20–49	0.3	4.0	17.5	na	na	24.7	740	23.5
25–49	0.4	4.2	17.7	38.0	64.0	16.4	594	23.1

na = not applicable
a = omitted because less than 50% of women had a birth before reaching the beginning of the age group

Table 4.7 presents the percentage of women aged 15–49 who gave birth by exact ages, the percentage who have never given birth, and the median age at first birth, according to current ages of women. Overall, the median age of women at first birth is 23.1. About 21.8% of women gave birth at or before age 20, and one in every four women reported that they have never given birth.

The results indicate a possible slight declining trend in the median age at first birth for women aged 15–49 in Tuvalu. For example, the median age for older women is 24.3 while the median age for younger mothers is 23.5.

4.8   MEDIAN AGE AT FIRST BIRTH

Postponing the first birth contributes to overall fertility reduction. Table 4.8 presents the median age at first birth for different cohorts and compares age at entry into parenthood for different subgroups of the population.

Table 4.8: Median age at first birth

Median age at first birth among women aged 20–49 (25–49), according to background characteristics, Tuvalu 2007

Background characteristic	Current age					Women aged
	25–29	30–34	35–39	40–44	45–49	25–49
Residence						
Funafuti	23.1	23.1	22.8	22.3	23.3	23.0
Outer islands	24.1	22.0	22.4	23.2	24.9	23.3
Education						
Less than secondary	a	22.3	21.8	23.1	24.1	23.0
Secondary	23.1	22.1	22.7	22.5	24.0	22.6
More than secondary	23.8	24.7	25.4	28.9	27.2	24.9
Wealth quintile						
Lowest	21.5	22.2	22.5	23.1	25.2	23.1
Second	22.7	21.4	20.2	22.0	25.1	22.1
Middle	23.4	22.3	24.8	23.0	23.1	23.4
Fourth	24.2	22.4	23.8	26.3	23.6	23.5
Highest	23.0	23.7	22.4	23.6	23.6	23.4
Total	23.5	22.5	22.6	23.0	24.3	23.1

a = omitted because less than 50% of women had a birth before reaching the beginning of the age group

The median age at first birth among women aged 20–49 years is shown at 23.1, meaning that half of these women have their first birth by age 23.1. The median age at first birth by urban-rural residence shows no significant differences. However, women with a higher education are likely to have a higher median age at first birth (24.9) compared with women with less education, and women from higher wealth quintile households also show a slightly higher age at fist birth than women in lower wealth quintiles.

4.9   TEENAGE PREGNANCY AND MOTHERHOOD

Teenage pregnancy is often regarded as a health concern because of its association with higher morbidity and mortality for both mother and child. Childbearing during the teenage years often has adverse social consequences, particularly on female educational attainment because women who become mothers in their teens are more likely to curtail education.

Table 4.9 presents the percentage of women aged 15–19 who have had a live birth or who are pregnant with their first child. The percentage of those who have begun childbearing is also presented. The percentage of women who have begun childbearing is the sum of the percentage that have had a live birth and the percentage who are pregnant with the first child.

An estimated 8% of women aged 15–19 had begun childbearing during the time of the survey. Nearly 7% had a live birth and 1.1% stated that they were pregnant with their first child during the time of the survey.

Table 4.9: Teenage pregnancy and motherhood

Percentage of women aged 15–19 who have had a live birth or who are pregnant with their first child, and the percentage who have begun childbearing, Tuvalu 2007

	Percentage who:			Number of women
	Have had a live birth	Are pregnant with first child	have begun childbearing	
Total	6.8	1.1	8.0	111

4.10   KEY FINDINGS

This section summarises the key findings relating to fertility levels and patterns, and other fertility factors in Tuvalu.

According to the 2007 TDHS, Tuvalu has a total fertility rate (TFR) of 3.9 children per woman, a slight increase from 3.7 children from the 2002 Housing and Population Census results.

The TFR is higher in Funafuti (4.2) than in the outer islands (3.7). The age pattern of fertility rates reflects higher rates of childbearing in the outer islands in the youngest age group and at the 25–29 age group.

Fertility by women's socioeconomic background shows that higher fertility rates are more common among women with less education and women from lower wealth quintile households. For example, the estimated TFR for women with more than a secondary education is 2.8 children per woman and is 3.5 for women with less than a secondary education.

Postponements of first births has made a large contribution to the overall fertility decline. Women who defer having a child at a later age, reflecting a rise in age at marriage. It is noted from the 2007 TDHS, that there is a slight declining trend in the median age at first birth for women aged 25–49 in Tuvalu. For example, the median age at first birth for older women aged 45–49 is 24.3 compared with 23.4 for younger women aged 25–29. The results confirm that women with a higher level of education are more likely to have their first child later than women with a lower level of education.

Measures of fertility patterns and trends are important for monitoring the effectiveness of family planning and reproductive health programmes in the country. The 2007 TDHS results show that there was no significant change in fertility level during the last 20 years, implying that fertility control programmes might have been introduced but were not effective during this period. This is supported by further findings of low contraceptive prevalence rates (31%), which is discussed further in the family planning chapter of this report.

CHAPTER 5   FAMILY PLANNING

Contraceptive use, knowledge, attitudes and behaviour are examined in this chapter. Although the focus is on women, some results from the men's survey are also discussed because men play an important role in realising reproduction goals. Data on inter-spousal communication and husband's knowledge about a wife's contraceptive use are also presented. The results presented in this chapter include contraceptive prevalence — an important indicator for program managers in assessing the extent to which family planning services are reaching users — and how effective the methods being adopted are. One important indicator resulting from this survey is the percentage of currently married women aged 15–49 who are currently using any method of contraception. Studying contraception prevalence is necessary because contraception plays an important role in determining fertility levels and trends within a country.

5.1   KNOWLEDGE OF CONTRACEPTION

One major objective of the 2007 TDHS was to assess the level of knowledge of contraceptive methods among Tuvaluan women and men. Individuals who have adequate information about available methods of contraception are better able to develop a rational approach to planning their families. Information on knowledge of contraception was collected during the survey by asking female and male respondents to name ways or methods by which a couple could delay or avoid pregnancy. If the respondent failed to mention a particular method spontaneously, the interviewer described the method and asked whether the respondent had heard of it. For this report, contraceptive methods are grouped into two types: modern methods, which include female sterilisation, male sterilisation, the Pill, intrauterine device (IUD), injectables, implants and male condom[8]; and traditional methods, which include rhythm method (periodic abstinence), withdrawal and various folk methods. The questionnaire was designed so as to record any other methods, including folk methods, named spontaneously by the respondent.

Knowledge of contraception methods is presented in Table 5.1 for all Tuvaluan women and men within the 15–49 age group who are currently married or who are sexually active and unmarried. A sexually active person is defined as someone who has been sexually active within the month prior to the survey. According to the 2007 TDHS, over nine in ten women (96%) and men (98%) have knowledge of any contraceptive methods, whether modern or traditional. The results show that there is almost universal knowledge of any method of contraception by women and men. Nearly 100% of currently married women and men say that they are aware of any method of contraception. Similarly, there is universal knowledge among unmarried and sexually active men of any method of contraception.

Table 5.1 also shows the results of respondents' knowledge of modern contraception. Levels of knowledge and distribution are the same as reported above for all methods (i.e. about the same for all currently married or unmarried women and men). Furthermore, about eight in ten women (78%) and men (82%) know about traditional methods.

The least known modern methods are lactational amenorrhea (LAM) and emergency contraception (known by less than 20% of both women and men), and the least known traditional method is folk method (known by only 11% of women and 1% of men).

To effectively use LAM as a contraceptive method, a woman should: 1) be exclusively or predominantly breastfeeding; 2) be less than 6 months postpartum; 3) be postpartum amenorrheic; and 4) use another contraceptive method when any of the previous criteria do not apply. LAM was reported to be one of the least known methods for all groups of married and unmarried women and men, with unmarried men having the least knowledge (less than 1%).

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[8] Female condom information was not collected in the survey.

Knowledge about modern and traditional contraceptive methods varies, although both women and men are likely to know more about modern contraceptive methods than traditional methods. However, knowledge varies by both women's and men's marital status. For example, unmarried men are aware of only five contraceptive methods while married women know about eight methods.

Table 5.1: Knowledge of contraceptive methods

Percentage of all respondents, currently married respondents and sexually active unmarried respondents aged 15–49 who know any contraceptive method, by specific method, Tuvalu 2007

Method	Women			Men		
	All women	Currently married women	Sexually active unmarried women[1]	All men	Currently married men	Sexually active unmarried men[1]
Any method	96.0	99.0	*	98.4	99.3	100.0
Any modern method	95.8	98.6	*	97.9	98.2	100.0
Female sterilisation	60.8	70.6	*	52.2	65.4	55.6
Male sterilisation	44.3	53.2	*	30.3	40.9	23.3
Pill	87.2	93.3	*	63.6	75.3	64.8
Intrauterine device (IUD)	68.4	80.2	*	39.7	55.0	21.8
Injectables	87.5	95.4	*	61.9	74.7	61.5
Implants	71.3	80.4	*	28.3	40.2	21.0
Male condom	88.0	91.2	*	97.2	97.0	100.0
Female condom	59.3	62.4	*	56.5	59.1	53.7
Lactational amenorrhea (LAM)	17.3	19.9	*	6.6	9.2	0.0
Emergency contraception	18.9	21.9	*	9.6	12.3	6.2
Any traditional method	77.8	89.6	*	82.0	89.8	93.5
Rhythm	72.5	84.3	*	61.3	78.6	66.2
Withdrawal	55.0	66.2	*	70.6	72.8	88.5
Folk method	10.8	12.7	*	1.1	0.5	0.0
Mean number of methods known by respondents aged 15–49	7.4	8.3	*	5.8	6.8	5.6
Number of respondents	851	598	12	428	224	57
Mean number of methods known by respondents 15+	na	na	na	5.9	6.8	5.6
Number of respondents	na	na	na	558	333	60

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed.
[1] Had last sexual intercourse within 30 days preceding the survey.
na = not applicable

5.2   KNOWLEDGE OF CONTRACEPTIVE METHODS BY BACKGROUND CHARACTERISTICS

Table 5.2 presents the level of knowledge about contraceptive methods for currently married women and men aged 15–49 who have heard of at least one contraceptive method or who have heard of at least one modern method, by their background characteristics. Modern family planning methods are the most important to examine because of their relevance to fertility planning and reproductive health. The analysis is restricted to currently married women and men in order to allow comparison between different age groups within the same category.

Table 5.2: Knowledge of contraceptive methods by background characteristics

Percentage of currently married women and currently married men aged 15–49 who have heard of at least one contraceptive method and who have heard of at least one modern method by background characteristics, Tuvalu 2007

Background characteristic	Women			Men		
	Heard of any method	Heard of any modern method[1]	Number of women	Heard of any method	Heard of any modern method[1]	Number of men
Age						
15–19	*	*	9	*	*	2
20–24	98.6	97.2	78	*	*	15
25–29	97.5	97.5	112	(100.0	100.0	40
30–34	98.8	97.6	89	*	*	24
35–39	99.2	99.2	84	(100.0)	(100.0)	35
40–44	100.0	100.0	111	(96.7)	(96.7)	50
45–49	99.5	99.5	116	100.0	100.0	58
Residence						
Funafuti	98.4	97.6	277	100.0	98.9	103
Outer islands	99.4	99.4	321	98.6	97.7	121
Education						
Less than secondary	99.4	99.4	220	100.0	98.9	104
Secondary	98.6	97.8	277	97.8	96.2	75
More than secondary	98.9	98.9	101	(100.0)	(100.0)	46
Wealth quintile						
Lowest	98.7	98.7	105	100.0	100.0	47
Second	99.5	99.5	119	100.0	97.8	50
Middle	100.0	100.0	137	100.0	100.0	56
Fourth	99.1	98.2	122	(94.9)	(94.9)	32
Highest	97.2	96.2	115	(100.0)	(97.0)	40
Total aged 15–49	99.0	98.6	598	99.3	98.2	224
50+	na	na	na	98.9	97.3	109
Total men 15+	na	na	na	99.1	97.9	333

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. Figures in parentheses are based on 25–49 cases.
[1] Female sterilisation, male sterilisation, the Pill, intrauterine device (IUD), injectables, implants, male condom, female condom, diaphragm, foam or jelly, lactational amenorrhea method (LAM), and emergency contraception.

Table 5.2 shows that knowledge by background characteristics is consistent among both women and men.

5.3   EVER USE OF CONTRACEPTION

All women and men who were interviewed in the 2007 TDHS and who were aware of at least one family planning method were asked whether they had ever used that method. Men were only asked about ever-use of male methods, such as male sterilisation, male condoms, rhythm method, and withdrawal. Table 5.3 shows the percentage of all women and currently married women who

have ever used specific methods of family planning, by age. Table 5.4 shows comparable information for men, including sexually active unmarried men.

About 64% of currently married women have ever used a contraceptive method, 56% have used a modern method, and 31% have used a traditional method. The modern methods most commonly used by married women are injectables (41%) and the Pill (29%). Ever-use of other methods does not exceed 10%. The most common traditional methods used by married women are rhythm (23%) and withdrawal (11%).

Among married men, the majority (89%) have used some sort of contraceptive method, 50% have used a modern method, while about 76% have used a traditional method in their lifetime (Table 5.4). Half of married men (50%) aged 15–49 have used male condoms, and an even higher proportion (63%) have used the rhythm method. Less than half of married men (46%) have used withdrawal. These figures are substantially higher than the proportion of married women who have used these methods.

Ever-use of any method is highest among sexually active unmarried men, 90% of whom have used some method at some time. Sexually active unmarried men are much more likely to have used male condoms (75%) and withdrawal (71%).

Table 5.3: Ever use of contraception — Women

Percentage of all women, currently married women, and sexually active unmarried women aged 15–49 who have ever used any contraceptive method by method, according to age, Tuvalu 2007

| Age | Any method | Any modern method | Modern methods | | | | | | | | | | Any traditional method | Traditional methods | | | Number of women |
			Female sterilisation	Male sterilisation	Pill	IUD	Injectables	Implants	Male condom	Female condom	LAM	Emergency contraception		Rhythm	Withdrawal	Folk method	
							All Women										
15–19	5.3	4.7	0.0	0.0	1.0	0.0	1.6	0.0	3.1	0.0	0.0	0.0	3.1	0.6	2.0	0.6	111
20–24	31.3	22.0	0.0	0.0	7.7	0.0	13.7	0.7	9.4	1.4	0.7	0.0	19.4	13.8	4.8	3.7	145
25–29	55.6	46.3	0.0	0.0	18.9	3.2	34.0	3.7	7.2	0.8	0.0	0.0	24.2	16.0	12.4	3.4	134
30–34	62.9	52.6	2.2	0.0	27.6	2.2	38.2	14.7	9.3	0.0	6.1	0.0	34.7	23.2	14.1	10.8	97
35–39	65.1	61.7	12.6	0.0	31.1	10.0	45.7	4.6	5.3	1.2	3.4	1.2	25.2	19.0	8.5	8.2	94
40–44	68.7	65.1	16.1	0.0	33.7	13.6	48.4	5.3	8.4	2.1	3.0	0.0	34.4	28.6	10.3	10.2	129
45–49	65.9	61.1	13.9	0.8	36.6	19.4	47.2	4.0	9.0	1.2	0.8	0.8	30.2	20.2	8.5	8.2	140
Total	50.4	44.4	6.4	0.1	22.1	7.1	32.4	4.4	7.6	1.0	1.8	0.3	24.5	17.4	8.5	6.3	851
							Currently Married Women										
15–19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9
20–24	48.8	33.0	0.0	0.0	12.1	0.0	20.3	0.0	13.2	2.7	1.4	0.0	31.9	24.2	7.5	4.2	78
25–29	59.5	51.2	0.0	0.0	22.0	3.8	38.1	4.4	5.8	1.0	0.0	0.0	24.1	16.3	11.9	2.1	112
30–34	62.8	51.6	1.2	0.0	28.7	2.4	37.8	16.1	10.2	0.0	6.7	0.0	36.0	23.4	15.4	11.8	89
35–39	66.6	62.8	14.2	0.0	29.6	9.9	46.0	2.6	5.9	1.3	3.8	1.3	26.8	20.6	8.0	9.2	84
40–44	75.3	71.6	17.8	0.0	35.9	15.9	53.1	6.2	9.8	2.5	3.5	0.0	39.0	32.9	12.1	11.3	111
45–49	68.4	64.4	15.7	0.0	39.6	20.7	49.7	4.8	10.0	1.5	0.9	0.9	31.7	22.6	9.3	6.9	116
Total	63.8	56.4	8.5	0.0	28.6	9.4	41.4	5.7	9.1	1.5	2.5	0.4	31.2	23.0	10.7	7.5	598

LAM = lactational amenorrhea method
Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. The panel for 'Sexually Active Unmarried Women' has been deleted due to small number of cases (N=12).

Table 5.4: Ever use of contraception — Men

Percentage of all men, currently married men, and sexually active unmarried men aged 15–49 who have ever used any contraceptive method by method, according to age, Tuvalu 2007

Age	Any method	Any modern method	Modern method		Any traditional method	Traditional method		Number of men
			Male sterilisation	Male condom		Rhythm	Withdrawal	
All Men								
15–19	53.5	39.3	0.0	39.3	41.0	16.1	39.7	91
20–24	76.3	67.7	0.0	67.7	49.2	24.9	46.7	74
25–29	86.0	65.8	1.9	65.8	73.0	55.8	52.6	62
30–34	(79.0)	(50.4)	(0.0)	(50.4)	(66.5)	(51.3)	(48.0)	38
35–39	(91.5)	(55.4)	(0.0)	(55.4)	(82.0)	(70.5)	(47.6)	41
40–44	86.0	49.5	0.0	49.5	75.3	59.9	45.6	59
45–49	85.7	33.6	0.0	33.6	75.4	61.4	39.9	63
Total 15–49	77.3	51.2	0.3	51.2	63.1	44.4	45.1	428
50+	69.9	29.0	3.0	26.5	65.8	50.6	35.4	130
Total men 15+	75.6	46.0	0.9	45.4	63.7	45.9	42.8	558
Currently Married Men								
15–19	*	*	*	*	*	*	*	2
20–24	*	*	*	*	*	*	*	15
25–29	(91.6)	(64.8)	(2.9)	(64.8)	(77.3)	(64.0)	(49.8)	40
30–34	*	*	*	*	*	*	*	24
35–39	(93.4)	(55.0)	(0.0)	(55.0)	(85.4)	(77.2)	(45.2)	35
40–44	(86.1)	(46.0)	(0.0)	(46.0)	(77.1)	(61.6)	(45.9)	50
45–49	85.6	34.5	0.0	34.5	76.5	64.1	40.6	58
Total aged 15–49	88.6	50.4	0.5	50.4	76.4	62.5	46.0	224
50+	71.9	27.4	2.1	25.8	70.2	53.7	38.6	109
Total men 15+	83.1	42.9	1.0	42.4	74.4	59.6	43.6	333
Sexually Active Unmarried Men[1]								
Total men 15+	90.3	74.7	0.0	74.7	73.3	39.1	70.5	60

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. Figures in parentheses are based on 25–49 cases.
[1] Men who had sexual intercourse within 30 days preceding the survey.

5.4   CURRENT USE OF CONTRACEPTION BY AGE

All women and currently married women were asked about the current use of family planning methods to delay or avoid pregnancy. The level of current use is the most widely used and valuable measure of a family planning programme's success. Furthermore, it can be used to estimate the reduction in fertility attributable to contraception. The results are presented in Figure 5.1 and Table 5.5.

As seen in Table 5.5, the contraceptive prevalence rate (i.e. the percentage of currently married women aged 15–49 who are using any method of family planning) is 31%. About 22% of married women use a modern method, while 8% use a traditional method.

By far the most commonly used modern methods among currently married women are female sterilisation (used by 9% of women) and injectables (used by 8% of women). The next most commonly used methods are the Pill and implants (each used by 2% of women). The IUD and condoms are the least used methods by currently married women.

Use of any modern contraceptive method generally rises with age (Fig. 5.1), for both all women and currently married women. The proportion of currently married women using any type of modern method rises from about 21% of married women aged 20–24 to almost 40% of married women aged 40–44, declining to 28% for women aged 45–49. The most popular methods used by women in their 20s and early 30s are injectables and the Pill. Older women are increasingly likely to be sterilised.

**Figure 5.1: Percent distribution of current use of contraception by age
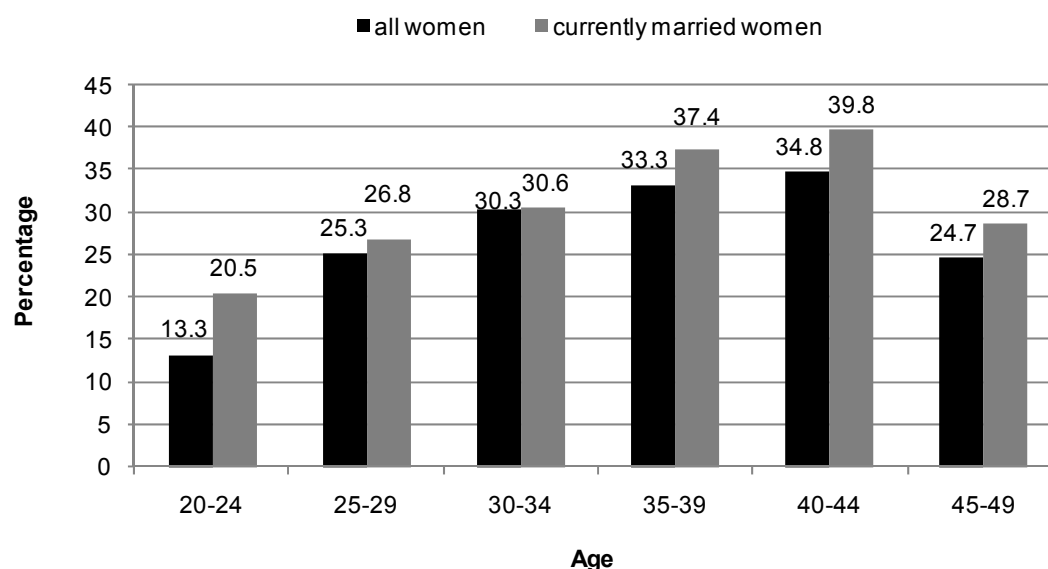for all women and currently married women**

65

Table 5.5: Current use of contraception by age

Percent distribution of all women, currently married women, and sexually active unmarried women aged 15–49 by contraceptive method currently used, according to age, Tuvalu 2007

Age	Any method	Any modern method	Modern method						Any traditional method	Traditional method			Not currently using	Total	Number of women
			Female sterilisation	Pill	IUD	Injectables	Implants	Male condom		Rhythm	Withdrawal	Folk method			
All Women															
15–19	2.7	2.7	0.0	0.0	0.0	1.6	0.0	1.1	0.0	0.0	0.0	0.0	97.3	100.0	111
20–24	13.3	7.7	0.0	0.0	0.0	4.7	0.7	2.2	5.6	4.8	0.0	0.7	86.7	100.0	145
25–29	25.3	18.8	0.0	3.8	0.8	12.1	2.1	0.0	6.5	4.9	0.8	0.8	74.7	100.0	134
30–34	30.3	20.0	2.2	1.7	1.1	10.9	4.0	0.0	10.3	7.5	1.1	1.8	69.7	100.0	97
35–39	33.3	27.7	12.6	3.7	3.5	7.9	0.0	0.0	5.5	3.0	0.0	2.6	66.7	100.0	94
40–44	34.8	26.7	16.1	2.3	0.8	5.0	1.6	0.8	8.2	4.9	3.3	0.0	65.2	100.0	129
45–49	24.7	19.7	13.9	0.0	0.8	5.0	0.0	0.0	5.0	3.7	0.8	0.5	75.3	100.0	140
Total	**23.1**	**17.3**	**6.4**	**1.6**	**0.9**	**6.6**	**1.2**	**0.7**	**5.8**	**4.1**	**0.9**	**0.8**	**76.9**	**100.0**	**851**
Currently Married Women															
15–19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9
20–24	20.5	10.2	0.0	0.0	0.0	7.4	0.0	2.8	10.4	9.0	0.0	1.4	79.5	100.0	78
25–29	26.8	20.0	0.0	4.6	1.0	11.9	2.5	0.0	6.8	5.9	0.9	0.0	73.2	100.0	112
30–34	30.6	19.4	1.2	1.9	1.2	10.6	4.4	0.0	11.3	8.1	1.2	1.9	69.4	100.0	89
35–39	37.4	31.2	14.2	4.2	3.9	8.9	0.0	0.0	6.2	3.4	0.0	2.9	62.6	100.0	84
40–44	39.8	30.2	17.8	2.7	1.0	5.8	1.9	1.0	9.5	5.7	3.8	0.0	60.2	100.0	111
45–49	28.7	22.7	15.7	0.0	0.9	6.0	0.0	0.0	6.0	4.5	0.9	0.6	71.3	100.0	116
Total	**30.5**	**22.4**	**8.5**	**2.2**	**1.3**	**8.4**	**1.5**	**0.5**	**8.1**	**5.9**	**1.2**	**1.0**	**69.5**	**100.0**	**598**

LAM = lactational amenorrhea method
Note: If more than one method is used, only the most effective method is considered in this tabulation. An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. The panel for 'Sexually Active Unmarried Women' has been deleted due to small number of cases (N=12).

5.5   CURRENT USE OF CONTRACEPTION BY BACKGROUND CHARACTERISTICS

Table 5.6 allows a comparison of levels of current contraceptive use among major population groups in Tuvalu, and permits an examination of the mix of contraceptive methods used by various population subgroups. The results assist in identifying major population groups who have poor access to family planning services.

As shown in Table 5.6 and Figure 5.2, some married women are more likely to use contraception than others. Married women with less education are more likely to use modern contraception than those with a secondary and higher education. Use of any modern methods is the same for women in Funafuti and the outer islands. Use of any modern methods increases with increasing number of children for currently married women aged 15–49. There is not much difference in the current use of contraception among currently married women in different wealth quintiles.

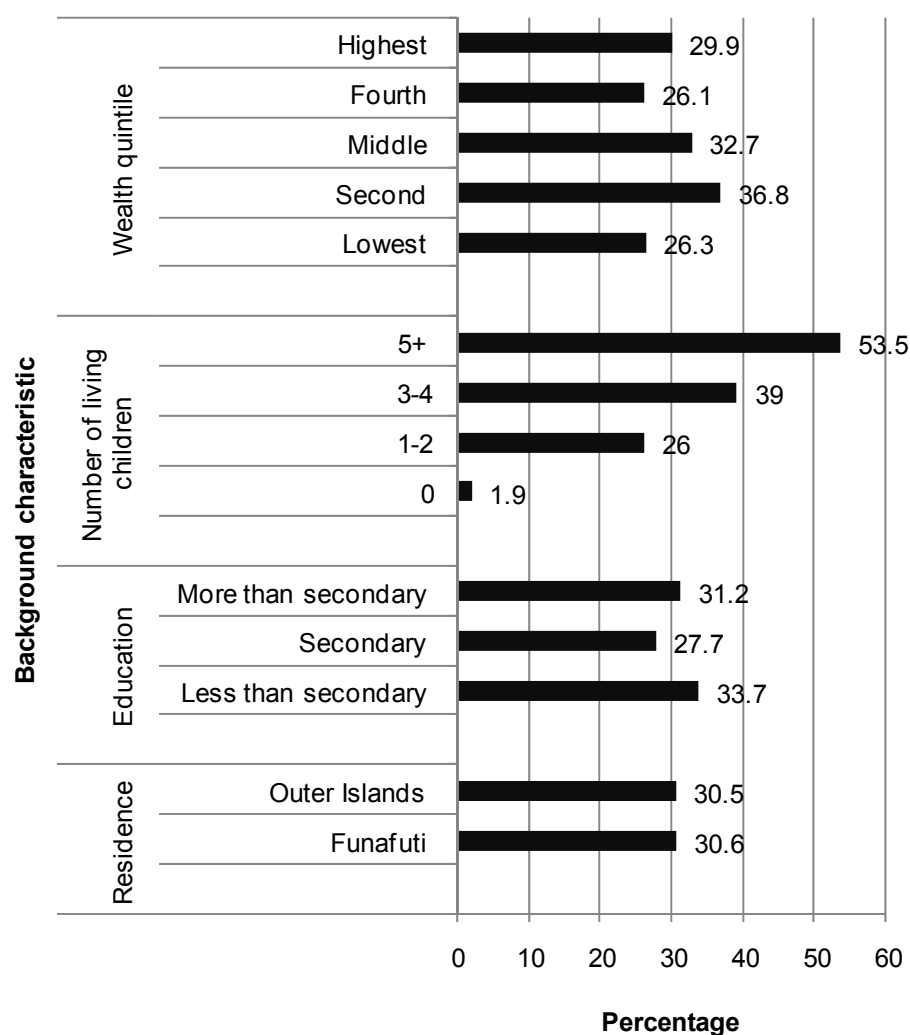**Figure 5.2: Current use of contraception by background characteristics**

Table 5.6: Current use of contraception by background characteristics

Percent distribution of currently married women aged 15–49 by contraceptive method currently used, according to background characteristics, Tuvalu 2007

Background characteristic	Any method	Any modern method	Modern method						Any traditional method	Traditional method			Not currently using	Total	Number of women
			Female sterilisation	Pill	IUD	Injectables	Implants	Male condom		Rhythm	Withdrawal	Folk method			
Residence															
Funafuti	30.6	23.5	9.8	1.6	2.7	7.5	0.8	1.2	7.1	5.1	0.8	1.2	69.4	100.0	277
Outer islands	30.5	21.4	7.4	2.8	0.0	9.2	2.1	0.0	9.0	6.6	1.6	0.8	69.5	100.0	321
Education															
Less than secondary	33.7	27.0	14.1	2.5	1.0	7.9	1.4	0.0	6.7	4.8	0.5	1.4	66.3	100.0	220
Secondary	27.7	18.9	3.4	2.9	0.4	10.0	1.4	0.8	8.9	6.3	1.9	0.6	72.3	100.0	277
More than secondary	31.2	22.2	10.2	0.0	4.3	4.9	1.8	1.1	9.0	6.9	1.0	1.1	68.8	100.0	101
Number of living children															
0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	0.0	0.0	98.1	100.0	108
1–2	26.0	16.2	5.3	0.7	1.1	6.9	1.1	1.1	9.8	8.4	0.5	0.9	74.0	100.0	191
3–4	39.0	30.5	12.1	2.1	1.6	12.4	2.3	0.0	8.4	5.3	1.6	1.5	61.0	100.0	199
5+	53.5	42.6	16.7	8.0	2.2	12.4	2.1	1.1	10.9	6.6	3.2	1.1	46.5	100.0	99
Wealth quintile															
Lowest	26.3	19.7	6.3	2.5	0.0	9.8	1.0	0.0	6.6	4.7	0.0	1.9	73.7	100.0	105
Second	36.8	27.7	9.8	4.8	0.0	9.3	2.9	0.9	9.1	5.6	2.6	0.9	63.2	100.0	119
Middle	32.7	22.4	9.7	2.4	0.8	8.7	0.8	0.0	10.3	7.2	2.3	0.8	67.3	100.0	137
Fourth	26.1	18.4	8.6	1.5	0.0	6.7	1.7	0.0	7.7	5.4	0.9	1.4	73.9	100.0	122
Highest	29.9	23.7	7.6	0.0	5.7	7.5	0.9	1.9	6.2	6.2	0.0	0.0	70.1	100.0	115
Total	30.5	22.4	8.5	2.2	1.3	8.4	1.5	0.5	8.1	5.9	1.2	1.0	69.5	100.0	598

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = lactational amenorrhea method
IUD = intrauterine device

5.6   NUMBER OF CHILDREN AT FIRST USE OF CONTRACEPTION

All women aged 15–49 who use any type of contraception were asked about the number of children they had at their first use of contraception. The question is important for determining the beginning of a woman's contraceptive history and is useful for distinguishing whether women whose first use a method was for spacing or for limiting fertility. The results are shown in Table 5.7 and Figure 5.3.

Almost half (49.6%) of all women aged 15–49 reported that they never used any method at all. More than one quarter (27.5%) of women first used a contraceptive method by the time they had one child, while only 4% first used any method after having three children (Fig. 5.3).

The results also indicate that Tuvaluan women adopt family planning methods when they have fewer children (i.e. one or two children). Almost half (47%) of all younger women aged 20–29 first used a contraceptive method when they already had one child. This obviously indicates that these young women are using family planning for birth spacing. However, 40% of older women aged 45–49 first used a contraceptive method when they already had one child implying that these older women are adopting family planning for birth limiting.

Table 5.7: Number of children at first use of contraception

Percent distribution of women aged 15–49 by number of living children at the time of first use of contraception, according to current age, Tuvalu 2007

| Current age | Never used | Number of living children at time of first use of contraception | | | | | Total | Number of women |
		0	1	2	3	4+		
15–19	94.7	3.1	2.2	0	0	0	100	111
20–24	68.7	9.9	15.8	5	0.5	0	100	145
25–29	44.4	8.9	31.7	10.6	2.8	1.6	100	134
30–34	37.1	6.1	31	12.5	9.8	3.5	100	97
35–39	34.9	4.1	33.6	14.2	5.7	7.5	100	94
40–44	31.3	5.4	37.3	12.6	8.9	4.5	100	129
45–49	34.1	9.7	40	10	1.2	5	100	140
Total	49.6	7.1	27.5	9.1	3.8	3	100	851

Figure 5.3: Percent distribution of women aged 15–49 by number of living children at the time of first use of contraception

Number of living children at time of first use of contraception
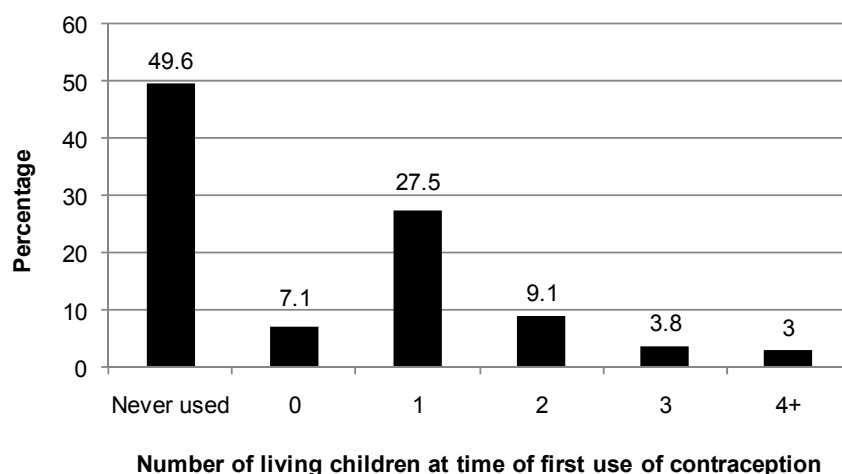
5.7 KNOWLEDGE OF FERTILE PERIOD

Successful use of the rhythm method depends in part on understanding when, during the ovulatory cycle, a woman is most likely to conceive. In the 2007 TDHS, women were asked, 'From one menstrual period to the next, are there certain days when a woman is more likely to get pregnant if she has sexual relations?' If the answer was 'yes', women were further asked whether that time was just before her period begins, during her period, right after her period has ended, or halfway between two periods. Table 5.8 provides the results for all women, as well as for women who report that they are currently using the rhythm method and those who are not.

Among nonusers of the rhythm method, less than one in five (17%) understand that a woman is most likely to conceive halfway between her menstrual periods. A little more than half (57%) wrongly believe that the fertile period is right after a woman's period has ended, while 15% of women say they do not know when the fertile period falls, and only 7% believe that there is no specific fertile time.

Users of the rhythm method are more likely than to know that the fertile time in a woman's menstrual cycle is halfway between periods (30%) than nonusers of the rhythm method (17%). Rhythm method users are also more likely to wrongly believe that the fertile period is right after a woman's period has ended.

Table 5.8: Knowledge of fertile period

Percent distribution of women aged 15–49 by knowledge of the fertile period during the ovulatory cycle, according to current use of the rhythm method, Tuvalu 2007

Perceived fertile period	Users of rhythm method	Nonusers of rhythm method	All women
Just before her menstrual period begins	(0.0)	1.8	1.7
During her menstrual period	(0.0)	2.1	2.0
Right after her menstrual period has ended	(67.0)	57.0	57.4
Halfway between two menstrual periods	(29.9)	16.7	17.2
Other	(0.0)	0.3	0.3
No specific time	(0.0)	7.1	6.8
Don't know	(3.1)	14.7	14.2
Missing	(0.0)	0.3	0.3
Total	100.0	100.0	100.0
Number of women	35	816	851

Note: Figures in parentheses are based on 25–49 cases.

5.8   TIMING OF STERILISATION

All sterilised women aged 15–49 were asked how old they were when they were sterilised. This question was asked in order to determine whether age at time of sterilisation is declining. Table 5.9 presents the percent distribution of sterilised women aged 15–49 by age at time of sterilisation and median age at sterilisation, according to the number of years since the operation.

The authors of this report emphasise caution when interpreting these results because they are based on a very small number of cases. More than half of women (57%) in the 25–34 age group have been sterilised, 30% in the 35–39 age group have been sterilised, while very few women in the older age groups have been sterilised. The findings also show that few young women aged less than 25 at the time of the operation are sterilised. The median age at sterilisation is increasing, from 29 in the past 10 years to 36 in less than 2 years since the operation took place.

Table 5.9: Timing of sterilisation

Percent distribution of sterilized women aged 15–49 by age at the time of sterilisation and median age at sterilisation, according to the number of years since the operation, Tuvalu 2007

Years since operation	Age at time of sterilisation						Total	Number of women	Median age[1]
	<25	25–29	30–34	35–39	40–44	45–49			
<2	0.0	0.0	23.9	62.2	0.0	13.9	100.0	5	35.8
2–3	0.0	27.5	0.0	0.0	45.0	27.5	100.0	4	a
4–5	0.0	0.0	15.7	84.3	0.0	0.0	100.0	4	37.1
6–7	0.0	0.0	22.2	55.3	22.5	0.0	100.0	8	38.1
8–9	0.0	27.7	36.1	36.1	0.0	0.0	100.0	15	32.3
10+	7.3	52.0	37.4	3.2	0.0	0.0	100.0	19	29.3
Total	2.5	27.9	29.5	30.4	6.5	3.2	100.0	54	a

a = not calculated due to censoring
[1] Median age at sterilisation is calculated only for women sterilised before age 40 at less than 40 years of age to avoid problems of censoring: women over 40 are excluded as they are likely to be exposed to menopause.

5.9   SOURCE OF MODERN CONTRACEPTIVE METHODS

Information on where women obtain their contraceptives is useful for family planning programme managers and implementers. Women who reported using a modern contraceptive method at the time of the 2007 TDHS were asked where they obtained the method the last time they acquired it. Because some women may not know in which category the source they use falls (e.g. government or private health centre or clinic), interviewers were instructed to note the full name of the source or facility. Supervisors and field editors were told to verify that the name and source type were consistent, asking informants in the enumeration areas for the names of local family planning outlets if necessary. This practice was designed to improve the accuracy of source reporting.

Table 5.10 presents the major sources of modern contraceptive methods for all users aged 15–49 by different methods used. Generally, the results show that Tuvaluan women are more likely to obtain their contraceptive supply from a public sector source than a private sector source. Over 8 in 10 users (86%) obtain their contraceptives from public sector sources, while less than 3% of users obtain their modern contraceptives from private sources. The same proportion of users (10%) report that they obtain their modern methods from other sources and from overseas.

Table 5.10: Source of modern contraception methods

Percent distribution of users of modern contraceptive methods aged 15–49 by most recent source of method, according to method, Tuvalu 2007

Source	Female sterilisation	Injectables	Total[1]
Public sector	75.3	96.9	86.0
Government hospital	75.3	61.2	68.5
Government health centre	0.0	35.7	17.5
Private medical clinic	0.0	0.0	2.2
Private hospital, clinic	0.0	0.0	2.2
Other source	24.7	3.1	10.3
Friend/relative	0.0	1.9	0.7
Overseas	24.7	1.2	9.6
Other	0.0	0.0	1.5
Total	100.0	100.0	100.0
Number of women	54	56	147

[1] Total includes other modern methods but excludes lactational amenorrhea method (LAM).

5.10   FUTURE USE OF CONTRACEPTION

An important indicator of the changing demand for family planning services is the extent to which non-users of contraception will use family planning in the future, which provides information for forecasting future needs for contraceptive methods and services. The future intention of women to use contraceptive methods also indicates the level of their future birth control, which is related to fertility level. Thus, in the survey, women who were not currently using a method of contraception were asked about their intention to use family planning in the future. The results are presented in Table 5.11 and Figure 5.4.
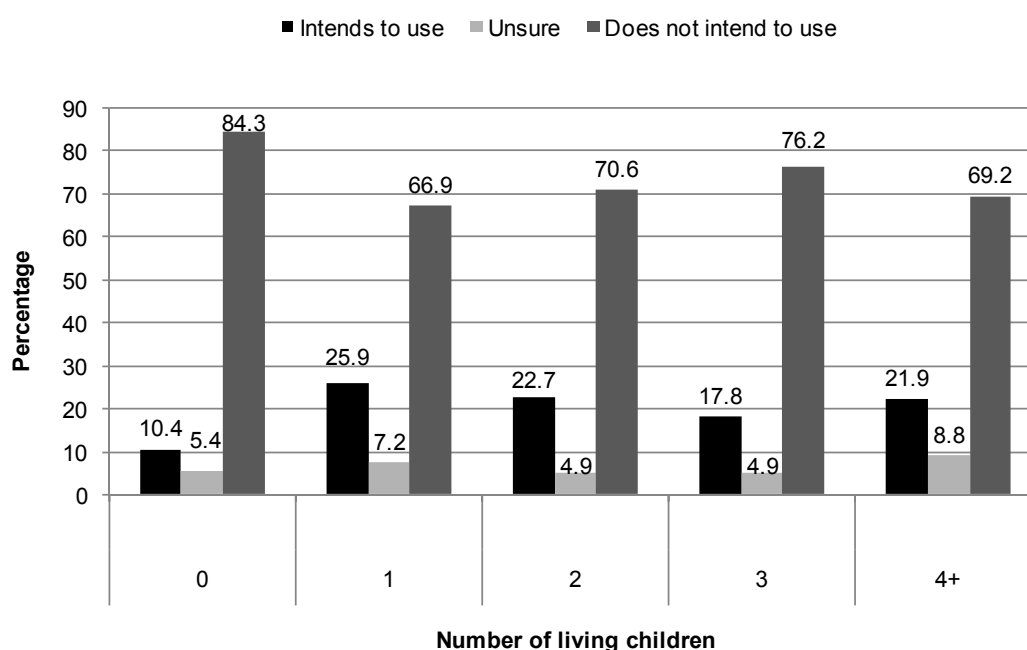
Table 5.11: Future use of contraception

Percent distribution of currently married women aged 15–49 who are not using a contraceptive method by intention to use in the future, according to number of living children, Tuvalu 2007

Intention to use in the future	Number of living children[1]					Total
	0	1	2	3	4+	
Intends to use	10.4	25.9	22.7	17.8	21.9	19.5
Unsure	5.4	7.2	4.9	4.9	8.8	6.5
Does not intend to use	84.3	66.9	70.6	76.2	69.2	73.6
Missing	0.0	0.0	1.7	1.1	0.0	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	96	79	63	65	113	416

[1] Includes current pregnancy.

**Figure 5.4: Percentage of currently married women aged 15–49
who are not using a contraceptive method by intention to use in future,
according to the number of living children**

About three out of four women (74%) in this category state that they do not intend to use any contraceptive methods in the future, while one in five women (20%) intend to use some method. Figure 5.4 shows no clear relationship between the future use of contraception with the number of living children the women are having during the time of the survey. For example, almost one in seven women with four or more living children report that they do not intend to use any contraception in the future. The proportion of non-users who intend to use any method in the future by the number of living children maintain a constant trend with the increasing the number of living children.

## 5.11   REASONS FOR NOT INTENDING TO USE CONTRACEPTION IN THE FUTURE

Figure 5.5 presents information about the reasons women do not intend to use contraception in the future, as reported by currently married non-users. These reasons are categorised into four major groups: fertility-related reasons, opposition to using any methods, lack of knowledge of any methods, and method-related reasons. Method-related (46%), fertility-related (40.6%), and opposition to use (9%) were the most often stated reasons. The most common reasons for women not intending to use contraception are a fear of side-effects (37%), and a desire to have as many children as possible (27%).

Table 5.12: Reason for not intending to use contraception in the future

Percent distribution of currently married women aged 15–49 who are not using contraception and who do not intend to use it in the future by main reason for not intending to use, Tuvalu 2007

Reason	Percent distribution
Fertility-related reasons	
Infrequent sex/no sex	1.3
Menopausal/had hysterectomy	5.5
Subfecund/ infecund	7.1
Wants as many children as possible	26.7
Opposition to use	
Respondent opposed	4.6
Husband/partner opposed	3.4
Religious prohibition	0.9
Lack of knowledge	
Knows no method	0.2
Method-related reasons	
Health concerns	3.3
Fear of side-effects	36.9
Inconvenient to use	0.2
Interferes with body's normal process	5.6
Other	2.1
Don't know	2.2
Total	100.0
Number of women	306

Figure 5.5: Reason for not intending to use contraception in the future
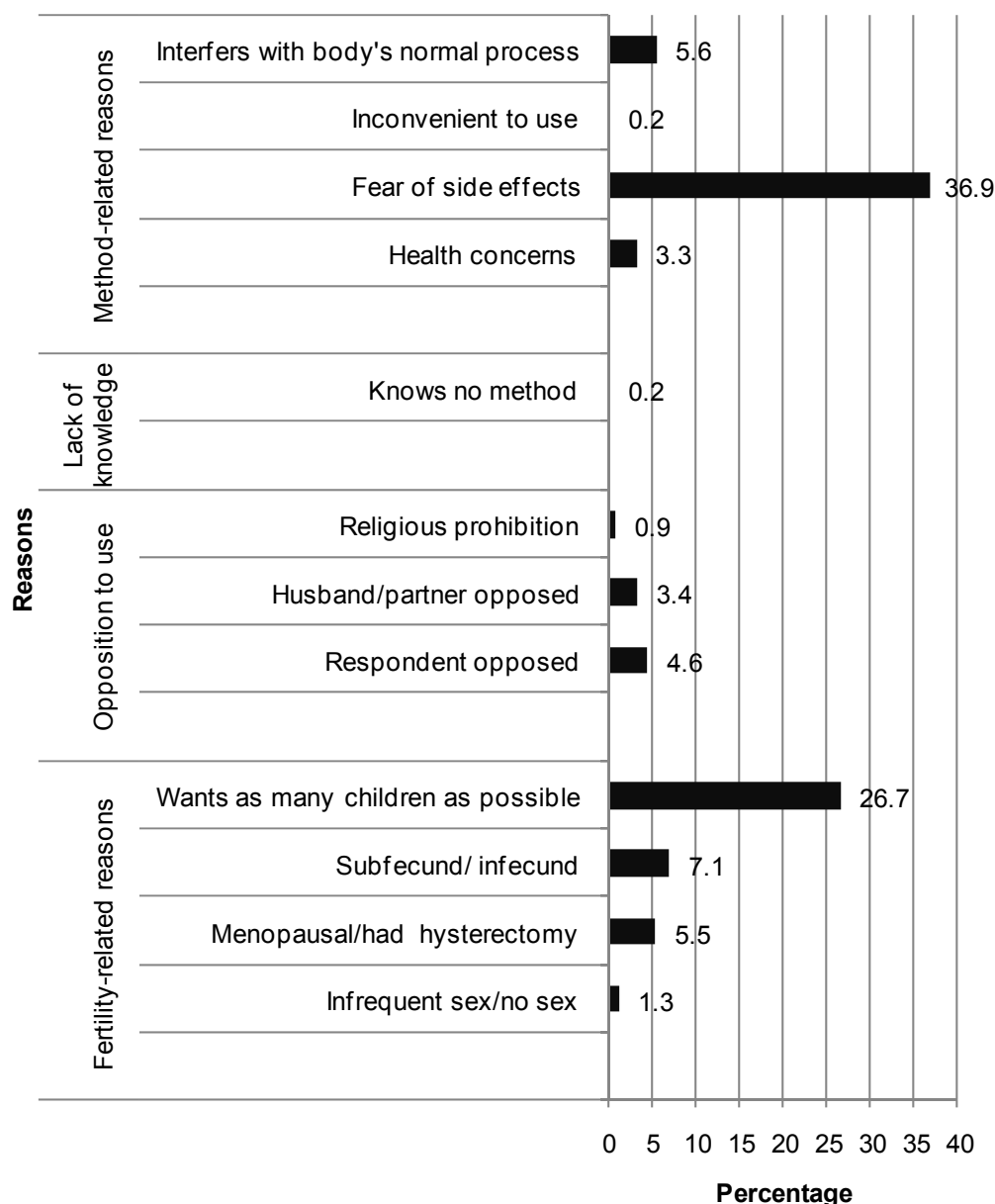

5.12   PREFERRED METHOD OF CONTRACEPTION FOR FUTURE USE

The analysis of preferred method of future contraception focuses on currently married women who are non-users but who intend to use contraception in the future. Women in this category were asked about the preferred contraceptive methods they would use in the future. Figure 5.6 shows the results.

Injectables are the most popular method that this group of women tends to use in the future, accounting for about 40% of women. The second most likely methods to be used in the future are periodic abstinence and the Pill, accounting for 17% and 16%, respectively. About 9% of women prefer implants while both condoms and female sterilisation are the least preferred methods women mentioned. About 2% of women are still unsure about which method to use in the future. These women are not included in the chart.

Figure 5.6: Preferred method of contraception for future use
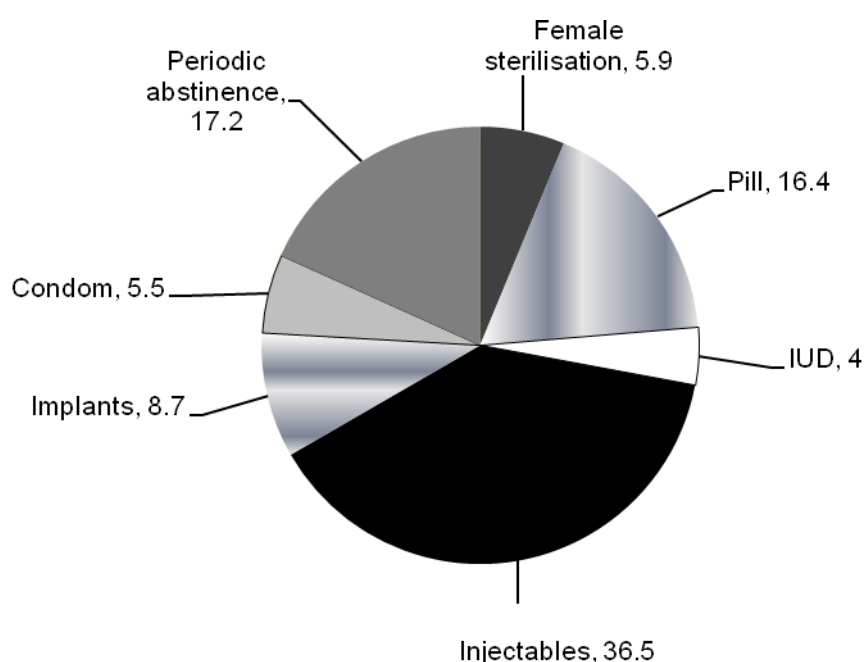
5.13 EXPOSURE TO FAMILY PLANNING MESSAGES

Information on public exposure to a particular type of media allows policy-makers to use the most effective media for targeting specific population groups. To assess the effectiveness of such media in disseminating family planning information, all respondents in the 2007 TDHS were asked whether they had heard or read about family planning in the previous few months on the radio or television, in a newspaper or magazine, or in a video or film.

Table 5.13 and Figure 5.7 show that a majority of respondents have been exposed to a family planning message through the media. Radio is by far the most common media source, with 92% of women and 84% of men saying that they had heard a message on the radio. The next most common forms of media for family planning messages are newspapers and magazines, cited by 33% of women and 32% of men. About 11% of women and 18% of men said that they had seen a family planning message on television in the previous few months before the survey. Overall, women are considerably more likely to have seen a family planning message than men.

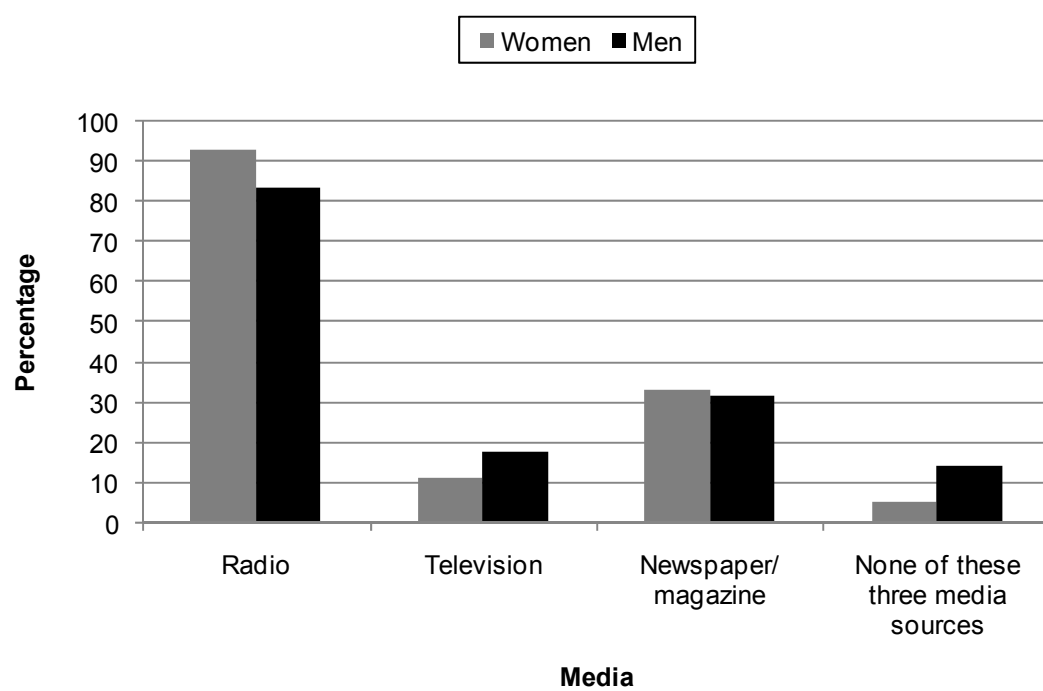**Figure 5.7: Exposure to family planning messages**

Table 5.13: Exposure to family planning messages

Percentage of women and men aged 15–49 who heard or saw a family planning message on the radio or television or in a newspaper in the past few months, according to background characteristics, Tuvalu 2007

Background characteristic	Women					Men				
	Radio	Television	Newspaper/ magazine	None of these three media sources	Number of women	Radio	Television	Newspaper/ magazine	None of these three media sources	Number of men
Age										
15–19	86.2	11.3	34.8	10.9	111	80.5	6.5	13.4	18.2	91
20–24	91.4	15.3	31.9	5.5	145	79.9	21.8	27.4	20.1	74
25–29	94.2	14.2	43.3	4.2	134	81.1	22.2	37.3	17.1	62
30–34	97.1	11.9	42.8	2.9	97	(88.1)	(21.6)	(41.4)	(8.8)	38
35–39	92.0	6.7	28.3	6.8	94	(86.3)	(8.5)	(36.3)	(13.7)	41
40–44	94.2	10.4	25.2	4.9	129	92.7	22.5	43.4	7.3	59
45–49	95.2	7.6	29.0	2.4	140	81.6	25.8	39.2	9.4	63
Residence										
Funafuti	89.5	18.9	42.5	7.1	414	85.4	24.0	41.1	12.0	225
Outer islands	96.2	4.0	24.8	3.5	437	81.5	11.4	21.6	16.9	203
Education										
Less than secondary	94.3	5.9	18.1	5.0	282	83.9	15.6	25.6	13.7	141
Secondary	92.5	11.2	33.8	5.1	437	83.1	14.6	28.3	15.8	223
More than secondary	91.6	23.1	64.8	6.3	132	84.2	35.2	58.8	10.2	63
Wealth quintile										
Lowest	95.1	2.4	17.8	4.5	152	79.7	11.7	16.3	18.1	75
Second	91.7	6.7	21.7	5.9	179	78.4	8.6	24.6	20.4	94
Middle	96.8	6.8	34.1	2.5	169	90.6	19.0	28.3	7.6	89
Fourth	90.7	11.3	42.7	6.4	173	85.7	21.1	44.0	11.1	74
Highest	90.8	27.7	48.9	6.7	177	83.6	28.8	45.3	14.0	96
Total aged 15–49	92.9	11.3	33.4	5.3	851	83.6	18.0	31.9	14.3	428
50+	na	na	na	na	na	88.3	20.1	27.0	10.4	130
Total men 15+	na	na	na	na	na	84.7	18.5	30.7	13.4	558

na = not applicable

Note: Figures in parentheses are based on 25–49 cases.

5.14 CONTACT OF NON-USERS WITH FAMILY PLANNING PROVIDERS

In the 2007 TDHS, women who were not using any family planning method were asked whether they had been visited by a health worker who talked with them about family planning in the 12 months preceding the survey. This information is especially useful for determining whether non-users of family planning are being reached by family planning outreach programmes. Non-users were also asked if they had visited a health facility in the preceding 12 months for any reason other than family planning, and if so, whether any health worker at the facility spoke to them about family planning. These questions can assess the level of so-called 'missed opportunities' to inform women about contraception.

The results shown in Table 5.14 indicate that only 8% of non-users are being reached by fieldworkers to discuss family planning issues. Moreover, only 15% of non-users visited a health facility and were spoken to about family planning. Altogether, 80% of non-users were not contacted about family planning through either of these two mechanisms in the 12 months preceding the survey.

Differences in contact with non-users by background characteristics show some variations. For example, young women aged 15–24 and women in the 40–49 age groups are less likely than other women to be reached by field workers to discuss family planning issues. Women In Funafuti who do not use any family planning method, as well as women with less education and those in the fourth and highest wealth quintiles are the most likely people to miss out on family planning information.

Table 5.14: Contact of non-users with family planning providers

Among women aged 15–49 who are not using contraception, the percentage who, during the last 12 months, were visited by a fieldworker who discussed family planning; the percentage who visited a health facility and discussed family planning; the percentage who visited a health facility but did not discuss family planning; and the percentage who neither discussed family planning with a fieldworker nor at a health facility, by background characteristics, Tuvalu 2007

Background characteristic	Percentage of women who were visited by fieldworker who discussed family planning	Percentage of women who visited a health facility in the 12 months preceding the survey and who:		Percentage of women who neither discussed family planning with fieldworker nor at a health facility	Number of women
		Discussed family planning	Did not discuss family planning		
Age					
15–19	7.2	3.0	31.9	90.8	108
20–24	2.4	14.2	41.6	84.7	126
25–29	17.4	23.2	53.5	70.8	100
30–34	9.9	26.2	46.2	70.3	68
35–39	11.6	23.2	41.6	71.3	63
40–44	11.5	12.0	42.5	82.3	84
45–49	5.4	10.0	52.8	85.7	105
Residence					
Funafuti	6.4	14.5	41.6	81.8	322
Outer islands	11.1	15.2	46.8	79.6	333
Education					
Less than secondary	7.9	14.6	43.5	82.1	204
Secondary	8.6	15.2	41.2	80.1	350
More than secondary	11.3	14.4	56.4	79.7	100
Wealth quintile					
Lowest	11.3	14.3	46.9	79.6	122
Second	10.1	14.9	38.9	80.6	127
Middle	10.4	22.5	41.9	73.6	124
Fourth	4.1	10.3	48.2	86.5	140
Highest	8.6	13.2	44.7	82.1	141
Total	8.8	14.9	44.2	80.7	654

5.15 HUSBAND'S OR PARTNER'S KNOWLEDGE OF WOMEN'S USE OF CONTRACEPTION

Use of family planning methods is facilitated when couples discuss and agree on the issue. To determine the extent to which women use contraception without telling their partners, the 2007 TDHS asked married women whether their husband or partner knew that they were using a family planning method.

Table 5.15 shows that the majority of women (85%) say that their husband knows they are using contraception. Differences by background characteristics are not large, with nearly universal knowledge by husbands/partners.

Table 5.15: Husband/partner's knowledge of women's use of contraception

Among currently married women aged 15–49 who are using a contraceptive method, the percent distribution by whether women report that their husband/partner knows about their use, according to background characteristics, Tuvalu 2007

Background characteristic	Knows[1]	Does not know	Unsure whether knows/missing	Total	Number of women
Residence					
Funafuti	85.9	7.7	6.4	100.0	85
Outer islands	84.7	13.1	2.1	100.0	98
Education					
Less than secondary	83.9	13.3	2.8	100.0	74
Secondary	84.8	12.3	2.8	100.0	77
More than secondary	(89.7)	(0.0)	(10.3)	(100.0)	32
Wealth quintile					
Lowest	(83.7)	(16.3)	(0.0)	(100.0)	28
Second	(83.8)	(11.4)	(4.8)	(100.0)	44
Middle	(95.2)	(4.8)	(0.0)	(100.0)	45
Fourth	(76.0)	(17.2)	(6.8)	(100.0)	32
Highest	(84.1)	(6.4)	(9.5)	(100.0)	34
Total	(85.3)	(10.6)	(4.1)	(100.0)	183

Note: Figures in parentheses are based on 25–49 cases.
[1]Includes women who report use of male sterilisation, male condoms or withdrawal.

5.16 KEY RESULTS

Contraception prevalence is one determinant of fertility level in any population. The study of contraception prevalence is most important because of the role of contraception in determining fertility levels and trends. The following are key results from this chapter.

- Knowledge of contraceptive methods is almost universal for both women and men in Tuvalu.
- This knowledge has not translated into current use because the results show that slightly more than 2 in 10 woman and 3 in 10 currently married woman use any method of contraception.
- Out of the 8 in 10 woman and 7 in 10 currently married woman who do not use any contraception, about 2 in 10 intend to use it in the future, while 1 in 10 are not sure, and the remainder (6 out of 10 women) do not intend to use any in the future.
- There a two main reasons why these women are not currently using any method of contraception: a fear of side effects (stated by about 3 in 10 women) and a desire to have as many children as possible (stated by about 3 in 10 women).

CHAPTER 6   OTHER PROXIMATE DETERMINANTS OF FERTILITY

This chapter addresses the principal factors, other than contraception, which affect a woman's risk of becoming pregnant. These factors include marriage, sexual activity, postpartum amenorrhoea, abstinence from sexual activity, and onset of menopause. Direct measures of the beginning of exposure to pregnancy and the level of exposure are also examined in this chapter.

6.1   CURRENT MARITAL STATUS

Marriage is a primary indication of the regular exposure of women to the risk of pregnancy and is, therefore, important for understanding fertility. Populations in which age at first marriage is low tend to have early childbearing and high fertility.

Table 6.1 presents the percent distribution of women and men by marital status, according to age. The term 'married' refers to legal or formal marriage, while 'living together' designates an informal union in which a man and a woman live together, even if a formal civil or religious ceremony has not occurred. In later tables that do not list 'living together' as a separate category, these women are included in the 'currently married' group. Respondents who are currently married, widowed, divorced, or separated are referred to as 'ever married'.

Table 6.1: Current marital status

Percent distribution of women and men aged 15–49 by current marital status, according to age, Tuvalu 2007

Age	Marital status						Percentage of respondents currently in union	Number of respondents
	Never married	Married	Divorced	Separated	Widowed	Total		
Women								
15–19	89.0	8.0	1.5	1.5	0.0	100.0	8.0	111
20–24	40.4	53.9	3.2	2.1	0.4	100.0	53.9	145
25–29	11.6	83.7	2.6	1.6	0.5	100.0	83.7	134
30–34	2.4	91.6	2.5	0.0	3.5	100.0	91.6	97
35–39	3.6	88.9	2.0	1.4	4.1	100.0	88.9	94
40–44	5.5	85.6	3.0	2.2	3.8	100.0	85.6	129
45–49	4.7	82.6	4.5	1.2	7.0	100.0	82.6	140
Total 15–49	22.6	70.3	2.9	1.5	2.7	100.0	70.3	851
Men								
15–19	96.7	2.0	0.0	1.3	0.0	100.0	2.0	91
20–24	79.2	20.0	0.0	0.7	0.0	100.0	20.0	74
25–29	33.7	64.5	0.0	1.9	0.0	100.0	64.5	62
30–34	(36.6)	(63.4)	(0.0)	(0.0)	(0.0)	(100.0)	(63.4)	38
35–39	(8.5)	(85.6)	(5.9)	(0.0)	(0.0)	(100.0)	(85.6)	41
40–44	10.8	86.1	3.1	0.0	0.0	100.0	86.1	59
45–49	4.6	89.6	2.7	0.0	1.1	100.0	91.7	63
Total 15–49	45.3	52.2	1.4	0.7	0.2	100.0	52.5	428
50+	7.1	82.9	2.7	0.0	6.8	100.0	83.4	130
Total men 15+	36.4	59.3	1.7	0.5	1.7	100.0	59.7	558

Note: Figures in parentheses are based on 25–49 cases.

In total, a higher proportion of women are married (70.3%) than men (52.2%) (Table 6.1 and Fig. 6.1). Current marital status displays a similar trend for both sexes according to age groups (15–49). Only a small percentage of women and men are found to be married at a younger age and the percentage increases as they get older. Women are more likely than men to be in a divorced,

separated and widowed status (Fig. 6.1). The higher percentage of widowed women indicates early death of Tuvaluan men.

Figure 6.1: Percent distribution of women and men aged 15–49 by current marital status
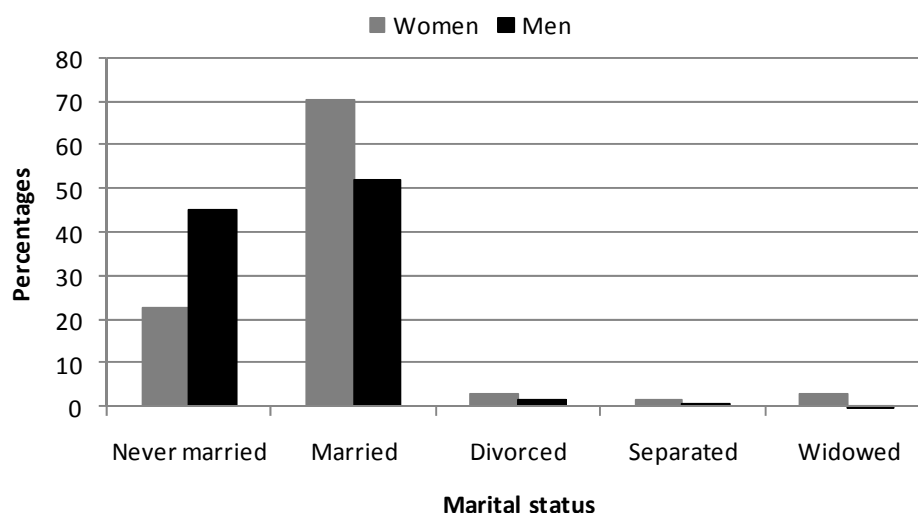
6.1.1 Age at first marriage

Marriage is generally associated with fertility because it is correlated with an exposed risk of pregnancy. The duration of exposure to the risk of pregnancy depends primarily on the age at which women first marry. On average, women who marry early have their first child early and give birth to more children, thereby contributing to higher fertility rates. Table 6.2 shows the percentage of women and men aged 15–49 who were first married by specific exact ages and median age at first marriage, according to current age.

When looking at the proportion of never married, these figures depict a different pattern for both sexes at age at first marriage. Overall, 89% of women aged 15–19 have yet not married, while more than 50% of women aged 20–29 are reported to be married. The proportion of women never married declines sharply with increasing age. For example, only 2% of women in the 30–34 age group have never married.

On the other hand, the majority of men (97%) did not marry at younger ages (i.e. 15–19), and 34% of men aged 30–34 were still not married. The results show that men marry at older ages than women, which is expressed in a median age at first marriage of 27.2 for men and 22.1 for women.

Looking at the exact age at first marriage for women, one in ten women aged 25–49 were married at the exact age of 18, and almost half of these women were married at exact age 22, and about three in four women married by age 25 (Table 6.2). Data imply that younger women tend to marry later, as reflected in the increasing proportion of younger women married at exact ages 22 and 25.

Table 6.2: Age at first marriage

Percentage of women and men aged 15–49 who were first married by specific exact ages and median age at first marriage, according to current age, Tuvalu 2007

Current age	Percentage first married by exact age:					Percentage never married	Number	Median age at first marriage
	15	18	20	22	25			
Women								
15–19	0.0	Na	na	na	na	89.0	111	(12.7)
20–24	0.0	9.9	34.0	na	na	40.4	145	a
25–29	0.0	9.6	30.4	55.4	84.8	11.6	134	21.5
30–34	0.0	16.9	31.3	55.9	81.6	2.4	97	21.6
35–39	0.0	14.9	34.3	49.8	68.4	3.6	94	22.0
40–44	0.8	11.4	24.1	46.9	65.7	5.5	129	22.3
45–49	0.0	5.8	19.3	38.0	66.2	4.7	140	23.0
20–49	0.1	10.9	28.5	na	na	12.7	740	22.1
25–49	0.2	11.1	27.2	48.7	73.2	5.9	594	22.1
Men								
15–19	0.0	Na	na	na	na	96.7	91	(14.0)
20–24	0.0	0.0	6.6	na	na	79.2	74	(10.7)
25–29	0.0	0.0	4.6	30.0	51.3	33.7	62	24.8
30–34	0.0	3.1	15.0	19.8	36.3	36.6	38	26.7
35–39	0.0	2.8	8.5	14.2	37.0	8.5	41	28.5
40–44	0.0	0.0	7.1	19.4	40.7	10.8	59	26.0
45–49	0.0	0.0	1.9	16.1	55.8	4.6	63	23.9
20–49	0.0	0.7	6.7	19.5	40.2	31.5	337	27.2
25–49	0.0	0.9	6.7	20.3	45.6	18.1	263	25.8

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner. Figures in parentheses are based on 25–49 cases.
na = not applicable due to censoring
 a = omitted because less than 50% of women married for the first time before reaching the beginning of the age group

6.1.2 Median age at first marriage — Women

Table 6.3 shows the median age at first marriage among women aged 25–49 by five-year age groups, according to background characteristics. The median age at first marriage among women aged 25–49 is 22.1.In terms of residence, in total, women from the outer islands have a lower median age of 21.8 at first marriage than women from Funafuti at 22.4. Women with a lower level of education tend to have a lower median age at first marriage than women with a higher level of education. The age at first marriage for women in the lowest and second lowest wealth quintiles are lower than for women in higher wealth quintiles.

Table 6.3: Median age at first marriage — Women

Median age at first marriage among women by five-year age groups, and aged 25–49, according to background characteristics, Tuvalu 2007

Background characteristic	Current age					Women aged 25–49
	25–29	30–34	35–39	40–44	45–49	25–49
Residence						
Funafuti	21.8	22.2	23.5	22.8	23.0	22.4
Outer islands	21.1	21.1	20.8	22.2	23.1	21.8
Education						
Less than secondary	17.9	21.1	21.2	22.7	22.7	22.1
Secondary	21.0	21.3	23.0	21.7	24.3	21.7
More than secondary	22.7	22.9	24.1	28.7	24.1	23.2
Wealth quintile						
Lowest	19.8	21.3	21.4	22.6	24.4	22.0
Second	21.9	20.1	18.8	20.5	24.1	20.6
Middle	21.1	20.9	25.3	22.2	22.5	22.2
Fourth	22.1	21.5	21.9	24.2	23.5	22.4
Highest	21.8	23.0	21.7	28.1	22.6	22.5
Total	21.5	21.6	22.0	22.3	23.0	22.1

Note: The age at first marriage is defined as the age at which the respondent began living with her first spouse/partner.

6.2 AGE AT FIRST SEXUAL INTERCOURSE

While age at first marriage is often used as a proxy for first exposure to intercourse, the two events do not necessarily occur at the same time. Women and men sometimes engage in sexual relations before marriage. In the 2007 TDHS, women and men were asked how old they were when they first had sexual intercourse.

Table 6.4 shows the percentage of women and men aged 15–49 who had their first experience of sexual intercourse by specific exact ages, the percentage who never had intercourse, and the median age at first intercourse, according to current age. The data show a notably different trend for the two sexes. Unlike the pattern in age at first marriage, which showed that women married at a younger age than men, males engage in sexual activities about four years earlier than females. The median age at first sexual intercourse was 17.8 for men and 21.7 for women.

These data confirm that men engage in sexual intercourse earlier than women and that they have sexual intercourse long before marriage. For instance, about 20% of men in the 20–49 age group had their first sexual intercourse by exact age 15. Because of their earlier exposure to sexual behaviours, men are more likely to be exposed to sexually transmitted diseases including HIV and AIDS.

Table 6.4: Age at first sexual intercourse

Percentage of women and men aged 15–49 who had first sexual intercourse by specific exact ages, percentage who never had intercourse, and median age at first intercourse, according to current age, Tuvalu 2007

Current age	Percentage who had first sexual intercourse by exact age:					Percentage who never had intercourse	Number of respondents	Median age at first intercourse
	15	18	20	22	25			
Women								
15–19	2.1	na	na	na	na	84.8	111	(12.3)
20–24	1.4	12.9	37.2	na	na	32.8	145	a
25–29	0.0	9.6	32.8	59.4	80.3	6.4	134	21.4
30–34	1.1	18.3	34.2	63.7	84.5	0.7	97	21.1
35–39	0.7	14.9	35.2	49.6	71.6	1.2	94	22.0
40–44	0.8	10.9	24.9	53.7	69.9	3.7	129	21.6
45–49	0.0	6.8	22.4	47.2	68.9	3.0	140	22.3
20–49	0.7	11.8	30.8	53.2	70.4	9.1	740	21.7
25–49	0.5	11.5	29.3	na	na	3.3	594	a
15–24	1.7	na	na	na	na	55.4	257	(6.4)
Men								
15–19	18.9	na	na	na	na	39.9	91	a
20–24	9.6	45.7	67.3	na	na	19.9	74	18.4
25–29	21.1	48.3	68.1	86.0	91.6	1.9	62	18.1
30–34	27.1	65.5	73.3	85.4	89.7	3.1	38	17.1
35–39	20.7	54.6	71.8	78.7	81.3	0.0	41	17.5
40–44	20.5	54.9	73.1	77.0	83.8	0.0	59	17.5
45–49	23.1	52.1	67.7	78.8	88.2	0.0	63	17.6
20–49	19.5	52.3	69.8	80.1	85.3	5.0	337	17.8
25–49	22.2	54.1	70.4	na	na	0.9	263	17.5
15–24	14.7	na	na	na	na	31.0	164	18.0
20+	20.5	51.7	68.4	na	na	3.8	467	17.8
25+	22.5	52.9	68.6	77.5	82.5	0.8	394	17.7

 Note: Figures in parentheses are based on 25–49 cases.
na = not applicable due to censoring
 a = omitted because less than 50% of the respondents had intercourse for the first time before reaching the beginning of the age group

6.3 MEDIAN AGE AT FIRST INTERCOURSE — WOMEN AND MEN

Differentials in age at first sex by background characteristics are shown in Tables 6.5 (for women) and 6.6 (for men).

Table 6.5: Median age at first intercourse — Women

Median age at first sexual intercourse among women by five-year age groups, age and aged 25–49, according to background characteristics, Tuvalu 2007

Background characteristic	Current age					Women aged
	25–29	30–34	35–39	40–44	45–49	25–49
Residence						
Funafuti	21.7	21.4	22.6	21.2	22.2	21.8
Outer islands	20.8	20.8	21.2	21.8	22.4	21.5
Education						
Less than secondary	17.9	21.0	20.9	21.4	22.1	21.5
Secondary	20.7	20.9	22.7	21.2	22.0	21.1
More than secondary	22.7	22.4	23.6	27.7	24.1	23.1
Wealth quintile						
Lowest	19.5	20.2	21.7	23.6	23.0	21.8
Second	20.2	19.4	18.8	20.4	21.5	20.2
Middle	21.1	22.2	24.2	22.5	21.4	22.1
Fourth	20.9	20.9	21.8	23.1	22.8	21.7
Highest	22.3	21.8	21.7	22.4	22.4	22.1
Total	21.4	21.1	22.0	21.6	22.3	21.6

When we look at the median age at first intercourse for women by residence, women living in the outer islands have a lower median age compared with women on Funafuti. The data by educational background show a lower median age at first intercourse for those who did not attend secondary school and those who reached secondary school compared than those with a higher education. Data by wealth quintile does not show a clear correlation between age at first intercourse and level of wealth.

The data show that the age at first intercourse for men from the outer islands is lower (17.1) than for men from Funafuti (18.1).

Data by educational characteristics show that those who have reached a secondary or higher education have a lower median age at first intercourse than those who with a lower level of education.

The 2007 TDHS data do not show a clear correlation between wealth status and age at first intercourse for men.

Table 6.6: Median age at first intercourse — Men

Median age at first sexual intercourse among men by five-year age groups, aged 20–54[59] and age25–54[59], according to background characteristics, Tuvalu 2007

Background characteristic	Current age							Men aged 20+	Men aged 25+
	20–24	25–29	30–34	35–39	40–44	45–49	50+		
Residence									
Funafuti	18.5	18.8	17.0	18.3	18.0	16.8	18.4	18.1	18.1
Outer islands	18.2	15.6	17.4	16.8	17.4	19.3	17.3	17.4	17.1
Education									
Less than secondary	13.7	17.0	18.3	18.0	18.2	18.4	18.0	18.1	18.1
Secondary	18.4	18.3	15.7	16.0	16.7	17.2	18.3	17.8	17.2
More than secondary	19.0	15.6	17.6	18.5	12.5	17.3	17.7	17.2	17.2
Wealth quintile									
Lowest	18.3	16.9	18.0	17.4	18.8	22.0	17.9	18.2	18.1
Second	18.2	18.0	14.0	18.2	18.3	16.6	18.2	18.0	17.8
Middle	18.2	17.5	16.7	20.6	17.4	16.8	17.0	17.4	17.2
Fourth	17.5	20.1	17.4	16.5	15.7	15.6	18.0	17.5	17.5
Highest	19.6	16.8	15.8	16.5	14.5	19.7	19.8	18.5	17.8
Total	18.4	18.1	17.1	17.5	17.5	17.6	18.0	17.8	17.7

6.4 RECENT SEXUAL ACTIVITY

In the absence of contraception, the probability of pregnancy is related to the frequency of intercourse. Thus, information on sexual activity can be used to refine measures of exposure to pregnancy. Table 6.7 and 6.8 show the percent distribution of women and men aged 15–49 by timing of last sexual intercourse, according to background characteristics.

6.4.1 Recent sexual activity — Women

Overall, 48% of women reported to be sexually active in the four weeks prior to the survey. More than half of all women, except for those in the 15–24 age group, had sexual intercourse in the four weeks prior to the survey. About 67% of women living in a marital type relationship (i.e. married or living together) were sexually active in the four weeks prior to the survey. In contrast, only 4% of never-married women had intercourse in the previous four weeks.

Prolonged marital duration seems to have a slightly positive effect on the proportion of women who recently had sexual intercourse, and the proportion of women who had recent intercourse living in the outer islands (56.5%) was much higher than in Funafuti (39.6%).

Furthermore, women with less than a secondary level education were more likely to have had recent intercourse than women with a higher level of education, while women living in a higher wealth quintile household were less likely to have had recent intercourse than those in lower wealth quintile households (Fig. 6.7).

Table 6.7: Recent sexual activity — Women

Percent distribution of women aged 15–49 by timing of last sexual intercourse, according to background characteristics, Tuvalu 2007

| Background characteristic | Timing of last sexual intercourse | | | | Never had sexual intercourse | Total | Number of women |
	Within the last four weeks	Within one year[1]	One or more years	Missing			
Age							
15–19	9.1	1.6	3.5	1.0	84.8	100.0	111
20–24	33.4	21.9	10.4	1.5	32.8	100.0	145
25–29	62.2	21.9	8.7	0.8	6.4	100.0	134
30–34	58.3	28.9	9.2	2.9	0.7	100.0	97
35–39	53.2	29.8	12.4	3.4	1.2	100.0	94
40–44	63.6	18.9	13.8	0.0	3.7	100.0	129
45–49	57.2	16.8	20.5	2.5	3.0	100.0	140
Marital status							
Never married	4.0	4.9	7.3	0.0	83.8	100.0	193
Married or living together	66.7	25.3	5.9	2.1	0.0	100.0	598
Divorced/separated/widowed	6.8	10.4	81.1	1.8	0.0	100.0	60
Marital duration[2]							
0–4 years	63.8	27.5	4.7	4.0	0.0	100.0	125
5–9 years	64.1	29.6	6.4	0.0	0.0	100.0	104
10–14 years	64.7	22.5	9.3	3.5	0.0	100.0	91
15–19 years	65.1	27.3	6.8	0.7	0.0	100.0	84
20–24 years	74.2	21.4	1.9	2.5	0.0	100.0	88
25+ years	(61.2)	(27.8)	(10.9)	(0.0)	(0.0)	(100.0)	40
Married more than once	74.7	19.3	3.3	2.7	0.0	100.0	65
Residence							
Funafuti	39.6	23.9	11.8	2.4	22.3	100.0	414
Outer islands	56.5	15.6	11.2	0.9	15.8	100.0	437
Education							
Less than secondary	58.5	16.0	15.3	1.5	8.8	100.0	282
Secondary	42.4	20.1	11.0	0.7	25.9	100.0	437
More than secondary	46.2	25.9	5.2	4.9	17.8	100.0	132

Table 6.7 (continued)

Background characteristic	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of women
	Within the last four weeks	Within one year[1]	One or more years	Missing			
Wealth quintile							
Lowest	53.7	13.5	15.7	1.6	15.5	100.0	152
Second	53.6	13.8	13.2	0.3	19.0	100.0	179
Middle	57.7	21.9	8.3	0.0	12.1	100.0	169
Fourth	43.8	24.8	9.0	1.8	20.6	100.0	173
Highest	33.7	23.5	11.6	4.3	26.9	100.0	177
Total	**48.3**	**19.6**	**11.5**	**1.6**	**19.0**	**100.0**	**851**

Note: Figures in parentheses are based on 25–49 cases.
[1] Excludes women who had sexual intercourse within the four weeks prior to the survey.
[2] Excludes women who are not currently married

Figure 6.2: Percentage distribution of women aged 15-49 by timing of last sexual intercourse by education, Tuvalu 2007
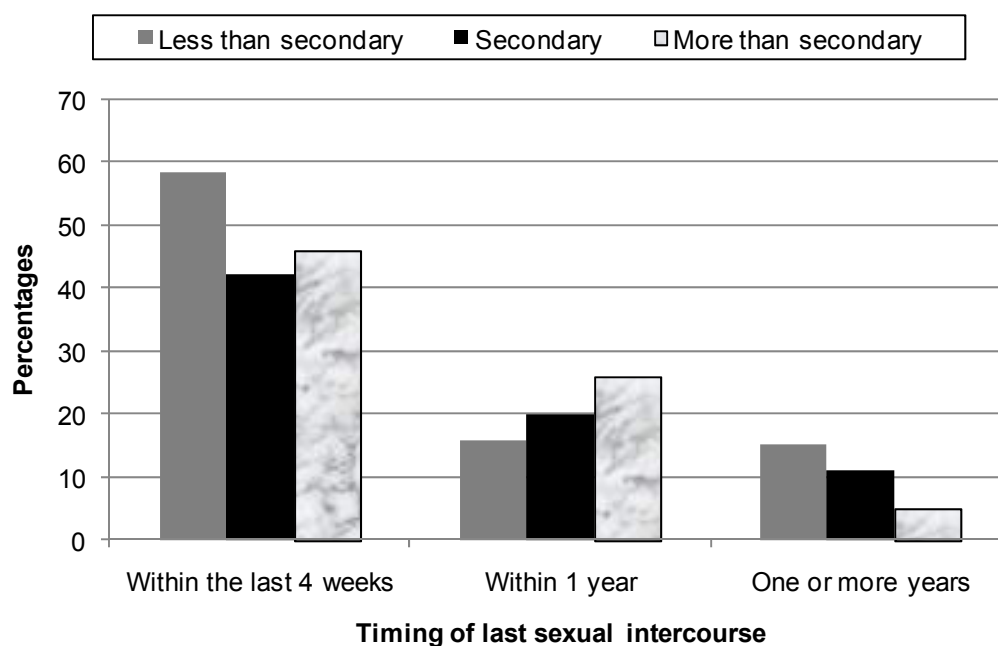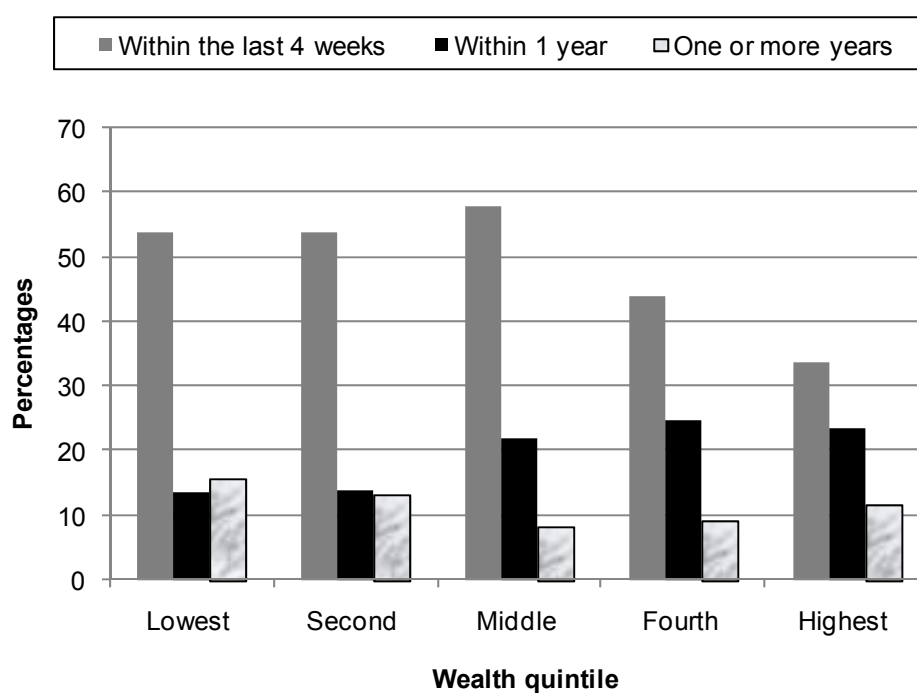

Figure 6.3: Percentage of women aged 15–49 by timing of last sexual intercourse by wealth, Tuvalu 2007

6.4.2   Recent sexual activity — Men

Recent sexual activity for men is similar to that of women. About 50% of all men aged 15 years and older had sexual intercourse in four weeks prior to the survey. Of these 71% were married men and 29% were never-married men.

The number of men who had sexual intercourse in the four weeks prior to the survey varied greatly by place of residence, with 38% for Funafuti men and 65% for men from the outer islands.

Data by education level shows that men with a secondary education are less sexually active than men with a lower or tertiary education.

Data by wealth background shows that a higher percentage of men from lower wealth quintile households had sexual intercourse in four weeks preceding the survey than men from higher wealth quintile households.

Table 6.8: Recent sexual activity — Men

Percent distribution of men aged 15–49 by timing of last sexual intercourse, according to background characteristics, Tuvalu 2007

Background characteristic	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of men
	Within the last four weeks	Within one year[1]	One or more years	Missing			
Age							
15–19	24.7	17.0	13.7	4.6	39.9	100.0	91
20–24	43.2	16.8	15.0	5.0	19.9	100.0	74
25–29	57.5	14.2	13.1	13.2	1.9	100.0	62
30–34	(57.6)	(10.5)	(12.1)	(16.8)	(3.1)	(100.0)	38
35–39	(66.2)	(17.0)	(6.8)	(10.0)	(0.0)	(100.0)	41
40–44	63.3	11.2	8.0	17.5	0.0	100.0	59
45–49	63.9	15.7	6.2	14.2	0.0	100.0	63
Marital status							
Never married	28.6	20.4	18.9	4.6	27.5	100.0	194
Married or living together	71.3	10.9	1.6	16.2	0.0	100.0	224
Divorced/separated/widowed	*	*	*	*	*	*	9
Marital duration[2]							
0–4 years	(62.8)	(5.8)	(4.2)	(27.2)	(0.0)	(100.0)	41
5–9 years	(60.7)	(16.8)	(3.4)	(19.2)	(0.0)	(100.0)	35
10–14 years	*	*	*	*	*	*	16
15–19 years	(57.8)	(19.1)	(2.4)	(20.7)	(0.0)	(100.0)	29
20–24 years	(62.0)	(7.5)	(0.0)	(30.5)	(0.0)	(100.0)	29
25+ years	*	*	*	*	*	*	9
Married more than once	(89.2)	(9.8)	(0.0)	(1.0)	(0.0)	(100.0)	65
Residence							
Funafuti	38.0	21.4	14.1	12.5	14.1	100.0	225
Outer islands	64.7	8.0	7.9	8.7	10.7	100.0	203
Education							
Less than secondary	60.1	11.2	9.3	13.0	6.3	100.0	141
Secondary	41.3	18.2	13.4	9.2	18.0	100.0	223
More than secondary	62.8	12.2	7.5	11.0	6.6	100.0	63

93

Table 6.8 (continued)

Background characteristic	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of men
	Within the last four weeks	Within one year[1]	One or more years	Missing			
Wealth quintile							
Lowest	52.6	10.2	12.6	11.2	13.5	100.0	75
Second	59.6	12.4	9.2	10.7	8.1	100.0	94
Middle	59.9	11.7	5.7	14.1	8.5	100.0	89
Fourth	41.4	14.3	23.6	8.9	11.8	100.0	74
Highest	39.0	25.0	7.4	8.6	20.1	100.0	96
Total 15–49	50.7	15.0	11.2	10.7	12.5	100.0	428
50+	47.9	20.6	19.9	11.1	0.5	100.0	130
Total men 15+	50.0	16.3	13.2	10.8	9.7	100.0	558

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. Figures in parentheses are based on 25–49 cases.
[1] Excludes men who had sexual intercourse within the four weeks prior to the survey.
[2] Excludes men who are not currently married.

6.5 POSTPARTUM AMENORRHOEA, ABSTINENCE, AND INSUSCEPTIBILITY

Postpartum amenorrhoea refers to the interval between childbirth and the return of menstruation. The length and intensity of breastfeeding influences the duration of amenorrhoea, which offers protection from pregnancy. Postpartum abstinence refers to the period between childbirth and the time when a woman resumes sexual activity. Delaying the resumption of sexual relations can also prolong protection. Women are considered to be insusceptible to pregnancy if they are not exposed to the risk of conception, either because their menstrual period has not resumed since a birth, or because they are abstaining from intercourse after childbirth. Table 6.9 shows the percent of births in the three years preceding the survey for which mothers are postpartum amenorrheic, abstaining and insusceptible, by number of months since birth, and median and mean durations. The estimates shown in Table 6.9 are based on current status data: they refer to the woman's situation at the time of the survey. The number of cases is too small to be presented by months since birth.

Table 6.9: Postpartum amenorrhoea, abstinence and insusceptibility

Percentage of births in the three years preceding the survey for which mothers are postpartum amenorrheic, abstaining and insusceptible, by number of months since birth, and median and mean durations, Tuvalu 2007

| | Percentage of births for which the mother is: | | | |
	Amenorrheic	Abstaining	Insusceptible[1]	Number of births
Total	10.1	27.5	32.2	275
Median	0.7	4.6	8.6	na
Mean	4.1	9.9	11.7	na

Note: Estimates are based on status at the time of the survey.
na = not applicable
[1] Includes births for which mothers are either still amenorrheic or still abstaining (or both) following birth.

Overall, 10% of women who gave birth in the three years preceding the survey are amenorrheic, 28% are abstaining and 32% are insusceptible. The results indicate a lower percentage of women experience postpartum amenorrhoea than they do abstinence or insusceptibility. Women are amenorrheic for a median of less than one month (0.7) and abstain for about five months after giving birth. The duration of insusceptibility was on average 8.6 months

Table 6.10: Median duration of amenorrhoea, postpartum abstinence and postpartum insusceptibility

Median number of months of postpartum amenorrhoea, postpartum abstinence and postpartum insusceptibility following births in the three years preceding the survey, by background characteristics, Tuvalu 2007

Background characteristic	Postpartum amenorrhoea	Postpartum abstinence	Postpartum insusceptibility[1]
Mother's age			
15–29	0.8	6.5	10.4
30–49	0.6	2.2	3.1
Residence			
Funafuti	0.8	4.1	8.5
Outer islands	0.6	5.0	5.6
Education			
Less than secondary	1.4	2.0	2.2
Secondary	0.6	5.3	10.7
More than secondary	0.8	7.8	7.8

Table 6.10 (continued)

Background characteristic	Postpartum amenorrhoea	Postpartum abstinence	Postpartum insusceptibility[1]
Wealth quintile			
Lowest	0.4	3.8	4.9
Second	0.4	3.8	7.6
Middle	3.3	9.6	12.7
Fourth	0.8	4.5	4.6
Highest	0.8	3.9	3.9
Total	**0.7**	**4.6**	**8.6**

Note: Medians are based on the status at the time of the survey (current status).
[1] Includes births for which mothers are either still amenorrheic or still abstaining (or both) following birth.

6.6 MEDIAN DURATION OF AMENORRHOEA, POSTPARTUM ABSTINENCE AND POSTPARTUM INSUSCEPTIBILITY

Data from the 2007 TDHS show that postpartum amenorrhoea and abstinence according to mother's age is slightly lower among older women aged 30–49 than younger women aged 15–29.

Data on educational attainment show that those with a higher education level are more likely to abstain from sexual activities after childbirth than women with less than a secondary education.

The wealth background of women shows that those in the middle wealth quintile have a higher median number of months of amenorrhoea and insusceptibility, and abstain longer than women in the other wealth quintiles.

6.7 MENOPAUSE

Another factor influencing the risk of pregnancy is menopause. In the context of available survey data, women are considered menopausal if they are neither pregnant nor postpartum amenorrheic, but have not had a menstrual period in the six months preceding the survey. Table 6.11 shows the percentage of women aged 30–49 who are menopausal by age.

Table 6.11 and Figure 6.4 show that there are women who have premature menopause and also early menopause, and show that some women do not experience menopause until after the age of 45.

Table 6.11: Menopause

Percentage of women aged 30–49 who are menopausal by age, Tuvalu 2007

Age	Percentage menopausal[1]	Number of women
30–34	7.1	97
35–39	8.1	94
40–41	13.6	53
42–43	(7.6)	42
44–45	14.1	75
46–47	23.7	59
48–49	(28.3)	41
Total	13.2	460

Note: Figures in parentheses are based on 25–49 cases.
[1] Percentage of all women who are not pregnant and not postpartum amenorrheic and whose last menstrual period occurred six or more months before the survey.

Figure 6.4: Percentage of women aged 30–49 who are menopausal by age
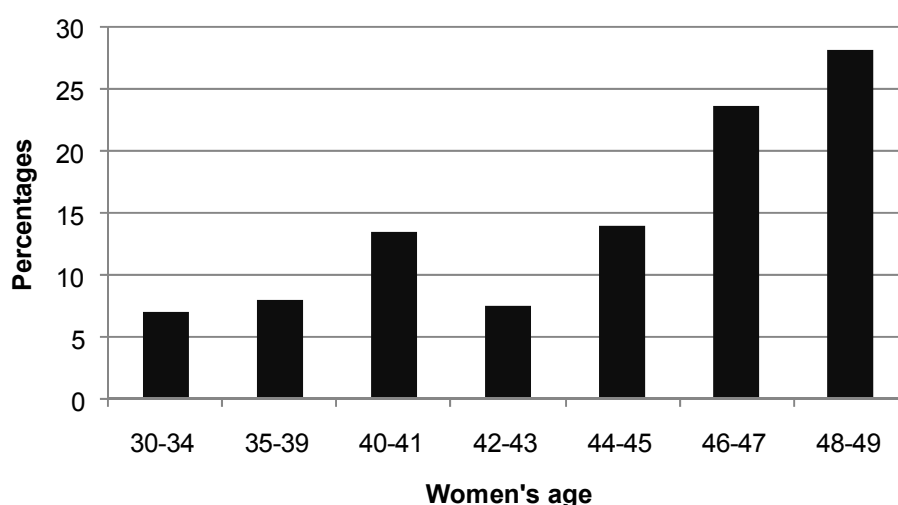
6.8   KEY RESULTS

A considerably higher proportion of women aged 15–49 are married (70.3%) than men aged 15–49 (52.2%).

Men marry approximately five years later than women. The median age at first marriage for men aged 20–49 is 27.2, and is 22.1 for women aged 20–49.

Both women and men engage in sexual activities (sexual intercourse) before getting married. The median age at first sexual intercourse for men aged 20–49 is 17.8 and is 21.7 for women aged 20–49.

Marital status has a considerably different impact on sexual activity for males and females. While only a small proportion of never-married women had sexual intercourse in the four weeks prior to the survey, about 29% of never-married men were sexually active in the same period. Furthermore, men and women from the outer islands were more sexually active than those living in Funafuti.

The median duration of postpartum amenorrhoea is 0.7 months, and is 4.6 months for abstinence and 8.6 months for insusceptibility.

Education level seems to have a more pronounced impact on the behaviour of women than on men. Women with a higher education level tend to marry and engage in sexual activities later than those with a lower education level. Furthermore, women with a higher education level seem to have less frequent sexual intercourse, which might be the result of their greater self confidence and empowerment.

CHAPTER 7   FERTILITY PREFERENCES

This chapter addresses three questions that allow an assessment of the need for contraception.

- Does the respondent want more children?
- If so, how long would she prefer to wait before the next child?
- If she could start afresh, how many children in all would she want?

Two further issues are examined: 1) To what extent do unwanted or mistimed pregnancies occur? 2) How would preventing such pregnancies affect fertility rates? Bearing in mind that the underlying rationale of most family planning programmes is to give couples the freedom and ability to bear the number of children they want, and to achieve the spacing of births they prefer, the relevance of this chapter is obvious.

The 2007 TDHS included questions to ascertain fertility preferences. Women who were either not pregnant or unsure about their status were asked: 'Would you like to have (a/another) child or would you prefer not to have any (more) children?' A different question was posed for women who were pregnant at the time of the survey. Pregnant women were asked: 'After the child you are expecting, would you like to have another child or would you prefer not to have any more children?' The women who indicated that they wanted another child were asked how long they would like to wait before the birth of the next child. Finally, women were asked about the number of children they would like to have, as well as their sex preference, if they were to start childbearing afresh.

Given the ongoing family planning programmes that address both men and women, and that men play a vital role in the realisation of reproductive goals, the 2007 TDHS included questions that elicited information on men's fertility preferences. Responses to questions provide a basis for classifying women and men by their fertility preferences according to selected background characteristics.

7.1   DESIRE FOR MORE CHILDREN

Data on men's and women's desire for more children can provide an indication of future reproductive behaviour, provided that the required family planning services are available, affordable and accessible. Table 7.1 presents the distribution of currently married women and men by their desire for more children and according to the number of living children. Only 14% of currently married women wanted another child after two or more years, 23% wanted to wait for less than two years to have another child, and 46% declared that they did not want to have any more children at all or were sterilised. About 2% of women reported not being able to have any more children because they were infecund. Figure 7.1 depicts the fertility preferences of women and men, and shows that men are more undecided (23%) than women (14%) about having another child.

Generally, the proportion of women and men who want another child decreases with the increasing number of living children. It is equally evident that the proportion of women and men aged 15–49 who want to stop childbearing increases rapidly with the increasing number of living children. For instance, 17% of the currently married women with one child indicate that they do not want more children or had been sterilized, while 81% of currently married women with six or more children indicated the same. Among women with six or more children, 8% still desire more children.

Table 7.1: Fertility preferences by number of living children

Percent distribution of currently married women and currently married men aged 15–49 by desire for children, according to number of living children, Tuvalu 2007

Desire for children	Number of living children							Total 15–49	Total men 50+	Total men 15+
	0	1	2	3	4	5	6+			
Women[1]										
Have another soon[2]	73.6	30.3	17.0	10.2	6.3	2.5	1.4	22.9	na	na
Have another later[3]	1.8	39.2	20.0	12.8	8.0	2.1	7.0	14.2	na	na
Have another, undecided when	3.3	0.0	2.3	1.6	0.0	0.0	0.0	1.2	na	na
Undecided	11.0	10.7	16.6	15.8	18.0	12.9	11.2	14.0	na	na
Want no more	7.2	16.1	32.6	46.3	53.1	64.4	66.3	37.2	na	na
Sterilised[4]	0.0	1.3	9.3	10.6	13.0	18.1	14.2	8.5	na	na
Declared infecund	3.1	2.4	2.2	2.6	1.7	0.0	0.0	2.0	na	na
Missing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	na	na
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	na	na
Number of women	98	97	94	107	100	53	50	598	na	na
Men[5]										
Have another soon[2]	58.7	26.8	17.9	9.2	3.6	9.4	0.0	16.1	2.9	13.5
Have another later[3]	4.8	24.8	10.9	6.6	1.9	1.3	2.1	8.5	1.6	7.2
Have another, undecided when	9.4	1.1	3.3	1.2	0.0	0.0	0.0	1.8	0.6	1.6
Undecided	12.5	22.8	31.0	22.6	25.0	35.1	9.9	22.6	2.2	18.8
Want no more	12.0	20.7	32.6	58.3	56.8	39.3	73.0	43.3	80.6	50.6
Sterilised[4]	0.0	3.8	4.3	2.1	12.8	14.9	15.0	7.4	12.0	8.0
Declared infecund	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Missing	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

na=not applicable
[1] The number of living children includes current pregnancy for women.
[2] Wants next birth within two years.
[3] Wants to delay next birth for two or more years.
[4] Includes both female and male sterilisation.
[5] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Figure 7.1: Fertility preferences among currently married women and men aged 15–49
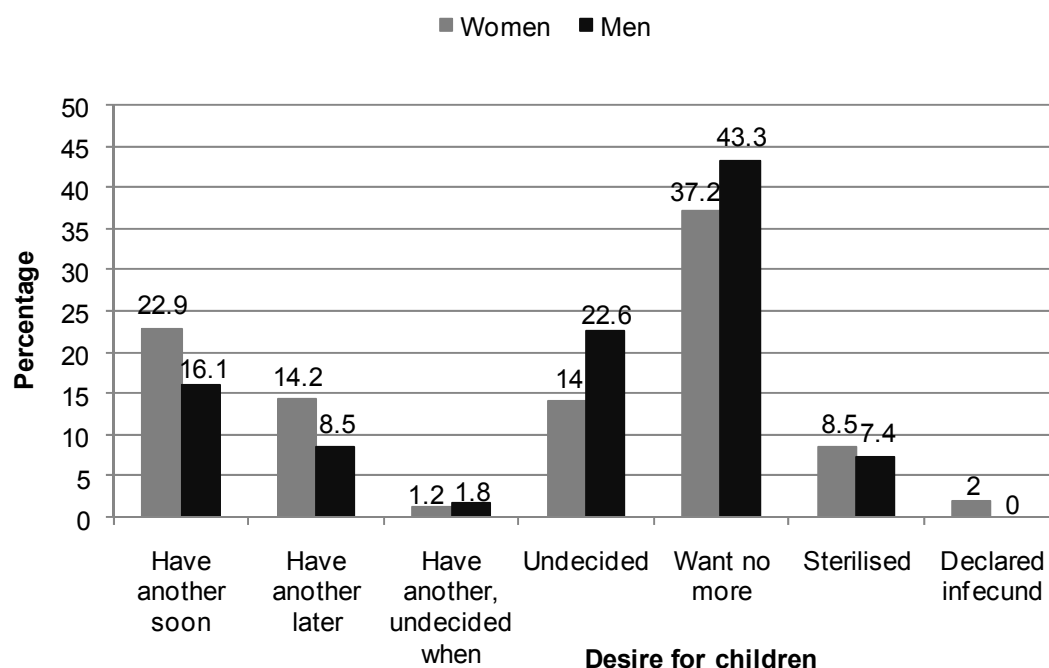
7.2 DESIRE TO LIMIT CHILDBEARING BY BACKGROUND CHARACTERISTICS

Tables 7.2 and 7.3 present the percentage of currently married women and men who want no more children, by number of living children and according to background characteristics. Overall, about one out of every two Tuvaluan women and men aged 15–49 indicate no desire for more children (45.7% women, 47.1% men). Figure 7.2 shows that, generally, the desire to stop childbearing among women and men increases from one living child onward.

Table 7.2: Desire to limit childbearing — Women

Percentage of currently married women aged 15–49 who want no more children, by number of living children, according to background characteristics, Tuvalu 2007

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Funafuti	9.5	14.6	44.1	47.5	71.8	85.7	75.0	45.1
Outer islands	5.2	20.7	40.5	63.5	61.8	78.2	86.5	46.3
Education								
No education/Primary	20.6	36.3	53.9	68.2	64.6	83.8	82.9	60.6
Secondary	2.1	10.5	43.3	42.2	68.5	78.2	74.3	37.5
More than secondary	4.8	15.4	18.0	69.1	65.1	100.0	100.0	36.1
Wealth quintile								
Lowest	5.0	26.4	31.7	70.2	73.8	67.2	70.3	48.8
Second	7.2	28.9	27.9	61.2	63.7	81.2	88.1	50.7
Middle	4.7	21.1	47.7	50.8	69.0	88.3	77.9	46.6
Fourth	7.6	14.1	44.8	55.3	55.8	89.1	86.5	41.1
Highest	11.2	4.3	51.9	46.8	69.2	100.0	85.7	41.7
Total	7.2	17.4	41.9	57.0	66.0	82.5	80.5	45.7

Note: Women who have been sterilised are considered to want no more children.
[1] The number of living children includes the current pregnancy.

Table 7.3: Desire to limit childbearing — Men

Percentage of currently married men aged 15–49 who want no more children, by number of living children, according to background characteristics, Tuvalu 2007

| Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Funafuti	20.0	5.0	37.5	56.3	61.5	50.0	86.7	44.3
Outer islands	12.9	28.8	43.0	63.3	56.3	76.5	85.7	49.4
Education								
No education/Primary	30.7	29.1	40.0	68.5	70.8	67.0	89.5	60.8
Secondary	7.4	10.7	44.9	70.7	47.9	66.7	65.2	36.4
More than secondary	21.1	0.0	36.9	32.1	44.8	36.9	100.0	33.4
Wealth quintile								
Lowest	28.9	56.2	29.1	60.0	53.6	60.4	60.2	53.7
Second	9.6	0.0	63.5	65.5	22.7	50.1	88.1	46.0
Middle	0.0	0.0	37.7	45.5	69.3	54.7	100.0	41.9
Fourth	32.1	0.0	0.0	100.0	70.7	100.0	100.0	53.6
Highest	22.6	19.1	40.0	40.0	57.1	100.0	75.0	42.6
Total 15–49	15.7	16.1	41.3	60.5	59.3	63.2	86.2	47.1
50+	73.3	74.6	90.5	100.0	86.5	95.4	96.9	91.7
Total men 15+	23.8	21.7	55.9	70.6	72.9	84.0	90.0	61.6

Note: Men who have been sterilised or who state that their wife has been sterilised are considered to want no more children.
[1] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

The proportion of women in the outer islands with no desire for more children (46%) is not much different from women in Funafuti (45%). Women with no education or with only a primary education are more likely to report that they do not want more children (61%) than women who have more than a secondary education (36%). A similar pattern exists among men. Men with no education or only a primary education are more likely to report that they do not want more children (61%) compared with those with a secondary education or higher (33%). These analyses show that the higher the education level, the less desire there is to limit family size.

An analysis of women's and men's desire to limit childbirth by wealth quintile shows that, overall, there is little variation in the desire to limit childbearing with increasing wealth quintile. Although the levels are comparatively different between the sexes, with women having a higher proportion than men, there is not a strong relationship between household wealth and desire to limit childbearing.

Figure 7.2: Percentage of currently married women and men who want no more children by number of living children
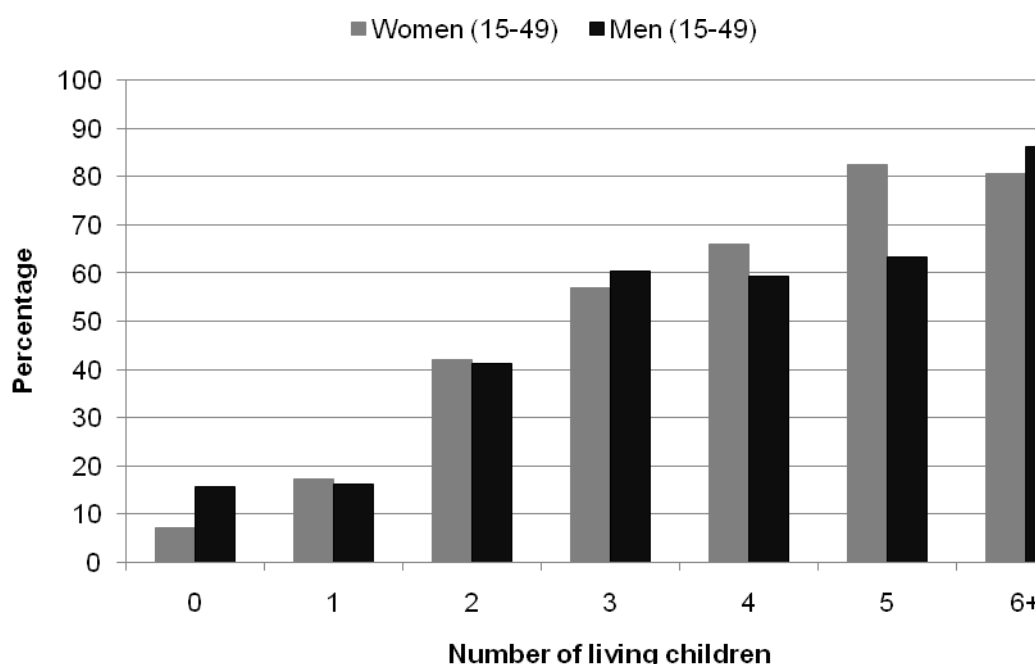
7.3   NEED FOR FAMILY PLANNING SERVICES

Women who indicate that they either want no more children or want to wait for two or more years before having another child, and who are not using contraception, constitute a group that has an unmet need for family planning. Women who are currently using a family planning method are considered to have a met need for family planning. Women with an unmet need for family planning and those who are currently using contraception form the total demand for family planning.

Table 7.4 presents estimates for the unmet need, met need, and total demand for family planning services for currently married women. Overall, 24% of currently married women have an unmet need for family planning services, 12% for spacing, and 12% for limiting. Over three out of every ten (31%) married women use contraceptive methods, which constitutes a met need. The total demand for family planning is estimated at 55%, and the demand satisfied is 56%.

There are substantial differences by background characteristics in the level of unmet need for family planning and the proportion of family planning demand satisfied. Women aged 30–34 are most likely to have a higher unmet need, both for spacing and for limiting child births (31%). This is followed by 24% of women aged 40–44, which is slightly higher than the need for younger women aged 20–29. Furthermore, older women have a higher proportion of family planning needs that are met. The very high unmet need in currently married women aged 30–34 and 40–44 has important implications for planning adolescent reproductive health information and services to ensure that the needs for family planning are met.

The differentials by place of residence show that women from Funafuti and the outer island have about the same unmet need (26% and 23%, respectively). There is also very little variation by educational attainment, which indicates that Tuvalu's compulsory education policy assists in information on and accessibility to family planning services. There is little difference among wealth quintiles with regard to unmet needs for family planning services.

The met need of family planning (i.e. the level of contraceptive use) is higher for spacing among younger women and for limiting among older women. By rural and urban residence, the proportion of current users for spacing and for limiting childbearing is about the same (30.5% outer islands, 30.6% Funafuti). The met need for spacing increases consistently with educational attainment, whereas the level of current use by household wealth quintile varies.

If women aged 45–49 are excluded, the total demand for family planning services increases with age from 44% among women aged 20–24 to 64% among women aged 40–44. There were too few cases of Tuvaluan teenage-aged women who were currently married to generate meaningful data. The total demand for family planning services is higher in Funafuti (56%) than in the outer islands (54%). The demand for family planning is about the same for each education level but fluctuates with wealth from 50% in the lowest quintile to 52% in the highest wealth quintile.

The percent of demand satisfied generally increases with age from 46% among women in the 20–24 age group to 62% among women in the 40–44 age group. The level of demand satisfied is similar for both the outer islands (56.8%) and Funafuti (54.5%). There is little variation in total demand satisfied for each education level. The percent of demand satisfied by wealth quintile fluctuates, with the lowest percentage reported (50%) for the fourth quintile.

Table 7.4: Need and demand for family planning among currently married women

Percentage of currently married women aged 15–49 with unmet need for family planning, percentage with met need for family planning, the total demand for family planning, and the percentage for the demand for contraception that is satisfied, by background characteristics, Tuvalu 2007

Background characteristic	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning[1]			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
Age											
15–19	*	*	*	*	*	*	*	*	*	*	9
20–24	18.0	5.8	23.8	17.8	2.8	20.5	35.8	8.5	44.3	46.3	78
25–29	15.1	7.1	22.2	20.3	6.5	26.8	35.4	13.6	48.9	54.7	112
30–34	19.5	11.4	30.9	10.1	20.5	30.6	29.6	31.9	61.5	49.8	89
35–39	9.9	13.8	23.7	7.7	29.8	37.4	17.6	43.5	61.2	61.2	84
40–44	8.9	15.4	24.3	3.1	36.7	39.8	12.0	52.1	64.1	62.0	111
45–49	2.9	17.2	20.2	3.0	25.8	28.7	5.9	43.0	48.9	58.8	116
Residence											
Funafuti	13.7	11.8	25.5	10.2	20.4	30.6	23.9	32.2	56.1	54.5	277
Outer islands	10.8	12.3	23.1	9.8	20.7	30.5	20.6	33.0	53.6	56.8	321
Education											
No education/Primary	7.1	13.4	20.5	4.8	28.9	33.7	11.9	42.3	54.2	62.2	220
Secondary	15.9	11.8	27.6	12.3	15.4	27.7	28.2	27.2	55.4	50.1	277
More than secondary	12.9	10.0	22.9	14.6	16.6	31.2	27.6	26.6	54.2	57.7	101
Wealth quintile											
Lowest	9.7	13.6	23.3	6.7	19.7	26.3	16.3	33.3	49.6	53.0	105
Second	11.8	10.9	22.7	11.1	25.7	36.8	23.0	36.6	59.6	61.9	119
Middle	12.9	13.4	26.2	11.5	21.2	32.7	24.4	34.5	58.9	55.5	137
Fourth	13.6	12.1	25.8	7.2	18.9	26.1	20.9	31.0	51.9	50.4	122
Highest	12.3	10.3	22.6	12.8	17.0	29.9	25.2	27.3	52.4	56.9	115
Total	12.1	12.1	24.2	10.0	20.6	30.5	22.1	32.6	54.7	55.8	598

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed.

[1] Unmet need for spacing includes pregnant women whose pregnancy was mistimed; amenorrheic women who are not using family planning and whose last birth was mistimed, or whose last birth was unwanted but now say they want more children; and fecund women who are neither pregnant nor amenorrheic, who are not using any method of family planning, and say they want to wait two or more years for their next birth. Also included in unmet need for spacing are fecund women who are not using any method of family planning and say they are unsure whether they want another child or who want another child but are unsure when to have the birth

Unmet need for limiting refers to pregnant women whose pregnancy was unwanted; amenorrheic women who are not using family planning, whose last child was unwanted and who do not want any more children; and fecund women who are neither pregnant nor amenorrheic, who are not using any method of family planning, and who want no more children

[2] Using for spacing is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another

Using for limiting is defined as women who are using and who want no more children. Note that the specific methods used are not taken into account here

Table 7.5 presents estimates for the unmet need, met need, and the total demand for family planning services for all women and for women who are not currently married. Overall, 17% of all women have an unmet need for family planning services, 8.6% for spacing, and 8.7% for limiting. About two out of every ten women (23%) use contraceptive methods, which constitute the met need. The total demand for family planning services for all Tuvaluan women is estimated to be 41%, and the demand satisfied is 57% (1% more than for currently married women).

The percent of demand satisfied increases with age from 40% for teenage girls (aged 15–19) to 60% for older women aged 45–49. This is greatly affected by the met demand for limiting, which increases by age from a low of 0% to 22% for women aged 45–49. The lowest percentages of demand satisfied are among young girls aged 15–19 and, women in Funafuti in the fourth wealth quintile.

Table 7.5: Need and demand for family planning for all women and for women who are not currently married

Percentage of all women and not currently married women aged 15–49 with unmet need for family planning, percentage with met need for family planning, the total demand for family planning and the percentage of the demand for contraception that is satisfied, by background characteristics, Tuvalu 2007

Background characteristic	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
					All Women						
Age											
15–19	3.1	1.0	4.1	2.7	0.0	2.7	5.9	1.0	6.9	39.9	111
20–24	9.7	3.9	13.6	11.8	1.5	13.3	21.5	5.3	26.9	49.5	145
25–29	12.6	5.9	18.6	19.9	5.4	25.3	32.5	11.4	43.9	57.7	134
30–34	17.8	10.4	28.3	9.3	21.1	30.3	27.1	31.5	58.6	51.7	97
35–39	8.8	12.2	21.1	6.8	26.4	33.3	15.7	38.7	54.3	61.2	94
40–44	7.6	14.0	21.6	2.6	32.2	34.8	10.2	46.2	56.5	61.7	129
45–49	2.4	14.2	16.7	2.4	22.2	24.7	4.9	36.5	41.3	59.7	140
Residence											
Funafuti	9.2	8.1	17.3	8.1	14.2	22.3	17.3	22.3	39.6	56.3	414
Outer islands	8.1	9.3	17.4	8.1	15.7	23.9	16.2	25.1	41.2	57.8	437
Education											
No education/Primary	5.8	10.9	16.6	4.2	23.4	27.6	10.0	34.3	44.2	62.3	282
Secondary	10.1	7.7	17.8	9.6	10.2	19.8	19.6	18.0	37.6	52.7	437
More than secondary	9.9	7.6	17.5	11.7	12.7	24.4	21.6	20.3	42.0	58.2	132
Wealth quintile											
Lowest	6.7	9.4	16.1	5.0	15.2	20.2	11.7	24.6	36.3	55.6	152
Second	7.9	7.8	15.7	11.8	17.1	28.9	19.6	25.0	44.6	64.8	179
Middle	10.8	10.8	21.6	9.3	17.1	26.5	20.2	27.9	48.1	55.0	169
Fourth	9.6	9.2	18.8	5.7	13.3	19.1	15.4	22.5	37.9	50.4	173
Highest	8.0	6.6	14.6	8.3	12.2	20.5	16.2	18.8	35.1	58.4	177
Total	8.6	8.7	17.4	8.1	15.0	23.1	16.7	23.7	40.5	57.1	851

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. Figures in parentheses are based on 25–49 cases.

[1] Unmet need for spacing includes pregnant women whose pregnancy was mistimed; amenorrheic women who are not using family planning and whose last birth was mistimed, or whose last birth was unwanted but now say they want more children; and fecund women who are neither pregnant nor amenorrheic, who are not using any method of family planning, and say they want to wait two or more years for their next birth. Also included in unmet need for spacing are fecund women who are not using any method of family planning and say they are unsure whether they want another child or who want another child but are unsure when to have the birth

Unmet need for limiting refers to pregnant women whose pregnancy was unwanted; amenorrheic women who are not using family planning, whose last child was unwanted and who do not want any more children; and fecund women who are neither pregnant nor amenorrheic, who are not using any method of family planning, and who want no more children

[2] Using for spacing is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another

Using for limiting is defined as women who are using and who want no more children. Note that the specific methods used are not taken into account here

Among women who are not currently married, Table 7.6 presents estimates of their unmet need, met need, and the total demand for family planning services. Overall, only 1.1% of women not currently married have an unmet need for family planning services, which is likely to be contributed by unmet need for limiting for women aged 15–24 years who are likely to live in one of the outer islands who have less than secondary level education and are observed to be in the second quintile household wealth category. About one out of every ten currently not married Tuvaluan women (5.5%) is using contraceptive methods, which constitutes a measure of their met need. These women's total demand for family planning is estimated at about 7% (less than seven times the demand of the currently married women which was 55%), and the demand satisfied is 83%.

Table 7.6: Need and demand for family planning for women who are not currently married

Percentage of all women and not currently married women aged 15–49 with an unmet need for family planning, the percentage with a met need for family planning, the total demand for family planning and the percentage of the demand for contraception that is satisfied, by background characteristics, Tuvalu 2007

Background characteristic	Unmet need for family planning			Met need for family planning (currently using)			Total demand for family planning			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
Women Not Currently Married											
Current age											
15–19	0.7	0.0	0.7	2.3	0.0	2.3	3.0	0.0	3.0	77.3	102
20–24	0.0	1.6	1.6	4.9	0.0	4.9	4.9	1.6	6.5	75.0	67
25–29	*	*	*	*	*	*	*	*	*	*	22
30–34	*	*	*	*	*	*	*	*	*	*	8
35–39	*	*	*	*	*	*	*	*	*	*	10
40–44	*	*	*	*	*	*	*	*	*	*	19
45–49	(0.0)	(0.0)	(0.0)	(0.0)	(5.4)	(5.4)	(0.0)	(5.4)	(5.4)	(100.0)	24
Residence											
Urban	0.0	0.8	0.8	4.0	1.6	5.6	4.0	2.4	6.3	87.5	137
Rural	0.6	0.9	1.5	3.5	2.0	5.5	4.1	2.9	7.0	78.8	116
Education											
No education/Primary	1.1	1.7	2.8	1.8	3.8	5.6	2.9	5.5	8.4	66.6	61
Secondary	0.0	0.7	0.7	4.8	1.4	6.2	4.8	2.0	6.8	90.1	160
More than secondary	(0.0)	0.0	0.0	2.2	0.0	2.2	2.2	0.0	2.2	100.0	31
Wealth quintile											
Lowest	0.0	0.0	0.0	1.3	5.0	6.4	1.3	5.0	6.4	100.0	47
Second	0.0	1.7	1.7	13.0	0.0	13.0	13.0	1.7	14.7	88.2	60
Middle	(2.1)	(0.0)	(2.1)	(0.0)	(0.0)	(0.0)	(2.1)	(0.0)	(2.1)	(0.0)	32
Fourth	(0.0)	(2.1)	(2.1)	(2.1)	(0.0)	(2.1)	(2.1)	(2.1)	(4.3)	(50.0)	51
Highest	0.0	0.0	0.0	0.0	3.5	3.5	0.0	3.5	3.5	100.0	63
Total	0.3	0.8	1.1	3.8	1.8	5.5	4.0	2.6	6.7	83.3	253

Overall, between 70% and 100% of women's family planning demands are satisfied.

7.4 IDEAL NUMBER OF CHILDREN

The 2007 TDHS asked women and men about the total number of children they would like to have in their lifetime. For respondents who already had living children, the question was posed hypothetically: 'If you could go back to the time when you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?' Table 7.7 presents the distribution of women and men aged 15–49 by their ideal number of children.

Table 7.7: Ideal number of children

Percent distribution of women and men aged 15–49 by their ideal number of children, and the mean ideal number of children for all respondents and for currently married respondents, according to number of living children, Tuvalu 2007

Ideal number of children	Number of living children							Total
	0	1	2	3	4	5	6+	
	Women[1]							
0	9.2	8.7	12.4	13.5	14.1	15.6	13.7	11.5
1	5.7	7.4	1.9	0.0	2.6	0.0	2.0	3.6
2	35.7	33.1	19.9	4.7	6.2	16.9	10.6	22.3
3	23.8	14.3	23.6	17.5	5.8	7.0	4.6	16.9
4	12.4	20.4	34.8	46.4	39.1	17.4	29.2	26.1
5	2.8	7.3	3.5	6.4	10.9	13.7	6.6	6.1
6+	7.2	6.4	1.5	8.2	13.9	25.5	27.7	9.8
Non-numeric responses	3.1	2.4	2.5	3.3	7.4	3.9	5.5	3.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	277	122	113	120	111	55	53	851
Mean ideal number children for:[2]								
All women	2.8	2.8	2.8	3.4	3.5	3.9	4.2	3.1
Number	269	119	110	116	102	53	50	820
Currently married women	3.1	2.9	2.9	3.4	3.5	3.7	(4.3)	3.3
Number	97	97	91	103	95	51	47	580
	Men[3]							
0	5.9	5.3	(0.0)	(11.0)	(4.4)	*	(9.1)	6.1
1	6.5	0.0	(0.0)	(2.5)	(0.0)	*	(0.0	3.6
2	32.0	16.2	(23.3)	(3.5)	(8.7)	*	(3.6	22.2
3	27.2	27.6	(14.4)	(25.1)	(6.4)	*	(3.6	22.3
4	12.4	30.7	(30.9)	(26.5)	(46.1)	*	(22.0	20.6
5	8.6	7.8	(12.5)	(13.2)	(15.6)	*	(12.4	10.2
6+	5.1	9.0	(13.2)	(13.3)	(18.8)	*	(39.2	11.7
Non-numeric responses	2.4	3.3	(5.6)	(5.0)	(0.0)	*	(10.2	3.4
Total	100.0	100.0	(100.0)	(100.0)	(100.0)	*	(100.0)	100.0
Number	220	54	33	47	27	14	33	428
Mean ideal number children for:[2]								
All men	3.0	3.5	(3.8)	(3.8)	(4.1)	*	(5.1)	3.5
Number	215	52	31	45	27	14	30	413
Currently married men	*	(3.5)	(3.9)	(3.8)	(4.1)	*	(5.1)	3.9
Number	28	42	28	44	27	14	30	213
Mean ideal number children for men 15+:[2]								
All men	3.0	3.4	(3.7)	3.7	3.7	(4.7)	(4.7)	3.5
Number	220	57	42	59	51	35	43	526
Currently married men	(2.3)	(3.4)	(3.8)	3.7	3.7	(4.7)	(4.7)	3.8
Number	33	47	39	58	51	35	43	306

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. Figures in parentheses are based on 25–49 cases.
[1] The number of living children includes current pregnancy for women.
[2] Means are calculated excluding respondents who gave non-numeric responses.
[3] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Generally, men express a desire for a slightly larger family. The mean ideal number of children among all women is 3.1 compared with 3.5 for men. The ideal family size of currently married women is 3.3 children. Currently married men aged 15–49 have a slightly higher mean ideal family size than all men in that age group (3.9 children).

Among all women aged 15–49, the ideal number of children increases from 2.8 children for women with no living children to 4.2 children for women with six or more children. A similar pattern exists among men aged 15–49, although the level is a little higher and the range is about the same; that is, 3.0 children for men with no living children and 5.1 children for men with six or more children.

The desired family size becomes below the actual number of children for those currently married women who have four or more children and currently married men who have six or more children. This is an indication that women who have had four or more children would have liked to have less and could not realise their goals, due to unwanted births.

Table 7.8: Mean ideal number of children

Mean ideal number of children for all women aged 15–49 by background characteristics, Tuvalu 2007

Background characteristic	Mean	Number of women[1]
Age		
15–19	2.3	105
20–24	3.0	142
25–29	3.3	131
30–34	3.3	94
35–39	3.6	93
40–44	3.3	125
45–49	3.1	131
Residence		
Funafuti	3.2	396
Outer islands	3.0	423
Education		
No education/Primary	3.1	270
Secondary	3.1	421
More than secondary	3.3	128
Wealth quintile		
Lowest	3.2	147
Second	3.2	174
Middle	2.9	165
Fourth	3.2	161
Highest	3.2	172
Total	3.1	820

[1] Number of women who gave a numeric response.

The mean ideal number of children among women aged 15–49 is 3.1 (Table 7.8). The average ideal number of children increases steadily within the 15–39 age group then decreases within the 40–49 age group. The mean ideal number of children is 2.3 for women aged 15–19 and is 3.1 for women aged 45–49. There is little difference by residence, although women from the outer islands are more likely to desire fewer children (3.0 children) than women from Funafuti (3.2 children).

There is very little variation in educational level although, in general, the mean ideal number of children increases with increased education. Women with no education or with only a primary education prefer 3.1 children, while those with more than a secondary education prefer 3.3 children. The desired number of children across all wealth quintiles is 3.2 children, except for the middle quintile with 2.9 children.

7.5   FERTILITY PLANNING

To measure the level of unwanted fertility, women were asked whether all of the children born in the preceding five years were wanted at the time, wanted but at a later time, or not wanted at all. For women who were pregnant at the time of the interview, this question was also asked with reference to the current pregnancy. The procedure required respondents to recall accurately their wishes at one or more points in the last five years. Care should be taken in interpreting the results because an unwanted conception may have become a cherished child, leading to the rationalisation of responses to these questions.

According to Table 7.9, 77% of the births in the five years preceding the survey were wanted at the time, 7% were wanted later (mistimed), and 15% were not wanted at the time they were conceived. This finding indicates an increase in demand for birth limiting, which is roughly consistent with the increase in unmet need for birth limiting observed in Table 7.4.

Looking at fertility planning status by birth order and age of the mother, the data shows that the proportion of births that were wanted then varies with the birth order, but no clear direction (that is, either increase or decrease with those characteristics). For example, although 84% of first births were wanted then, there were also about 72% of fourth or higher order births that were wanted at the time they occurred. Whereas, over 76% of the second and third order births were wanted at the time they occurred. On the other hand, the percentage of unwanted births changes markedly from 9% of first-order births to 21% of fourth- and higher-order births.

In addition, fertility planning status sort of increases with age of the mother as indicated in a steady increase of wanted then with age of the mother from 69.8% for the younger age group to 77.8% with older mothers. Women who are less than 20 are much more likely to report an unwanted birth in the five years before the survey than women over the age of 20. Altogether, 30% of births to teenage mothers (16% unwanted and 14% wanted later) were not wanted or were not timely.

Table 7.9: Fertility planning status

Percent distribution of births to women aged 15–49 in the five years preceding the survey (including current pregnancies), by planning status of the birth, according to birth order and mother's age at birth, Tuvalu 2007

Birth order and mother's age at birth	Planning status of birth				Total	Number of births
	Wanted then	Wanted later	Wanted no more	Missing		
Birth order						
1	84.2	7.1	8.7	0.0	100.0	137
2	76.0	9.6	14.5	0.0	100.0	97
3	78.6	5.8	13.1	2.6	100.0	85
4+	72.2	7.2	20.6	0.0	100.0	179
Mother's age at birth						
<20	(69.8)	(14.2)	(16.0)	(0.0)	(100.0)	31
20–24	85.4	5.5	9.1	0.0	100.0	168
25–29	74.0	9.9	15.2	0.8	100.0	130
30–34	76.3	8.7	13.5	1.4	100.0	75
35–39	77.8	2.1	20.1	0.0	100.0	63
40–44	(56.9)	(8.3)	(34.9)	(0.0)	(100.0)	29
45–49	*	*	*	*	*	2
Total 15-49	77.3	7.4	14.9	0.4	100.0	498
Total 15+	49.2	15.4	35.1	0.2	100.0	1,250

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 7.10: Wanted fertility rates

Total wanted fertility rates and TFRs for the three years preceding the survey, by background characteristics, Tuvalu 2007

Background characteristic	Total wanted fertility rates	Total fertility rate
Residence		
Funafuti	3.3	4.2
Outer islands	2.4	3.7
Education		
No education/Primary	2.6	3.5
Secondary	2.9	4.3
More than secondary	2.4	2.8
Wealth quintile		
Lowest	2.0	3.6
Second	3.3	4.3
Middle	3.4	5.5
Fourth	2.8	3.3
Highest	2.5	2.8
Total	2.8	3.9

Note: Rates are calculated based on births to women aged 15–49 in the period 1–36 months preceding the survey. The TFRs are the same as those presented in Table 4.2.

7.6   WANTED FERTILITY RATES

Wanted fertility rates measure the potential demographic impact of avoiding unwanted births. The wanted fertility rate is calculated in the same way as the conventional TFR, except that unwanted births are excluded. A birth is considered wanted if the number of living children at the time of conception was less than the ideal number of children reported by the respondent. The gap between wanted and actual fertility shows how successful women are in achieving their reproductive intentions.

A comparison of the total wanted fertility rates and total fertility rates for the three years preceding the survey by background characteristics is presented in Table 7.10. The data reveal that if all unwanted births are eliminated, the Tuvalu's TFR would be 2.8 children per woman instead of the actual TFR of 3.9 children per woman.

There is considerable variation in the total wanted fertility rate by background characteristics. The gap between actual and wanted fertility for most of the above characteristic categories is within a range of 1.1–2.1. The lowest gap in fertility is found for women with above secondary level education (0.4 children), and for women in the highest household wealth quintile (0.3 children).

7.7   KEY FINDINGS

Unmet needs for contraception can lead to unintended pregnancies, which pose risks for both mother and child and contribute to high fertility levels. Understanding the level or size of unmet needs of contraception and the background characteristics of women with unmet needs for family planning methods can help strengthen health services and family planning programmes in targeting subgroups that are in need of such services. Woman's fertility preferences and desire for having children are likely to be achieved provided the required family planning services are available, affordable and accessible.

The results show that 24% of currently married women have an unmet need for family planning services; 12% spacing and likewise for limiting. The size of unmet needs of contraception indicates that the proportions of these currently married women are having difficulties gaining full access to family planning methods. The needs of currently married women for both birth spacing and birth limiting are not met, which can lead to unwanted and unplanned births.

The 2007 TDHS also examined women's fertility preferences, their desire to limit childbearing, ideal number of children, fertility planning and wanted fertility rates. These are indications of contraception needs, particularly to enable women to have their desired number of children. Results can assist and provide overall direction of family planning programmes and services in targeting subgroups that are in need of such services. The following are the results.

1. About 46% of currently married women and 47% of currently married men desire no more children. Results indicate that the desire of having no more children increases with the increasing number of children.

2. Results show that the mean ideal number of children for currently married women is 3.3, whereas it is 3.8 for currently married men. The results implies that both women and men are having difficulties in archiving this goal as they still continue to have more children than their ideal number.

3. About 7% of births are reported to be mistimed and most young mothers (less than 20 years of age) are having mistimed births. About 15% of births are not being planned by women aged 15–49.

4. The data show that the desired TFR is 2.8 per woman as compared with the actual TFR of 3.9 for the three years preceding the survey. This implies that if all unwanted births are eliminated, Tuvalu's actual fertility rate would be 2.8 children per woman.