CHAPTER 8 INFANT AND CHILD MORTALITY

This chapter presents estimates of levels, trends and differentials of neonatal, postneonatal, infant and childhood mortality, as well as perinatal mortality in Tuvalu. This information is important not only for examining demographic trends within the country, but also in designing and evaluating health policies and programmes. Primary and preventative health services focus on improving the quality of life of Tuvaluan people, including reducing infant and childhood mortality and reducing incidences of high-risk pregnancies. These services also aid the health ministry by identifying a category of the population, particularly babies and their mothers, who are at high risk of mortality.

8.1 DEFINITIONS, METHODOLOGY AND ASSESSMENT OF DATA QUALITY

For this report, the measures or indicators of childhood mortality are defined as follows:

Neonatal mortality: The probability of dying within the first month of life.

Infant mortality: The probability of dying between birth and the first birthday.

Postneonatal mortality: The arithmetic difference between infant and neonatal mortality.

Child mortality: The probability of dying between exact age 1 and the fifth birthday.

Under-5 mortality: The probability of dying between birth and the fifth birthday.

The data used in estimating these mortality rates were collected from the birth history section of the 2007 TDHS women's questionnaire. The section begins with questions about the respondent's childbearing experience (i.e. the number of sons and daughters who live in the household, those who live elsewhere, and those who have died). Then, for each live birth, information on the name, date of birth, sex, whether the birth was single or multiple, and survivorship status was recorded. For living children, information about their age and whether they resided with their mother was obtained. For children who had died, the respondent was asked to provide the child's age at death.

A retrospective birth history, such as that included in the 2007 TDHS is susceptible to several data collection errors:

- Only surviving women aged 15–49 were interviewed; therefore, no data are available for children of women who had died. The resulting mortality estimates will be biased if the child mortality rate of surviving and non-surviving women differs substantially.
- Another possible error in data collection is under-reporting of events (births and deaths), especially in cases where deaths occur early in infancy. If such deaths are selectively omitted, the consequence will not only be a lower infant mortality rate and neonatal mortality rate, but also a low ratio of neonatal deaths to infant deaths and early neonatal death (within one week) to neonatal deaths.
- It is believed that under-reporting of early infant deaths may increase with the length of time since the child's death (e.g. an early infant death that occurred ten years before the survey may be more likely to be omitted than an early infant death two years before the survey). Thus, an examination of these patterns over time is critical.

8.2 EARLY CHILDHOOD MORTALITY RATES: LEVELS AND TRENDS

The 2007 TDHS collected birth histories from 915 women. Early childhood mortality rates for the 15-year period preceding the survey are presented below by five-year periods in Table 8.1.

Table 8.1: Early childhood mortality rates

Neonatal, postneonatal, infant, child, and under-5 mortality rates for five-year periods preceding the survey, Tuvalu 2007

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality (1q0)	Child mortality (4q1)	Under-5 mortality (5q0)
0–4	29	2	31	5	36
5–9	14	10	24	5	29
10–14	25	12	37	8	44

[1] Computed as the difference between the infant and neonatal mortality rates.

For the most recent period (i.e. zero to four years before the survey, reflecting roughly 2003–2007), the infant mortality rate was 31 deaths per 1,000 live births. This means that about 3 in every 100 babies born in Tuvalu do not live to their first birthday. Child mortality, the probability of dying between age 1 and exact age 5, was 5 deaths per 1,000 people aged 1–4. The overall under-five mortality is 36 deaths per 1,000 live births, which implies that 36 in every one thousand Tuvaluan babies do not survive to their fifth birthday.

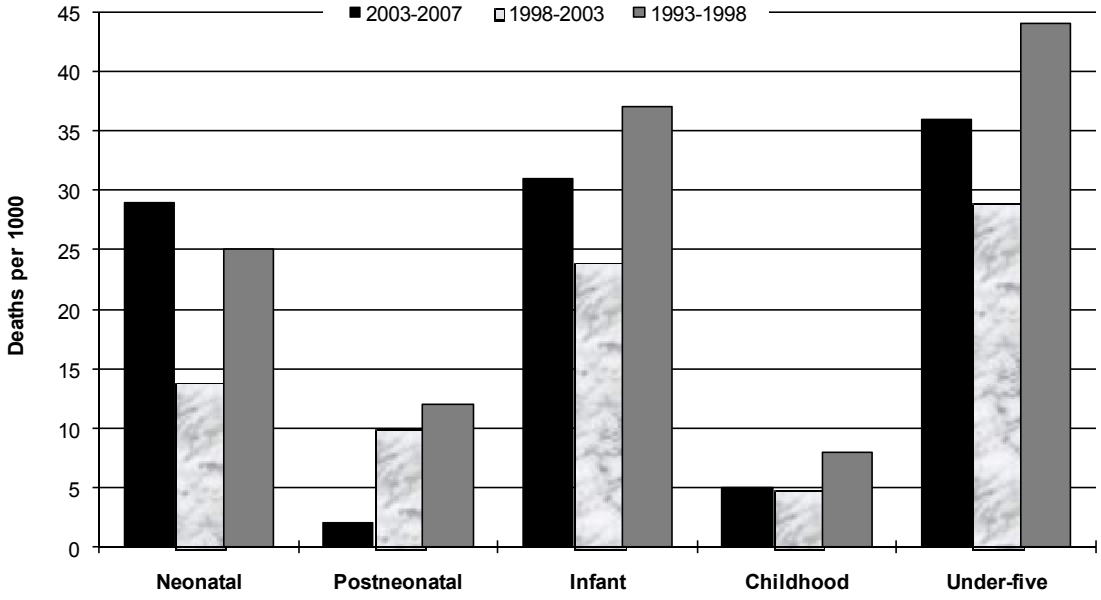
The first month of life is associated with the highest risk of survival. The neonatal mortality rate is 29 deaths per 1,000 live births, implying that nearly 3 out of every 100 infant deaths occur during the first month of life. As childhood mortality declines, postneonatal mortality usually declines faster than the neonatal mortality because neonatal mortality is frequently caused by biological factors that are not easily addressed by primary care interventions. In Tuvalu, postneonatal mortality is 2 per 1,000 births among infants during the five-year period before the survey.

Data from the 2007 TDHS shows that the situation of childhood mortality in Tuvalu worsened from 2003–2007, compared with 1998–2003. This situation is observed in postneonatal, infant, childhood and under-5 mortality. For example, the infant mortality rate increased from 24 per 1,000 live births during the period 1998–2003 to 31 per 1,000, while the rate for under-five mortality increased from 29 to 36 deaths per 1,000 births (See Fig. 8.1).

According to the 2007 TDHS, mortality estimates for the period 1998–2003 (i.e. five to nine years before the survey) decreased from high levels observed for the period 1993–1998 (ten to fourteen years before the survey). For example, there was a decrease in neonatal deaths from 25 deaths per 1,000 live births during 1993–1998 to only 14 per 1,000 during 1998–2003. There was also a decrease in post neonatal deaths from 12 deaths per 1,000 during 1993–1998 to 10 deaths during 1998–2003. The infant mortality rate decreased from 37 to 24 during the same period.

Only post neonatal mortality showed a constant decline during the 15-year period before the survey.

Figure 8.1: Mortality trends



8.3 EARLY CHILDHOOD MORTALITY BY SOCIOECONOMIC CHARACTERISTICS

Table 8.2 presents early childhood mortality rates by socioeconomic characteristics. The rates refer to the 10-year period 1998–2007.

Table 8.2: Early childhood mortality rates by socioeconomic characteristics

Neonatal, postneonatal, infant, child, and under-5 mortality rates for the 10-year period preceding the survey, by background characteristic, Tuvalu 2007

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality (1q0)	Child mortality (4q1)	Under-5 mortality (5q0)
Residence					
Funafuti	18	8	26	9	34
Outer islands	25	4	30	2	32
Mother's education					
Less than secondary	33	6	40	3	43
Secondary	21	8	29	9	38
Wealth quintile					
Lowest	19	11	30	0	30
Second	39	12	52	4	55
Middle	16	0	16	8	23
Fourth	33	7	40	7	47
Highest	0	0	0	8	8

[1] Computed as the difference between the infant mortality rate and the neonatal mortality rate.

As evidenced from sources such as censuses, there are differences in mortality levels between Tuvalu's urban population (Funafuti) and rural population (outer islands). While the level of neonatal and infant mortality is lower in Funafuti than in the outer islands, it is higher for postneonatal and child mortality. As a result, the under-5 mortality is higher in Funafuti than in the outer islands. For example, the infant mortality rate in Funafuti during the 10-year period before

the 2007 TDHS is 26 deaths per 1,000 births as opposed to 30 in the outer islands, and child mortality was 9 in Funafuti and only 2 in the outer islands (See Fig. 8.2).

In general, a mother's educational attainment is strongly associated with child survival. Children born to a mother with a secondary or higher education have by far the lowest rates for all types of childhood mortality, while the opposite is true for mothers with less education. Table 8.2 and Figure 8.3 confirm that as the level of a mother's education increases, the level of early-age mortality decreases. For instance, the estimated infant mortality rate of children whose mothers have less than a secondary education is 40, while the rate for those whose mothers have a secondary education is 29. A similar pattern is observed for neonatal and under-5 mortality. However, postneonatal and child mortality are higher for mothers with a secondary education than those with less education. Interestingly, the pattern of child mortality rates by education and urban–rural residence is exactly the same. A likely explanation is that a larger proportion of women living in Funafuti have a higher education than women living in the outer islands.

Figure 8.2: Child mortality rates by mother's place of residence

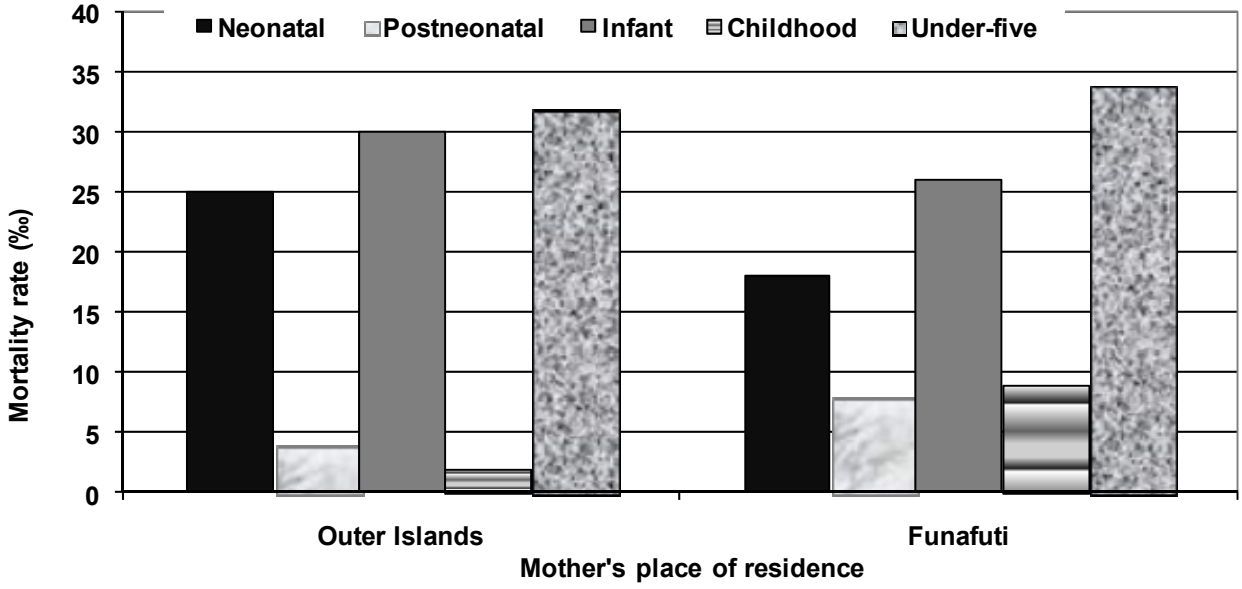
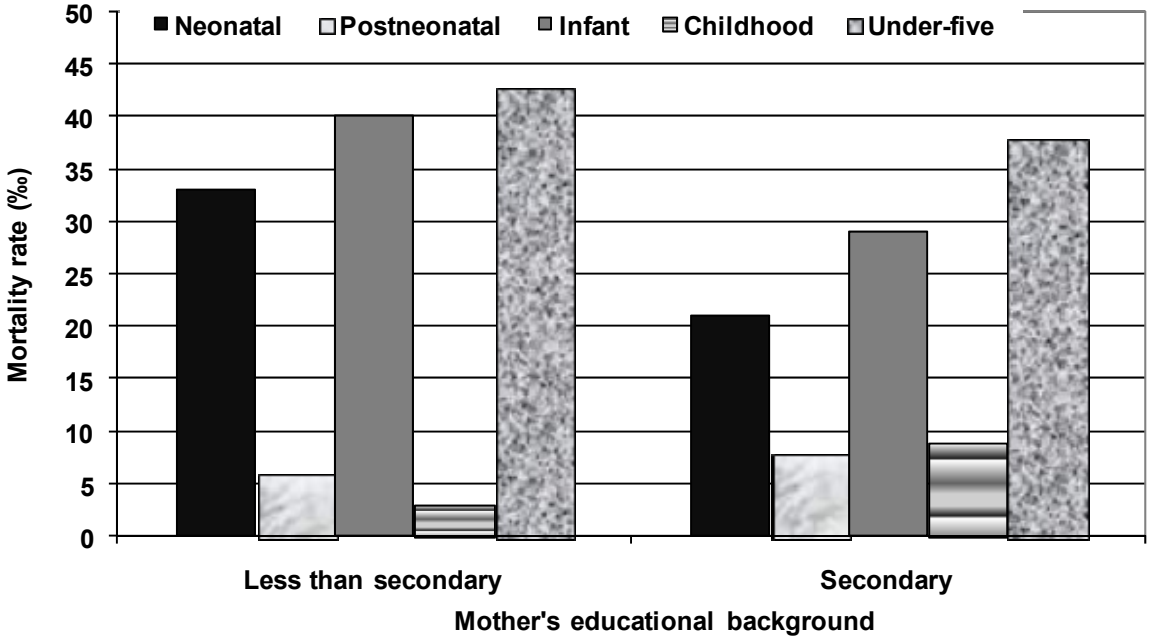
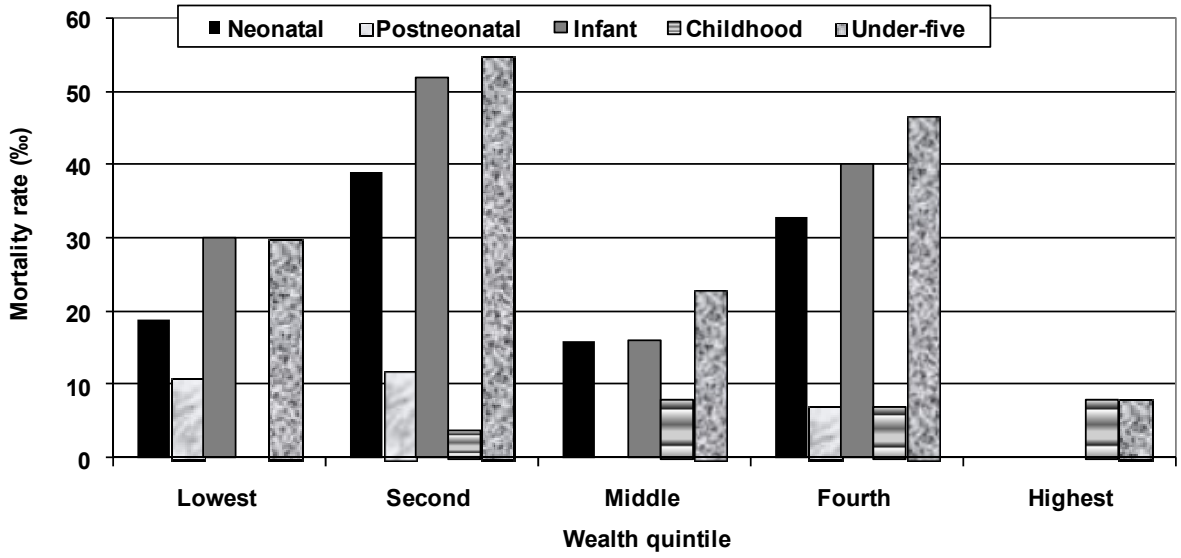


Figure 8.3: Child mortality rates by mother's educational background



In general, the wealth status of a mother is inversely associated with childhood mortality. However, this general guide is not observed in Tuvalu as shown in Table 8.2. Children in the lowest wealth quintile households have lower mortality rates than those in the second wealth quintile, while those in the middle wealth quintile households have the lowest mortality rates of all households, which is significantly lower than the fourth wealth quintile (See Fig. 8.4).

Figure 8.4: Child mortality rates by wealth quintile



8.4 EARLY CHILDHOOD MORTALITY BY DEMOGRAPHIC CHARACTERISTICS

The demographic characteristics of both mother and child have been found to play an important role in the survival probability of children. Table 8.3 presents early childhood mortality by a number of these characteristics, including the sex of child, mother's age at birth, birth order, and previous birth interval for the 10-year period before the survey.

Table 8.3: Early childhood mortality rates by demographic characteristics

Neonatal, postneonatal, infant, child, and under-5 mortality rates for the 10-year period preceding the survey, by demographic characteristics, Tuvalu 2007

Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality (1q0)	Child mortality (4q1)	Under-5 mortality (5q0)
Child's sex					
Male	25	4	29	5	33
Female	18	9	27	6	33
Mother's age at birth					
20–29	17	8	24	6	30
30–39	28	6	34	6	39
40–49	62	0	62	0	62
Birth order					
1	8	6	15	0	15
2–3	21	6	27	7	34
4–6	36	4	40	7	47
7+	0	19	19	0	19

Table 8.3 (continued)

Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality (1q0)	Child mortality (4q1)	Under-5 mortality (5q0)
Previous birth interval[2]					
<2 years	24	15	38	7	45
2 years	29	0	29	13	42
3 years	23	11	33	10	43
4+ years	27	0	27	0	27
Birth size[3]					
Small/very small	75	18	93	na	na
Average or larger	16	0	16	na	na
Don't Know/Missing	350	0	350	na	na

[1] Computed as the difference between the infant and neonatal mortality rates.
[2] Excludes first-order births.
[3] Rates for the five-year period before the survey.

The estimated infant mortality rate for males (29 deaths per 1,000) is slightly higher than that for females (27 deaths per 1,000).

The results in Table 8.3 agree with the traditional hypothesis of 'too early and too late increases child mortality'. According to the 2007 TDHS results, children born 'too late' (i.e. children born to mothers who are aged 40 and older) are disadvantaged compared with children born to mothers aged 20–39. Neonatal and infant mortality of children born to mothers aged older than 40 years was about twice as high as children born to younger mothers (See Fig. 8.5). Given that the sample size was too small, the hypothesis that 'too early increases child mortality' could not be tested.

Figure 8.5: Child mortality rates by mother's age at birth

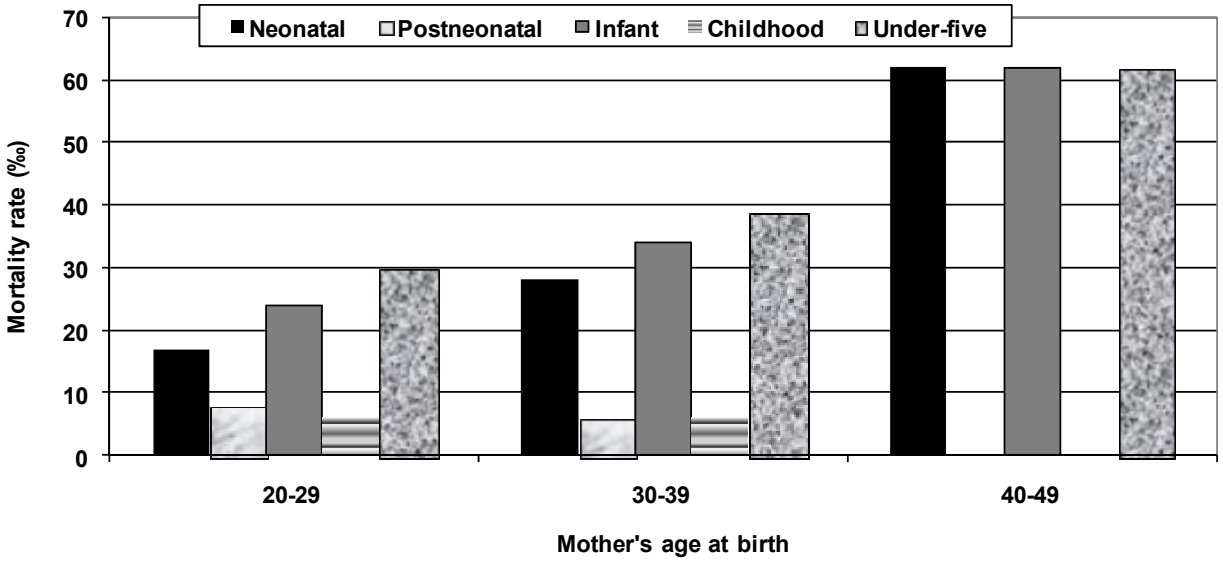
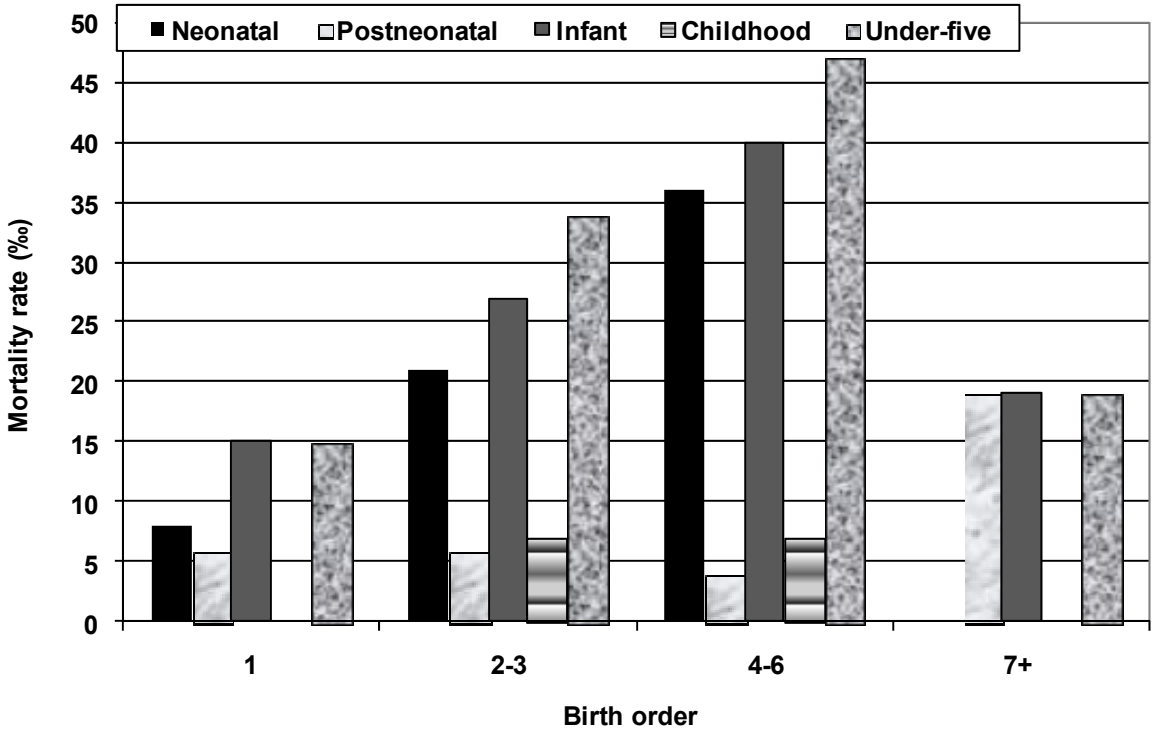


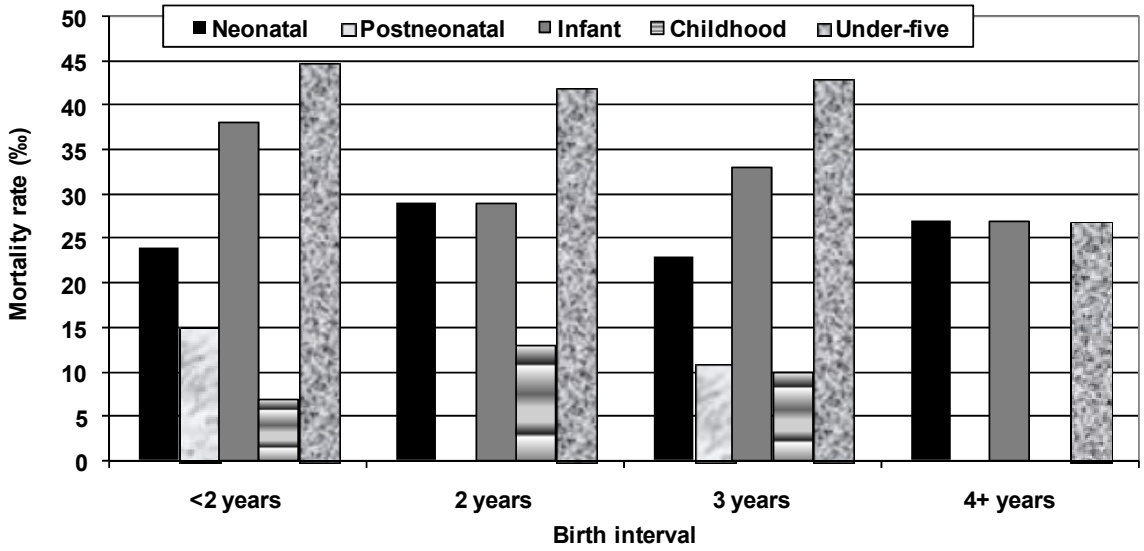
Figure 8.6: Child mortality rates by birth order



Higher birth orders are inversely associated with childhood mortality. This notion is certainly not true for Tuvalu, where child mortality levels are significantly lower for first-order births than for higher-order births (See Fig. 8.6).

Birth interval normally affects a child's risk of survival (mostly during infancy). In Tuvalu, children are at a higher risk of mortality if they are born less than two years after the previous birth (see Fig. 8.7). For example, the infant mortality rate of children born after an interval of less than 2 years is 38, which is higher than for children born after longer birth intervals. In general, however, the length of the birth interval does not show a clear correlation with the level of child mortality, although children born after a birth interval of more than four years show the lowest level of under-5 mortality (27 per 1,000).

Figure 8.7: Child mortality rates by birth interval



Data on the relationship between a child's birth weight and levels of child mortality are shown at the bottom of Table 8.3. Small and/or very small babies have a much higher risk of mortality than average or large-sized babies. The neonatal mortality rate for small and very small babies is 75 compared with only 16 for average or large-sized babies. The infant mortality rate for small and very small babies is 93 compared with 16 for larger babies.

8.5 HIGH-RISK FERTILITY BEHAVIOUR

The 2007 TDHS examined the relative importance of maternal fertility patterns associated with increased risk of mortality. Generally, infants and children have a greater probability of dying if they are: 1) born to mothers who are too old or too young, 2) born after a short birth interval, or 3) of high birth order. In analysing the effects of high-risk fertility behaviour on child survival, a mother is classified as too young if she is less than age 18, and too old if she is over age 34 at the time of birth. A short birth interval is defined as a birth occurring less than 24 months after the previous birth, and a child is of a high birth order if the mother has previously given birth to three or more children (i.e. if the child is of birth order four or higher).

Table 8.4 shows the percent distribution of births in the five-year period before the survey according to these elevated risk factors. The table also examines the relative risk of dying for children by comparing the proportion dead in each specified high-risk category with the proportion dead among children not in any high-risk category. Although first births are commonly associated with an increased risk of mortality, they are not included in any high-risk category because they are considered an unavoidable risk.

Only 22% of births in Tuvalu were not in any high-risk category. An additional 26% of births are first-order births to mothers aged 18–34, which is considered an unavoidable risk category. The remaining 52% of births are in at least one of the specified avoidable high-risk categories. About 29% of births are in only one of the high-risk categories; mostly a birth order of less than 24 months (13%), and birth orders greater than 3 (12%), while 23% are in multiple high-risk categories. Births in multiple high-risk categories are mostly found among mothers aged older than 34, and in birth order higher than 3.

The second column of Table 8.4 shows that the risk of dying for a child who falls in any avoidable high-risk category is 1.6 times that of a child not in any high-risk category.

The risk of a child dying is considerably higher to mother's aged older than 34 years, showing a risk ratio that is almost four times (3.92) higher than that of births accruing not in any high-risk category. Furthermore, the risk of dying is more than double for children born after a birth interval of less than 24 months compared with those who are not born in any high-risk category.

Table 8.4 also shows the potential for high-risk births among currently married women. A woman's current age, time elapsed since last birth, and parity are used to determine the risk categories in which any birth she conceived at the time of the survey would fall. In the final data processing, the criteria for placing women into specific risk categories are adjusted to take into account the gestation period.

One-fifth (20%) of currently married women in Tuvalu are not in any high-risk category, while over two-thirds (68%) have the potential of giving birth to a child exposed to a higher risk of mortality, and 37% of married women fall into multiple high-risk categories.

Table 8.4: High-risk fertility behaviour

Percent distribution of children born in the five years preceding the survey by category of elevated risk of mortality and the risk ratio, and percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Tuvalu 2007

	Births in the five years preceding the survey		
Risk category	Percentage of births	Risk ratio	Percentage of currently married women[1]
Not in any high risk category	21.8	1.00	20.4[a]
Unavoidable risk category			
First order births to mothers between ages 18 and 34	26.1	0.37	12.0
Single high-risk category			
Mother's age <18	1.0	0.00	0.1
Mother's age >34	2.1	3.92	14.6
Birth interval <24 months	13.4	2.25	8.0
Birth order >3	12.3	1.51	8.4
Subtotal	28.8	1.98	31.1
Multiple high-risk category			
Age >34 & birth interval <24 months	0.0	*	0.3
Age >34 & birth order >3	13.6	1.56	26.8
Age >34 & birth interval <24 months & birth order >3	2.7	1.80	2.9
Birth interval <24 months & birth order >3	6.9	*	6.4
Subtotal	23.2	1.12	36.5
In any avoidable high-risk category	52.0	1.60	67.6
Total	100.0	na	100.0
Number of births/women	447	na	598

Note: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category to the proportion dead among births not in any high-risk category. An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed.
na = not applicable
[1] Women are assigned to risk categories according to the status they would have at the birth of a child if they were to conceive at the time of the survey: current age less than 17 years and 3 months or older than 34 years and 2 months, latest birth less than 15 months ago, or latest birth being of order 3 or higher.
[a] Includes sterilised women.

8.6 KEY RESULTS

Data from the 2007 TDHS show a decrease in infant mortality from 37 deaths per 1,000 births during the period 1993–1998 to 24 deaths per 1,000 births from 1998–2003, then increasing again to 31 deaths from 2003–2007. However, this mortality level and trend is not supported by data from the vital registration system, indicating a considerably higher level of early-age mortality during the period 1997–2002 of 35. Levels and trends of early age mortality from the 2007 TDHS are based on very low numbers of respondents. Only postneonatal mortality showed a constant decline during the 15-year period before the survey

The 2007 TDHS examined the relative importance of maternal fertility patterns associated with increased risk of mortality. Generally, infants and children have a greater probability of dying if 1) they are born to mothers who are living in the outer islands, 2) mothers are older than 40, and 3) mothers have a lower educational background. In addition, mortality risks are higher if the birth interval is shorter than two years, and the size of the baby is small or very small.

In analysing the effects of high-risk fertility behaviour on child survival, a mother is classified as being too young if she is less than age 18, and too old if she is over age 34 at the time of birth. A short birth interval is defined as a birth occurring less than 24 months after the previous birth, and a child is of a high birth order if the mother had previously given birth to three or more children (i.e. if the child is of birth order four or higher). The results show that:

- only 22% of births in Tuvalu are not in any high-risk category;
- an additional 26% of births are first-order births to mothers aged 18–34, considered an unavoidable risk category;
- the remaining 52% of births in Tuvalu are in at least one of the specified avoidable high-risk categories:
    - About 29% of births are in only one of the high-risk categories; mostly birth intervals < 24 months (13%), and birth orders > 3 (12%), while 23% are in multiple high-risk categories;
    - Births in multiple high-risk categories are mostly found among mothers who are older than 34, and in birth orders higher than three.

The risk of a child dying is considerably higher if its mother is older than 34, with a risk ratio that is almost four times (3.92) higher than children who are not born in any of the high-risk categories. Furthermore, the risk of a child dying is more than double if it is born less than 24 months after the previous birth, compared with children who are not born in any of the high-risk categories.

CHAPTER 9 REPRODUCTIVE HEALTH

Reproductive health is an important part of any healthcare system and is aimed at reducing morbidity and mortality related to pregnancy, through the regular monitoring and education of pregnant women. Proper care during pregnancy and childbirth are important for both the health of the mother and her baby. This chapter includes information related to antenatal, childbirth and postpartum care.

Information on antenatal, delivery and postnatal care is of great value in identifying subgroups of women who do not use such services, and is useful in planning for improving service delivery.

The Tuvaluan government is committed to achieving the Millennium Development Goals (MDGs), and reproductive health is well recognised in the National Kakeega II Development Plan. A National Reproductive Health Policy is in draft form, and will be finalised by the end of 2009.

During the 2007 TDHS, women who had given birth in the five years preceding the survey were asked a number of questions about maternal and neonatal health care. For the last live birth in that period, mothers were asked about: 1) whether they had obtained antenatal care during their pregnancy; 2) the number of antenatal care visits or times they attended an antenatal clinic; and 3) the stage of pregnancy when they first attended antenatal care. Women were also asked whether they had received a tetanus toxoid injection while pregnant, and also about the component of care, including information given, testing, and treatments provided during this period.

Mothers were also asked about the place of delivery, the health providers who delivered the child, and whether they had a normal birth or a caesarean section.

Information obtained on postnatal care included timing of first postnatal check up and the type of provider who provided the first postnatal checkup.

Overall, 292 women aged 15–49 had at least one live birth in the five years preceding the survey. Table 9.9 provides findings on problems associated with accessing health care for all women aged 15–49 years.

9.1 ANTENATAL CARE

A major objective of antenatal care is to provide care for pregnant women, and identify and treat health problems that can occur during pregnancy and childbirth. The 2007 TDHS asked women about the source of their antenatal care and the person who provided that care for their most recent birth. If a woman received antenatal care from more than one provider, the provider with the highest qualifications was recorded.

Table 9.1 shows the reported types of health personnel who provided antenatal care by mother's age at birth, child's birth order, mother's level of education, and wealth quintile for the household. About 97% of women received antenatal care from a skilled provider. Most women sought care from a doctor, nurse or midwife. Less than 1% of women received antenatal care from a traditional birth attendant as their most qualified provider. Less than 2% of women who gave birth in the five years preceding the survey received no antenatal care.

Table 9.1: Antenatal care

Percent distribution of women aged 15–49 who had a live birth in the five years preceding the survey by antenatal care provider during pregnancy for the most recent birth and the percentage receiving antenatal care from a skilled provider for the most recent birth, according to background characteristics, Tuvalu 2007

Background characteristic	Doctor	Nurse/ midwife	Auxiliary nurse/ midwife	Traditional birth attendant	Other	No one	Total	Percentage receiving antenatal care from a skilled provider[1]	Number of women
Mother's age at birth									
<20	*	*	*	*	*	*	*	*	14
20–34	45.6	48.1	3.6	0.5	0.5	1.6	100.0	97.4	206
35–49	50.3	40.6	6.2	1.4	0.0	1.5	100.0	97.0	72
Birth order									
1	66.9	27.8	3.9	0.0	0.0	1.5	100.0	98.5	75
2–3	34.3	57.6	4.7	1.1	0.0	2.2	100.0	96.6	97
4–5	46.5	49.3	2.9	0.0	1.3	0.0	100.0	98.7	84
6+	(44.2)	(44.4)	(5.5)	(2.9)	(0.0)	(3.0)	(100.0)	94.1	36
Residence									
Funafuti	72.9	20.3	2.3	0.8	0.8	3.0	100.0	95.5	144
Outer islands	22.4	71.0	5.9	0.7	0.0	0.0	100.0	99.3	148
Mother's education									
Less than secondary	48.8	45.3	2.9	1.5	0.0	1.5	100.0	97.0	70
Secondary	43.3	48.6	4.9	0.7	0.7	2.0	100.0	96.7	166
More than secondary	57.8	39.0	3.2	0.0	0.0	0.0	100.0	100.0	56
Wealth quintile									
Lowest	30.0	63.1	4.9	0.0	0.0	2.1	100.0	97.9	52
Second	30.3	63.2	3.2	1.6	0.0	1.7	100.0	96.7	65
Middle	55.4	39.1	3.9	0.0	0.0	1.6	100.0	98.4	68
Fourth	(56.8)	(35.3)	(3.6)	(2.2)	(0.0)	(2.2)	(100.0)	(95.7)	50
Highest	64.9	28.3	4.9	0.0	1.9	0.0	100.0	98.1	57
Total	47.4	45.9	4.1	0.7	0.4	1.5	100.0	97.4	292

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation. 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] Skilled provider includes doctor, nurse, midwife, and auxiliary nurse or midwife.

The data also show that 99% of women in the outer islands received antenatal care from a skilled provider compared with 96% of women living in Funafuti.

9.2 NUMBER OF ANTENATAL CARE VISITS AND TIMING OF THE FIRST VISIT

In line with WHO guidelines, Tuvalu's Ministry of Health and medical services recommend that a woman who is having a normal pregnancy should attend four antenatal care visits, the first of which should take place during the first trimester. Table 9.2 presents information on women aged 15–49 who had a live birth in the five years preceding the survey by number of antenatal care visits for the most recent live birth, and by the timing of the first visit.

Table 9.2: Number of antenatal care visits and timing of first visit

Percent distribution of women aged 15–49 who had a live birth in the five years preceding the survey by number of antenatal care (ANC) visits for the most recent live birth, and by the timing of the first visit, and among women receiving ANC, the median number of months pregnant at first visit, according to residence, Tuvalu 2007

	Residence		
Number and timing of ANC visits	Funafuti	Outer islands	Total
Number of ANC visits			
None	3.0	0.0	1.5
1	1.5	0.9	1.2
2–3	12.0	5.4	8.7
4+	67.7	67.0	67.3
Don't know/missing	15.8	26.7	21.3
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No antenatal care	3.0	0.0	1.5
<4	27.8	26.8	27.3
4–5	30.1	42.5	36.4
6–7	34.6	24.4	29.5
8+	3.8	1.7	2.7
Don't know/missing	0.8	4.5	2.7
Total	100.0	100.0	100.0
Number of women	144	148	292
Median months pregnant at first visit (for those with ANC)	5.4	5.1	5.2
Number of women with ANC	140	148	288

Table 9.2 further shows that only 27% of pregnant women received their first antenatal care during the first three months of pregnancy. A high proportion of pregnant women (36%) received their first antenatal care during the fourth or fifth months of pregnancy, while about 30% made their first visit during the sixth month of pregnancy or later. Only about 3% of pregnant women sought antenatal care very late during the third trimester, while about less than 2% did not receive antenatal care at any time during their pregnancy. The median number of months pregnant that women first seek antenatal care is 5.2 months, when the opportunity may have passed to diagnose problems early on, provide treatment, and prevent further complications.

9.3 QUALITY OF ANTENATAL CARE

In line with WHO guidelines and recommendations for good antenatal care, Tuvalu's Ministry of Health encourages pregnant women to receive antenatal care and recommended treatment. All healthcare workers have been trained to give pregnant mothers proper antenatal care and treatment.

Table 9.3 shows the percentage of mothers who received antenatal care by content of antenatal care and background characteristics. The results show that the majority of women received some form of antenatal care during their most recent birth. Overall, about 99% of women who had a live birth in the five years preceding the survey received some form of antenatal care for their most recent birth. About 92% of women who had a live birth in the five years preceding the survey took iron tablets or syrup during their last pregnancy, while only about 4% took drugs for intestinal parasites. Almost all women (99%) who received antenatal care for their most recent birth in the past five years, had their weight and blood pressure measured, and urine and blood samples taken during their pregnancy. Only about half of all women who received antenatal care for their most recent birth received information on recognising signs of pregnancy complications.

Table 9.3: Components of antenatal care

Among women aged 15–49 who had a live birth in the five years preceding the survey, the percentage who took iron tablets or syrup and drugs for intestinal parasites during the pregnancy of the most recent birth, and among women receiving antenatal care (ANC) for the most recent live birth in the five years preceding the survey, the percentage receiving specific antenatal services, according to background characteristics, Tuvalu 2007

	Among women with a live birth in the last five years, the percentage who during the pregnancy of their last birth:			Among women who received antenatal care for their most recent birth in the last five years, the percentage with selected services:					
Background characteristic	Took iron tablets or syrup	Took intestinal parasite drugs	Number of women with a live birth in preceding five years	Informed of signs of pregnancy complications	Weighed	Blood pressure measured	Urine sample taken	Blood sample taken	Number of women with ANC for their most recent birth
Mother's age at birth									
<20	*	*	14	*	*	*	*	*	14
20–34	92.0	3.3	206	51.1	100.0	99.5	97.6	96.6	202
35–49	92.9	5.6	72	49.5	99.1	97.6	99.1	99.1	71
Birth order									
1	88.9	1.5	75	61.8	100.0	98.5	95.7	97.1	74
2–3	90.2	1.9	97	43.3	100.0	100.0	98.2	100.0	94
4–5	95.5	7.3	84	50.0	100.0	100.0	100.0	94.3	84
6+	(94.7)	(4.8)	36	(51.4)	(98.2)	(95.1)	(98.2)	(98.2)	35
Residence									
Funafuti	91.7	3.0	144	49.6	100.0	98.4	98.4	100.0	140
Outer islands	92.2	4.4	148	52.3	99.6	99.6	97.7	94.9	148
Mother's education									
Less than secondary	93.4	9.0	70	41.8	100.0	100.0	99.1	100.0	69
Secondary	91.9	1.0	166	50.4	99.6	98.9	98.3	96.6	163
More than secondary	90.4	5.1	56	64.1	100.0	98.0	96.2	96.2	56
Wealth quintile									
Lowest	88.0	5.7	52	56.7	100.0	100.0	100.0	100.0	51
Second	91.6	0.9	65	44.3	100.0	100.0	99.0	96.7	64
Middle	94.3	4.1	68	45.3	99.1	99.1	97.4	94.9	67
Fourth	(90.0)	(4.7)	50	(44.4)	(100.0)	(97.8)	(93.5)	(95.7)	49
Highest	95.1	3.8	57	65.5	100.0	98.1	100.0	100.0	57
Total	92.0	3.7	292	51.0	99.8	99.0	98.1	97.4	288

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.

In summary, the results reflecting the provision of a more comprehensive antenatal care is recommended. While the rate of coverage of four or more antenatal care visit is fairly high, concerted efforts are needed to improve the timing of attendance and quality of antenatal care, especially education about the signs of pregnancy complications and provision of antihelminthic drugs.

9.4 TETANUS TOXOID IMMUNISATIONS

Neonatal tetanus is a leading cause of neonatal death in developing countries. Tetanus can be prevented through immunisation with tetanus toxoid (TT)-containing vaccines. Neonatal tetanus can be prevented by immunising women of childbearing age, and pregnant mothers with TT. This not only protects the mother but also the foetus through a transfer of tetanus antibodies. Neonatal tetanus, which is mostly fatal, is particularly common where deliveries are conducted at home, and in unhygienic environments.

If a woman has not received previous TT injections, then she should be given two TT injections during pregnancy. However, if a woman was immunised before she became pregnant, she may require one or no TT injections during pregnancy, depending on the number of injections she has ever received and the timing of the last injection. Five doses are required for a lifetime protection. The 2007 TDHS collected data on whether or not women received at least two TT injections during a pregnancy and whether or not the pregnancy was protected against neonatal tetanus. Table 9.4 show the percentage of mothers who received two or more TT injections during their pregnancy for their last live birth, and the percentage whose last live birth was protected against neonatal tetanus, according to background characteristics.

Table 9.4: Tetanus toxoid injections

Among mothers aged 15–49 with a live birth in the five years preceding the survey, the percentage who received two or more tetanus toxoid (TTI) injections during the pregnancy for the last live birth, and the percentage whose last live birth was protected against neonatal tetanus, according to background characteristics, Tuvalu 2007

Background characteristic	Percentage receiving two or more injections during last pregnancy	Percentage whose last birth was protected against neonatal tetanus[1]	Number of mothers
Mother's age at birth			
<20	*	*	14
20–34	24.1	30.6	206
35–49	18.5	30.5	72
Birth order			
1	37.1	40.0	75
2–3	13.9	22.4	97
4–5	21.2	32.5	84
6+	(28.7)	(40.70	36
Residence			
Funafuti	26.3	37.6	144
Outer islands	21.3	26.7	148
Mother's education			
Less than secondary	31.6	43.2	70
Secondary	18.3	25.7	166
More than secondary	30.2	37.3	56
Wealth quintile			
Lowest	25.8	29.1	52
Second	22.8	32.3	65
Middle	25.3	37.3	68
Fourth	(17.8)	(23.4)	50
Highest	26.6	36.1	57
Total	23.8	32.1	292

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] Includes mothers with two injections during the pregnancy of her last birth, or two or more injections (the last within three years of the last live birth), or three or more injections (the last within five years of the last birth), or four or more injections (the last within ten years of the last live birth), or five or more injections prior to the last birth.

The results show that only 24% of pregnant women received two or more TT injections during their last pregnancy. However, 32% of women had their last pregnancy protected against neonatal tetanus. Younger women and women with lower births order are more likely to receive two TT injections during their pregnancy. The likelihood of having a pregnancy that is protected against neonatal tetanus does not appear to decline with mother's age at birth, and women who are pregnant with their first child are actually less likely to have their pregnancy protected against neonatal tetanus (40%), than women who have had two to three children (22%).

The proportion of women whose last pregnancy was protected against neonatal tetanus was higher in Funafuti (38%) than in the outer islands (27%). The likelihood of having the last pregnancy protected against neonatal tetanus increases with wealth quintiles, but is variable with educational attainment.

9.5 PLACE OF DELIVERY

Some of the factors associated with birth outcome include the place where a mother delivers a baby, the disinfection practices used there, the equipment available, and the skills and performance of those who assist the woman. Table 9.5 shows the percent distribution of live births in the five years preceding the survey by place of childbirth by background characteristics of the mother.

Table 9.5: Place of delivery

Percent distribution of live births in the five years preceding the survey by place of delivery and percentage delivered in a health facility, according to background characteristics, Tuvalu 2007

Background characteristic	Health facility		Home	Other	Missing	Total	Percentage delivered in a health facility	Number of births
	Public sector	Private sector						
Mother's age at birth								
<20	(96.3)	(3.7)	(0.0)	(0.0)	(0.0)	(100.0)	(100.0)	29
20–34	86.6	6.1	4.1	2.9	0.3	100.0	92.7	335
35–49	84.7	7.2	6.7	1.3	0.0	100.0	91.9	82
Birth order								
1	84.1	12.5	0.9	2.6	0.0	100.0	96.5	125
2–3	88.8	4.1	4.4	2.0	0.7	100.0	92.9	163
4–5	89.3	2.0	5.1	3.7	0.0	100.0	91.3	118
6+	(81.2)	(6.9)	(11.9)	(0.0)	(0.0)	(100.0)	(88.1)	40
Residence								
Funafuti	84.4	7.5	2.8	4.7	0.5	100.0	92.0	230
Outer islands	89.5	4.7	5.8	0.0	0.0	100.0	94.2	217
Mother's education								
Less than secondary	89.8	2.3	6.8	0.0	1.1	100.0	92.1	100
Secondary	89.6	4.7	4.4	1.2	0.0	100.0	94.4	266
More than secondary	74.3	15.4	0.8	9.4	0.0	100.0	89.8	81
Antenatal care visits[1]								
None	*	*	*	*	*	*	*	4
1–3	(76.7)	(9.8)	(6.0)	(7.5)	(0.00	(100.0)	(86.5)	29
4+	88.5	7.1	2.8	1.7	0.0	100.0	95.5	197
Don't know/missing	90.4	4.7	3.1	1.7	0.0	100.0	95.1	62
Wealth quintile								
Lowest	87.4	4.7	7.9	0.0	0.0	100.0	92.1	72
Second	90.3	2.4	5.1	1.1	1.1	100.0	92.7	99
Middle	87.7	9.3	2.1	1.0	0.0	100.0	96.9	112
Fourth	89.6	6.3	2.8	1.4	0.0	100.0	95.8	78
Highest	79.2	7.5	4.5	8.8	0.0	100.0	86.7	86
Total	86.9	6.1	4.3	2.4	0.2	100.0	93.0	447

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] Includes only the most recent birth in the five years preceding the survey

Overall, the majority of women (93%) who reported having a live birth in the five years preceding the survey indicated that they had delivered in a health facility. Of these, 87% reported giving birth in a public sector facility, while only few women reported giving birth either at home or in a private sector facility. Because Tuvalu has only one public hospital and eight small health centres, women who give birth in a private facility would have given birth in another country.

Younger women are more likely than older women to give birth in a health facility. Table 9.5 also shows that women having their first child were more likely to have their child in a private sector health facility (i.e. overseas) than women having their fourth or later child. Likewise, the likelihood of giving birth in a private sector facility increases with educational attainment, but was variable across wealth quintiles.

9.6 ASSISTANCE WITH DELIVERY

Assistance during childbirth is another important variable that influences birth outcome and the health of the mother and child. This is because the knowledge, skills and performance of the birth attendant determines whether or not they can manage complications and observe hygienic practices.

Table 9.6 shows the percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, according to background characteristics of the mother.

Table 9.6: Assistance during delivery

Percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, percentage of birth assisted by a skilled provider and percentage delivered by caesarean section, according to background characteristics, Tuvalu 2007

Background characteristic	Person providing assistance during delivery							Percentage delivered by a skilled provider[1]	Percentage delivered by C-section	Number of births
	Doctor	Nurse/ midwife	Nurse aide	Traditional birth attendant	Relative/ other	No one	Total			
Mother's age at birth										
<20	(19.2)	(75.0)	(5.8)	(0.0)	(0.0)	(0.0)	(100.0)	(100.0)	(0.0)	29
20–34	17.9	74.9	5.2	1.1	1.0	0.0	100.0	97.9	7.2	335
35–49	21.4	72.8	2.9	0.8	0.8	1.3	100.0	97.1	9.4	82
Birth order										
1	26.7	66.7	5.8	0.9	0.0	0.0	100.0	99.1	11.6	125
2–3	15.0	76.4	6.4	0.4	1.8	0.0	100.0	97.9	4.6	163
4–5	15.1	79.8	2.6	1.6	0.9	0.0	100.0	97.5	4.8	118
6+	(18.1)	(76.0)	(1.6)	(1.6)	(0.0)	(2.7)	(100.0)	(95.8)	(10.1)	40
Place of delivery										
Health facility	19.5	75.1	5.0	0.2	0.3	0.0	100.0	99.6	7.6	416
Elsewhere	7.2	65.5	2.0	12.0	9.5	3.6	100.0	74.8	0.0	30
Residence										
Funafuti	24.5	68.4	4.7	0.5	1.4	0.5	100.0	97.6	9.4	230
Outer islands	12.3	81.0	4.9	1.5	0.3	0.0	100.0	98.2	4.6	217
Mother's education										
Less than secondary	22.2	72.5	2.3	1.9	1.1	0.0	100.0	97.0	8.2	100
Secondary	15.2	76.8	5.5	0.9	1.1	0.4	100.0	97.6	6.8	266
More than secondary	25.3	69.3	5.4	0.0	0.0	0.0	100.0	100.0	6.7	81
Wealth quintile										
Lowest	11.2	83.5	4.4	0.9	0.0	0.0	100.0	99.1	4.7	72
Second	16.1	72.6	8.7	1.9	0.7	0.0	100.0	97.4	5.1	99
Middle	15.9	82.0	0.6	1.6	0.0	0.0	100.0	98.4	4.1	112
Fourth	27.2	66.8	3.2	0.0	1.4	1.4	100.0	97.2	8.8	78
Highest	23.4	66.6	7.5	0.0	2.5	0.0	100.0	97.5	13.8	86
Total	18.6	74.5	4.8	1.0	0.9	0.2	100.0	97.9	7.1	447

Note: If the respondent mentioned more than one person attending the delivery, only the most qualified person is considered in this tabulation. Figures in parentheses are based on 25–49 cases.

[1] A skilled provider includes a doctor, nurse, midwife and auxiliary nurse/midwife.

Overall, 98% of deliveries were assisted by a skilled provider. Of these, the majority (75%) were assisted by a nurse or midwife, 19% were assisted by a doctor, and only 5% were assisted by a nurse aide. About 1% of deliveries were assisted by a traditional birth attendant, and less than 1% were assisted by a relative or received no assistance.

Table 9.6 also shows that women are more likely to receive assistance from a doctor during the birth of their first child (27%) than women with higher parity (15%).

The likelihood of receiving skilled assistance at birth is the same for all women, regardless of their wealth and educational attainment. This may reflect the easy access to health facilities, and the availability of skilled providers.

9.7 TIMING OF FIRST POST NATAL CHECK UP

The postpartum period, also known as the puerperium, is the six-week period following childbirth. Postnatal care is very important for the health of the mother and her baby. Postnatal checkups enable healthcare providers to detect complications and provide appropriate treatment and referral for mothers and their babies. Also during this checkup, mothers are provided with information on how to care for herself and her child, and how to recognise and respond to problems during the postpartum period.

The national guideline recommends that a mother should receive a postnatal checkup within the first hour after giving birth, daily while in hospital, and 42 days or 6 weeks after the delivery.

Table 9.7 shows the percent distribution of the mother's first postnatal check up for the last live birth by time after delivery according to background characteristics of the mother. A large proportion of women (33%) reported not having any postnatal check up after delivery. About 20% received postnatal care within four hours after delivery, 15% received postnatal care within 24 hours after delivery, 15% received postnatal care within the first two days after delivery, and 14% received postnatal care within 3 to 41 days after delivery.

Older women, women with higher parity, urban women, well-educated women, and those in the highest wealth quintiles are more likely to receive postpartum care than other women.

Table 9.7: Timing of first postnatal checkup

Among women aged 15–49 giving birth in the five years preceding the survey, the percent distribution of the mother's first postnatal checkup for the last live birth by time after delivery, according to background characteristics, Tuvalu 2007

Background characteristic	Timing after delivery of mother's first postnatal checkup					No postnatal checkup[1]	Total	Number of women
	Less than 4 hours	4–23 hours	2 days	3–41 days	Don't know/ missing			
Mother's age at birth								
<20	*	*	*	*	*	*	*	14
20–34	19.3	15.7	18.3	10.7	1.6	34.4	100.0	206
35–49	23.4	10.8	9.0	25.7	0.0	31.0	100.0	72
Birth order								
1	13.6	27.1	20.6	10.3	0.8	27.5	100.0	75
2–3	23.2	15.1	13.0	10.3	3.3	35.2	100.0	97
4–5	24.2	6.2	15.2	19.0	0.0	35.6	100.0	84
6+	(17.7)	(12.5)	(12.2)	(22.3)	(0.0)	(35.3)	(100.0)	36
Residence								
Funafuti	21.1	15.0	15.0	14.3	0.8	33.8	100.0	144
Outer Islands	19.7	15.5	15.9	14.3	1.8	32.9	100.0	148
Education								
Less than secondary	22.4	12.4	11.6	21.9	0.9	30.9	100.0	70
Secondary	16.4	14.0	17.1	12.8	1.3	38.4	100.0	166
More than secondary	29.4	22.7	15.4	9.0	2.0	21.5	100.0	56

Table 9.7 (continued)

Background characteristic	Timing after delivery of mother's first postnatal checkup					No postnatal checkup[1]	Total	Number of women
	Less than 4 hours	4–23 hours	2 days	3–41 days	Don't know/ missing			
Wealth quintile								
Lowest	24.0	14.2	11.1	18.3	1.2	31.2	100.0	52
Second	12.8	13.1	20.1	12.1	3.2	38.6	100.0	65
Middle	20.3	6.8	18.7	15.9	0.0	38.4	100.0	68
Fourth	(17.9)	(25.3)	(14.3)	(16.2)	(0.0)	(26.3)	(100.0)	50
Highest	27.7	20.0	11.3	9.5	1.9	29.6	100.0	57
Total	20.3	15.3	15.5	14.3	1.3	33.4	100.0	292

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] Includes women who received a checkup after 41 days.

9.8 TYPE OF PROVIDER OF FIRST POSTNATAL CHECK UP

The type of provider for postpartum care was assessed in this chapter. This is important because the skills of a provider determine the ability to detect and diagnose complications during the postnatal period, and provide appropriate treatment or referral. Table 9.8 shows the percent distribution of women giving birth in the five years preceding the survey by type of provider of the mother's first postnatal health check for the last live birth according to background characteristics.

Table 9.8: Type of provider of first postnatal checkup

Among women aged 15–49 giving birth in the five years preceding the survey, the percent distribution by type of provider of the mother's first postnatal health check for the last live birth, according to background characteristics, Tuvalu 2007

Background characteristic	Type of health provider of mother's first postnatal checkup			No postnatal checkup[1]	Total	Number of women
	Doctor/ nurse/ midwife	Nurse aide/midwife	Other			
Mother's age at birth						
<20	*	*	*	*	*	14
20–34	61.1	3.4	1.1	34.4	100.0	206
35–49	64.2	4.8	0.0	31.0	100.0	72
Birth order						
1	71.0	0.0	1.5	27.5	100.0	75
2–3	58.2	5.5	1.1	35.2	100.0	97
4–5	59.1	5.4	0.0	35.6	100.0	84
6+	(63.0)	(1.7)	(0.0)	(35.3)	(100.0)	36
Residence						
Funafuti	60.9	3.8	1.5	33.8	100.0	144
Outer islands	63.7	3.4	0.0	32.9	100.0	148
Education						
Less than secondary	66.7	2.4	0.0	30.9	100.0	70
Secondary	57.7	3.3	0.7	38.4	100.0	166
More than secondary	70.7	5.9	2.0	21.5	100.0	56
Wealth quintile						
Lowest	67.6	1.2	0.0	31.2	100.0	52
Second	54.6	5.2	1.7	38.6	100.0	65
Middle	60.0	1.6	0.0	38.4	100.0	68
Fourth	(69.3)	(4.3)	(0.0)	(26.3)	(100.0)	50
Highest	62.9	5.6	1.9	29.6	100.0	57
Total	62.3	3.6	0.7	33.4	100.0	292

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] Includes women who received a checkup after 41 days.

Table 9.8 shows that 62% of women received postpartum care from a doctor, nurse or midwife, while 4% received postpartum care from a nurse aide, and less than 1% received postpartum care from some other type of health provider. About 33% of women reported not having any postpartum care from any type of health provider.

Older women, women giving birth to their first child, women with a higher education, and women in the lowest wealth quintile households are the most likely to receive postpartum care from a skilled provider.

9.9 PROBLEMS IN ACCESSING HEALTH CARE

Many factors can prevent women from receiving medical advice or treatment. Information on such factors is particularly important in understanding and addressing the barriers women may face in seeking care during pregnancy and at the time of delivery.

The 2007 TDHS assessed problems encountered in accessing health care. Table 9.9 shows the percentage of women who reported having serious problems in accessing health care for themselves, by type of problems, and according to background characteristics.

Overall, 98% of women reported at least one problem accessing health care. The majority of women did not seek health care because they were concerned that no provider (93%) or drugs (97%) were available at the health facility. Nearly 72% of women were concerned that no female provider was available. An equal proportion of women did not want to go alone, or reported that the distance to the health facility was too far, or that they would have to take transport to get there (25% each). Fewer numbers of women have problems of getting money for treatment (20%), and getting permission to go for treatment (11%).

More younger women reported having problems with: 1) getting permission to go for treatment; 2) not wanting to go alone for treatment; and 3) far distance to a health facility. Also more young women than older women cited the concern that no female provider was available.

Table 9.9: Problems in accessing health care

Percentage of women aged 15–49 who reported that they have serious problems in accessing health care for themselves when they are sick, by type of problem, according to background characteristics, Tuvalu 2007

Background characteristic	Problems in accessing health care									
	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Having to take transport	Not wanting to go alone	Concern no female provider available	Concern no provider available	Concern no drugs available	At least one problem accessing health care	Number of women
Age										
15–19	21.1	20.9	29.5	29.0	42.4	79.7	91.8	93.9	97.4	111
20–34	13.0	17.8	24.1	22.3	22.8	69.3	92.1	95.3	98.0	376
35–49	6.5	21.9	26.1	26.4	21.3	71.6	93.8	98.1	98.8	363
Number of living children										
0	17.2	20.5	25.8	23.7	32.9	68.9	91.7	94.7	98.3	289
1–2	9.4	18.6	23.7	24.2	23.2	72.5	94.6	98.1	99.5	235
3–4	7.9	18.8	23.9	24.0	17.2	73.5	92.4	95.2	96.7	223
5+	6.0	23.6	33.3	31.7	21.5	73.7	92.6	99.0	99.0	105
Marital status										
Never married	22.4	20.8	28.0	24.5	38.3	78.6	92.1	94.3	98.5	193
Married or living together	7.6	18.7	23.8	23.9	20.0	67.8	92.8	96.7	98.1	598
Divorced/separated/widowed	12.0	28.9	36.1	36.3	28.6	88.0	95.5	99.0	100.0	60
Employed last 12 months										
Not employed	12.1	15.9	23.3	22.0	26.3	74.2	93.4	95.9	98.0	414
Employed for cash	11.0	24.7	28.1	28.1	22.8	69.8	91.6	96.4	98.4	405
Employed not for cash	(3.6)	(11.4)	(26.1)	(23.8)	(29.7)	(59.9)	(100.0)	(100.0)	(100.0)	30
Residence										
Funafuti	13.6	21.8	32.3	33.1	29.1	73.0	91.3	95.3	99.0	414
Outer islands	9.0	18.2	19.4	17.2	20.6	70.4	94.2	97.2	97.7	437
Education										
Less than secondary	11.7	27.6	33.6	31.8	24.7	77.8	96.4	99.0	99.0	282
Secondary	11.2	18.6	24.6	24.1	26.7	73.5	92.1	95.6	98.5	437
More than secondary	10.4	7.9	12.1	12.8	18.3	52.7	87.6	92.7	96.0	132

Table 9.9 (continued)

Background characteristic	Problems in accessing health care									
	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Having to take transport	Not wanting to go alone	Concern no female provider available	Concern no provider available	Concern no drugs available	At least one problem accessing health care	Number of women
Wealth quintile										
Lowest	12.9	23.5	30.4	29.0	23.8	84.0	96.8	100.0	100.0	152
Second	11.0	18.8	26.2	25.5	27.2	72.4	88.8	93.0	97.1	179
Middle	9.7	21.3	28.9	26.4	27.9	73.1	93.7	97.1	98.4	169
Fourth	7.9	21.3	25.2	21.7	19.1	59.7	92.7	96.9	98.2	173
Highest	14.7	15.3	18.3	22.6	25.5	70.6	92.7	95.1	98.2	177
Total	11.2	19.9	25.6	24.9	24.7	71.7	92.8	96.3	98.3	851

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

9.10 KEY RESULTS

The followings are the main findings discussed in the chapter.

1. The majority of Tuvaluan mothers (97%) received antenatal care from a skilled provider. Most of them sought care from a doctor, nurse or midwife. More mothers from the outer islands received antenatal care from a skilled provider (99%) than mothers in Funafuti (95%).
2. About 27% of mothers aged 15–49 who had a live birth in the five years preceding the survey received their first antenatal care during the first three months of pregnancy. About 30% of mothers made their visit during the sixth and seventh month of pregnancy, which was considered very late for detecting any pregnancy-related complications.
3. While the vast majority of women who attended antenatal care during their most recent pregnancy reported having received all forms of routine care (i.e. were weighed, had blood pressure measured, and urine and blood samples taken), only 51% reported being given information about identifying signs of pregnancy-related complications. This finding indicates a need to determine whether women are routinely provided this information when they make antenatal care visits.
4. About 32% of mothers indicated that their most recent birth in the five years preceding the survey was protected against neonatal tetanus. More babies in Funafuti were immunised than in the outer islands.
5. The vast majority of women (93%) who had a live birth in the five years preceding the survey indicated that they had delivered the baby in a recognised health facility. Overall, the majority (98%) reported they were assisted by a skilled health provider. Of concern is that 33% of women reported that they did not have a postnatal checkup. Further investigation would be valuable to ascertain whether some women are missing out on postnatal checkups, and if so, to determine strategies to overcome this problem.
6. Over 90% of all women who participated in the 2007 TDHS reported at least one problem with accessing health care in Tuvalu. The two most commonly raised concerns were the availability of medications (reported by 96% of respondents) and the availability of health providers (reported by 93% of respondents).

Other problems included the availability of female providers (72%), and distance to a health facility (26%), having to take transport and not wanting to go alone (25% each). These issues should be considered when developing strategies for improving women's access to health care.

CHAPTER 10 CHILD HEALTH

This chapter presents findings on several areas of importance to child health and survival, including characteristics of the neonate (birth weight and size at birth), the vaccination status of young children, and treatment practices among children suffering from three childhood diseases. The information on birth weight and birth size is important for designing and implementing programmes aimed at reducing neonatal and infant mortality.

Many early childhood deaths can be prevented by immunising children against preventable diseases, and by ensuring that children receive prompt and appropriate treatment when they become ill. Vaccination coverage information focuses on the 18–29 month age group. Overall, coverage levels at the time of the survey and by 18 months of age are shown for this age group. Additionally, the source of the vaccination (whether based on a written vaccination card or on the mother's recall) is shown. Differences in vaccination coverage between population subgroups assist in programme planning.

Information on treatment practices and contact with health services among children with the three most important childhood illnesses (i.e. acute respiratory infection, fever, and diarrhoea) help in assessing national programmes aimed at reducing the mortality impact of these illnesses. Information is provided on the prevalence of acute respiratory infection and fever, and their treatment with antibiotics. The treatment of diarrhoeal disease with oral rehydration therapy (including increased fluids) aids in assessing programmes that recommend such treatment. Because appropriate sanitary practices can help prevent and reduce the severity of diarrhoeal disease, information is also provided on the manner of disposing of children's faecal matter.

10.1 BIRTH WEIGHT

A child's birth weight or size at birth is an important indicator of their vulnerability to the risk of childhood illnesses and their chances of survival. Children whose birth weight is less than 2.5 kg, or children reported to be 'very small' or 'smaller than average' are considered to have a higher-than-average risk of early childhood death. For births in the five years preceding the survey, birth weight was recorded in the questionnaire if available from either a written record or the mother's recall. Since birth weight may not be known for many babies, the mother's estimate of the baby's size at birth was also obtained. Even though it is subjective, it can be a useful proxy for the child's weight. Table 10.1 presents information on child's weight and size at birth according to background characteristics.

Of the 447 eligible births in the five years prior the survey, almost all (97.5%) were weighed. Among these, 6.1% weighed less than 2.5 kg at birth. Lower birth weight is slightly more frequent among:

- children with older mothers aged 35–49;
- birth orders one, four and five;
- children whose mothers have a secondary level education; and
- births from mothers in second and fourth wealth quintile households.

Table 10.1 also includes information on the mother's assessment of the baby's size at birth. In the absence of birth weight, the mother's estimate of the baby's size at birth may be useful. Overall, about 3% of births are reported to be very small at the time of birth and 11% are smaller than average.

Table 10.1: Child's weight and size at birth

Percent distribution of live with a reported birth weight; percent distribution of all live births in the five years preceding the survey by mother's estimate of baby's size at birth and percentage of all births with a reported birth weight, according to background characteristics, Tuvalu 2007

	Percent distribution of births with a reported birth weight[1]					Percent distribution of all live births by size of child at birth					
Background characteristic	Less than 2.5 kg	2.5 kg or more	Total	Number of births	Percentage of all births with a reported birth weight	Very small	Smaller than average	Average or larger	Don't know/ missing	Total	Number of births
Mother's age at birth											
<20	(10.4)	(89.6)	(100.0)	27	92.8	(3.7)	(19.2)	(70.0)	(7.2)	(100.0)	29
20–34	5.3	94.7	100.0	331	98.7	2.4	10.1	86.8	0.6	100.0	335
35–49	8.0	92.0	100.0	78	94.1	4.7	9.7	84.9	0.8	100.0	82
Birth order											
1	7.3	92.7	100.0	121	96.6	4.3	15.9	77.2	2.5	100.0	125
2–3	5.3	94.7	100.0	161	98.7	1.7	9.8	87.8	0.7	100.0	163
4–5	7.4	92.6	100.0	114	96.4	3.6	7.5	88.9	0.0	100.0	118
6+	(1.5)	(98.5)	(100.0)	40	98.4	(1.5)	(6.9)	(90.1)	(1.6)	(100.0)	40
Mother's smoking status											
Smokes cigarettes/tobacco	7.8	92.2	100.0	89	96.5	3.5	7.7	87.6	1.2	100.0	92
Does not smoke	5.6	94.4	100.0	346	97.7	2.8	11.4	84.7	1.1	100.0	355
Residence											
Funafuti	6.7	93.3	100.0	226	98.1	4.2	13.2	81.6	0.9	100.0	230
Outer islands	5.3	94.7	100.0	210	96.8	1.6	7.9	89.3	1.3	100.0	217
Mother's education											
Less than secondary	5.8	94.2	100.0	96	96.2	2.8	8.7	86.7	1.7	100.0	100
Secondary	6.7	93.3	100.0	259	97.2	3.1	11.6	84.1	1.2	100.0	266
More than secondary	4.3	95.7	100.0	81	100.0	2.7	9.7	87.6	0.0	100.0	81
Wealth quintile											
Lowest	4.4	95.6	100.0	72	100.0	0.8	11.6	87.6	0.0	100.0	72
Second	11.0	89.0	100.0	96	96.8	7.2	15.6	74.1	3.2	100.0	99
Middle	4.2	95.8	100.0	107	96.2	1.0	5.6	92.5	1.0	100.0	112
Fourth	7.2	92.8	100.0	75	96.5	2.8	11.9	84.5	0.8	100.0	78
Highest	3.3	96.7	100.0	85	98.7	2.5	9.5	87.9	0.0	100.0	86
Total	6.1	93.9	100.0	436	97.5	2.9	10.6	85.3	1.1	100.0	447

Note: Figures in parentheses are based on 25–49 cases.
[1] Based on either a written record or the mother's recall.

10.2 VACCINATION COVERAGE BY SPECIFIC VACCINES

Universal immunisation of children against the six vaccine-preventable diseases — tuberculosis, diphtheria, whooping cough (pertussis), tetanus, polio and measles — is crucial to reducing infant and child mortality. Differences in vaccination coverage among population subgroups are useful for programme planning and targeting resources.

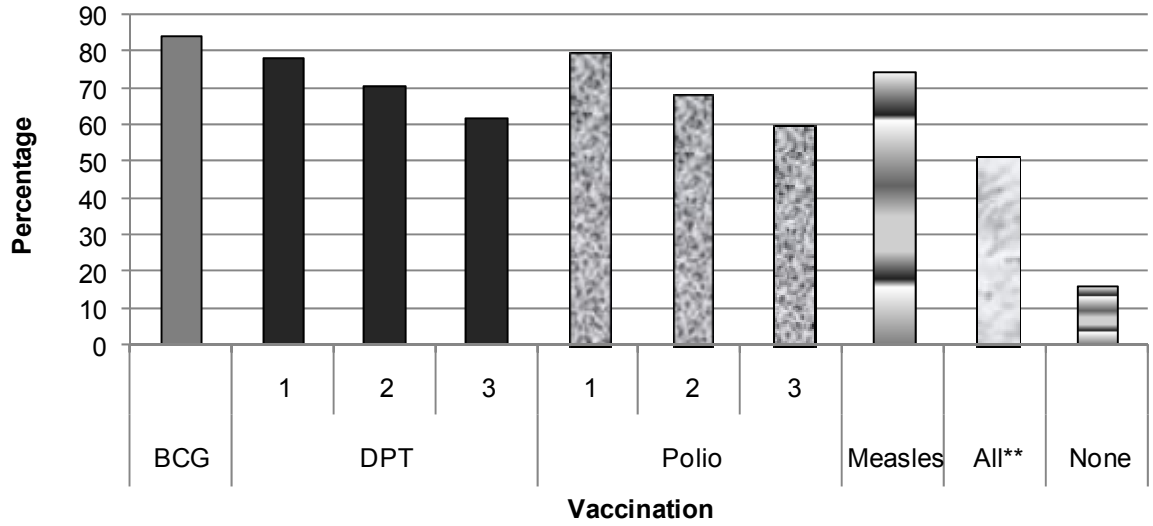
According to guidelines developed by the World Health Organization, children are considered fully immunised when they have received a BCG vaccination against tuberculosis, three doses each of DPT (diphtheria, pertussis and tetanus) and polio vaccines, and a measles vaccination by age 12 months. BCG should be given at birth or at first clinical contact, DPT and polio require three vaccinations at approximately 6, 10 and 14 weeks of age, and measles should be given at or soon after reaching 9 months of age.

The Tuvalu child vaccination schedule consists of BCG at the age of one month, DPT and polio at the age of 2, 4 and 6 months, and measles at age 1 year. DPT and polio are usually given together. The 2007 TDHS collected information on vaccination coverage for all living children born in the five years preceding the survey, either from vaccination cards shown to the interviewer or, lacking these, from mothers' recall.

Table 10.2 and Figure 10.1 show the percentage of children aged 18–29 months at the time of the survey who received the various vaccinations at any time, and by 18 months of age, respectively. Out of 80 children, more than half (54%) had no vaccination card at the time of the survey. Survey results show that 51% of all children are reported to receive all basic vaccinations. Of these, the number who receive each single vaccination of DPT and polio declines with increasing age of the child. About 74% have received a measles vaccination and 84% have had a BCG vaccination at birth. These results are lower compared with 2005 data from the Ministry of Health, which is available through the UNICEF/WHO immunisation summary[9].

[9] Immunisation summary: The 2007 Edition, UNICEF/WHO. A statistical reference containing data through 2005.

Figure 10.1: Percentage of children aged 18–29 months by specific vaccinations, Tuvalu 2007*



* Percentage of children who received the vaccine at any time before the survey

**BCG, measles, and three doses each of DPT and polio vaciine (excluding polio 0)

Table 10.2: Vaccinations by information source

Percentage of children aged 18–29 months who received specific vaccines at any time before the survey, by source of information (vaccination card or mother's report), and percentage vaccinated by 18 months of age, Tuvalu 2007

Source of information	BCG	DPT 1	DPT 2	DPT 3	Polio 1	Polio 2	Polio 3	Measles	All basic vaccinations[1]	No vaccinations	Number of children
Vaccinated at any time before survey											
Vaccination card	(33.1)	(33.1)	(33.1)	(33.1)	(33.1)	(30.5)	(30.5)	(30.4)	(27.8)	(0.0)	27
Mother's report	50.8	44.6	37.1	28.5	46.5	38.1	29.6	43.7	23.4	16.1	54
Either source	83.9	77.7	70.3	61.6	79.6	68.6	60.1	74.1	51.2	16.1	80
Vaccinated by 18 months of age[2]	83.9	77.7	70.3	60.2	79.6	68.6	54.5	3.5	2.7	16.1	80

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

[1] BCG, measles and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth).

[2] For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccination.

10.3 VACCINATION COVERAGE BY BACKGROUND CHARACTERISTICS

Table 10.3 shows the percentage of children with a vaccination card and the percentage who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), by background characteristics. This table is important for assessing the vaccination programme's success in reaching all population subgroups.

The results show that coverage is lower for all basic vaccinations among children aged 18–29 months in Funafuti (46%) than in the outer islands (57%), and is also lower among female children (42%) than male children (59%). The percentage of children aged 18–29 months who received a measles vaccine is also lower among female children and those residing in Funafuti. The same pattern is seen with BCG vaccinations. About 33% of children aged 18–29 months had their vaccination cards seen by the interviewers of the 2007 TDHS, with a higher proportion of these children living in the outer islands.

10.4 TRENDS IN VACCINATIONS COVERAGE

One way of measuring trends in vaccination coverage is to compare coverage among children of different age. Table 10.4 shows the percentage of children who received specific vaccines during the first year of life by current age. This table illustrates changes in the vaccination programme over time and also provides information on trends in vaccination coverage over the last four years.

There has been little improvement in vaccination coverage over the last four years. For instance, only 17% of children have received all basic vaccinations, and the proportion of these fully immunised children has declined from about 50% among older children to only 4% of young children. This is due to a dramatic decline in the proportion of children who received a measles vaccine, from 81% among children aged 48–59 months to only 5% for children aged 12–23 months.

However, there is also some improvement in the proportion of children with no vaccination. The trend shows a declining proportion of children who have had no vaccinations, from 16% among older children to 10% for younger ones. The percentage of children with a vaccination card also increased over this period.

Table 10.3: Vaccinations by background characteristics

Percentage of children aged 18–29 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and the percentage with a vaccination card, by background characteristics, Tuvalu 2007

Background characteristic	BCG	DPT 1	DPT 2	DPT 3	Polio 1	Polio 2	Polio 3	Measles	All basic vaccinations[1]	No vaccinations	Percentage with a vaccination card seen	Number of children
Sex												
Male	(85.1)	(77.6)	(72.4)	(63.3)	(85.1)	(74.9)	(66.8)	(80.00	(59.3)	(14.9)	(34.4)	43
Female	(82.5)	(78.0)	(67.8)	(59.7)	(73.4)	(61.6)	(52.6)	(67.5)	(42.2)	(17.5)	(31.7)	38
Residence												
Funafuti	(80.5)	(73.2)	(65.9)	(56.1)	(75.6)	(63.4)	(58.5)	(65.9)	(46.3)	(19.5)	(22.0)	45
Outer islands	(88.1)	(83.4)	(75.8)	(68.4)	(84.5)	(75.0)	(62.1)	(84.4)	(57.3)	(11.9)	(47.0)	36
Total	83.9	77.7	70.3	61.6	79.6	68.6	60.1	74.1	51.2	16.1	33.1	80

Note: Figures in parentheses are based on 25–49 cases.
[1] BCG, measles and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth).

Table 10.4: Vaccinations in first year of life

Percentage of children aged 12–59 months at the time of the survey who received specific vaccines by 18 months of age, and the percentage with a vaccination card, by current age of child, Tuvalu 2007

Age in months	BCG	DPT 1	DPT 2	DPT 3	Polio 1	Polio 2	Polio 3	Measles	All basic vaccinations[1]	No vaccinations	Percentage with a vaccination card seen	Number of children
12–23	90.0	85.3	80.0	65.9	85.9	78.4	64.0	4.8	3.6	10.0	39.8	84
24–35	87.9	80.2	74.2	59.9	85.9	76.8	58.8	20.7	16.4	12.1	25.1	89
36–47	80.0	74.5	68.7	56.7	76.0	68.4	54.9	64.1	43.0	19.3	13.0	84
48–59	83.3	76.5	69.7	59.4	80.1	69.5	52.7	81.0	49.7	15.8	5.9	75
Total	85.9	79.7	73.7	60.5	82.6	73.9	57.1	24.2	17.3	13.7	21.4	332

Note: Information was obtained from the vaccination card or if there was no written record, from the mother. For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccinations.
[1] BCG, measles and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth).

10.5 ACUTE RESPIRATORY INFECTION

Acute respiratory infection (ARI) is among the leading causes of childhood morbidity and mortality throughout the world. Early diagnosis and treatment with antibiotics can prevent a large proportion of deaths caused by ARI. In Tuvalu, ARI prevalence is estimated by asking mothers whether any of their children under age 5 have been ill in the two weeks preceding the survey, with a cough accompanied by short, rapid breathing that was chest-related. This syndrome is considered to be a proxy for pneumonia. It should be noted that morbidity data are based on the mother's perception without validation by medical personnel.

Table 10.5 shows that 3% of children under age 5 are reported to have had ARI symptoms in the two weeks preceding the survey. The prevalence of ARI varies by age of the child. Children aged 12–23 months are more likely to show symptoms of ARI (5%) than other age groups. Symptoms of ARI are more common among children:

- under age 5;
- whose mothers smoke cigarettes or tobacco;
- living in a household with electricity or gas as main cooking source;
- living in Funafuti; and
- living in the lower and middle wealth quintile households.

Table 10.5: Prevalence and treatment of symptoms of acute respiratory infection

Among children under age 5, the percentage who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey, according to background characteristics, Tuvalu 2007

	Among children under age 5	
Background characteristic	Percentage with symptoms of ARI[1]	Number of children
Age in months		
<6	1.9	59
6–11	(4.1)	42
12–23	4.7	84
24–35	2.0	89
36–47	2.1	84
48–59	2.3	75
Sex		
Male	2.8	224
Female	2.7	208
Mother's smoking status		
Smokes cigarettes/tobacco	3.2	87
Does not smoke	2.6	345
Cooking fuel		
Electricity or gas	5.0	112
Kerosene	1.8	255
Wood/straw[2]	2.7	65
Residence		
Funafuti	3.4	224
Outer islands	2.1	208
Mother's education		
Less than secondary	2.3	93
Secondary	3.0	258
More than secondary	2.7	81

Table 10.5 (Continued)

Wealth quintile		
Lowest	3.5	70
Second	1.9	93
Middle	3.6	108
Fourth	2.3	74
Highest	2.5	86
Total	2.8	432

Note: Figures in parentheses are based on 25–49 cases.
[1] Symptoms of ARI (cough accompanied by short, rapid breathing that was chest-related) is considered a proxy for pneumonia.
[2] Includes grass, shrubs, crop residues.

10.6 FEVER

Table 10.6 shows the percentage of children under 5 who had fever in the two weeks preceding the survey, and among children who had a fever, the percentage of children for whom treatment was sought from a health facility or provider and the percentage who took antibiotic drugs. Fever contributes to high level of malnutrition and high mortality.

One in every five children under age 5 is reported to have had fever in the two weeks preceding the survey. Among these, about four out of five sought advice or treatment from a health facility, and 54% took antibiotic drugs.

Table 10.6: Prevalence and treatment of fever

Among children under age 5, the percentage who had a fever in the two weeks preceding the survey; and among children with fever, the percentage of children for whom treatment was sought from a health facility or provider, the percentage who took antimalarial drugs and the percentage who took antibiotic drugs, Tuvalu 2007

	Among children under age 5:		Children under age 5 with fever:		
Background characteristic	Percentage with fever	Number of children	Percentage for whom advice or treatment was sought from a health facility or provider[1]	Percentage who took antibiotic drugs	Number of children
Total	21.1	432	78.7	54.4	91

[1] Excludes pharmacy, shop, and traditional practitioner.

10.7 PREVALENCE OF DIARRHOEA

Dehydration caused by severe diarrhoea is a major cause of morbidity and mortality among young children, although the condition can be easily treated with oral rehydration therapy (ORT). Exposure to diarrhoea-causing pathogens is often caused by the use of contaminated water and by unhygienic practices in food preparation and disposal of excreta. In interpreting the findings of the 2007 TDHS, it should be remembered that diarrhoea prevalence in Tuvalu varies seasonally. Diarrhoea with blood in the stools is indicative of specific enteric diseases and needs to be treated somewhat differently than diarrhoea without blood.

Table 10.7 shows the percentage of children under age 5 who had diarrhoea in the two weeks preceding the survey by background characteristics. About 10% of children under age 5 are reported to have diarrhoea in the two weeks before the survey, and only two of these had diarrhoea with blood. Diarrhoea is most common among children aged 12–23 months. Young female children are more likely to have diarrhoea than young male children. Almost all children live in households with an improved source of drinking water, thus this variable can't be analysed.

Diarrhoea is more common among children:

- under age 5 living in households with poor toilet facilities,
- residing in Funafuti,
- whose mother has a secondary level or higher education,
- who live in the lowest or second lowest wealth quintiles.

Table 10.7: Prevalence of diarrhoea

Percentage of children under age five who had diarrhoea in the two weeks preceding the survey, by background characteristics, Tuvalu 2007

	Diarrhoea in the two weeks preceding the survey		
Background characteristic	**All diarrhoea**	**Diarrhoea with blood**	**Number of children**
Age in months			
<6	5.9	0.0	59
6–11	(16.3)	(0.0)	42
12–23	14.3	0.0	84
24–35	8.7	0.8	89
36–47	9.4	0.0	84
48–59	5.3	1.4	75
Sex			
Male	7.0	0.8	224
Female	12.5	0.0	208
Source of drinking water[1]			
Improved	10.0	0.4	420
Not improved	*	*	3
Other/missing	*	*	10
Toilet facility[2]			
Improved, not shared	8.7	0.5	345
Non-improved or shared	13.5	0.0	87
Residence			
Funafuti	11.7	0.5	224
Outer islands	7.6	0.3	208
Mother's education			
Less than secondary	6.3	1.2	93
Secondary	10.7	0.3	258
More than secondary	10.2	0.0	81
Wealth quintile			
Lowest	9.7	1.0	70
Second	14.5	0.0	93
Middle	8.2	0.0	108
Fourth	8.2	1.5	74
Highest	7.5	0.0	86
Total	9.7	0.4	432

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] See Table 2.7 for definition of categories.
[2] See Table 2.8 for definition of categories.

10.8 DIARRHOEA TREATMENT

Mothers of children with diarrhoea were asked whether they sought advice or treatment from any source and if so, which sources (i.e. public, private or other, including traditional). As part of treatment for diarrhoea, mothers were asked whether the children received fluids made from a packet of oral rehydration salts (ORS), a pre-packaged ORS liquid, or liquids made from ingredients typically available at home according to directions recommended by the government. Respondents were also asked to list any other treatment given for diarrhoea in order to allow an estimation of the proportion of children who received appropriate treatment, as well as treatments that may be inappropriate (e.g. antibiotics, antimotility drugs, injections) (Table 10.8).

Out of 42 children under age 5 who had diarrhoea in the two weeks preceding the survey, the mothers of about 60% of these children sought advice or treatment from a health facility while 26% of these children were not treated at all. About 44% were treated with ORS packets or pre-packaged liquid and 48% received either ORS or recommended home fluids. The survey results also show that about 6% of children with diarrhoea were given antibiotics.

10.9 FEEDING PRACTICES DURING DIARRHOEA

Mothers are encouraged to continue normal feeding of children with diarrhoea and to increase their amount of fluids. These practices help to reduce dehydration and minimise adverse consequences of diarrhoea on the child's nutritional status. Mothers were asked whether they gave the child less, the same amount, or more fluids and food than usual when their child had diarrhoea. It is recommended that children should be given more liquids to drink during diarrhoea and food should not be reduced.

Table 10.9 shows the percent distribution of children under 5 who had diarrhoea in the two weeks preceding the survey by feeding practices. About one in every two children (48%) under age 5 with diarrhoea continued feeding, were treated with ORT, and/or fed with increased fluids. Only 7% were given increased fluids and continued feeding during the diarrhoea episode. The majority of children under age 5 with diarrhoea in the preceding two weeks were fed with the same amount of liquids and food (80%) as before they had diarrhoea (76%). The results show that few children with diarrhoea are given more liquids (7%) and foods (2%) during diarrhoea.

Table 10.8: Diarrhoea treatment

Among children under age 5 who had diarrhoea in the two weeks preceding the survey, the percentage for whom advice or treatment was sought from a health facility or provider, the percentage given oral rehydration therapy (ORT), the percentage given increased fluids, the percentage given ORT or increased fluids, and the percentage who were given other treatments, Tuvalu 2007

		Oral rehydration therapy (ORT)					Other treatments			
Background characteristic	Percentage of children with diarrhoea for whom advice or treatment was sought from a health facility or provider[1]	ORS packets or pre-packaged liquid	Recommended home fluids (RHF)	Either ORS or RHF	Increased fluids	ORT or increased fluids	Antibiotic drugs	Home remedy/ other	No treatment	Number of children
Total	(59.5)	(43.5)	(5.7)	(47.7)	(6.6)	(47.7)	(5.6)	(23.8)	(26.1)	42

Note: ORT includes a solution prepared from oral rehydration salt (ORS), pre-packaged ORS packet, and recommended home fluids (RHF)
[1] Excludes pharmacy, shop and traditional practitioner.

Table 10.9: Feeding practices during a diarrhoea episode

Percent distribution of children under age 5 who had diarrhoea in the two weeks preceding the survey by amount of liquids and food offered compared with normal practice, the percentage of children given increased fluids and continued feeding during the diarrhoea episode, and the percentage of children who continued feeding and were given ORT and/or increased fluids during the episode of diarrhoea, Tuvalu 2007

	Amount of liquids offered					Amount of food offered								
Background characteristic	More	Same as usual	Somewhat less	Much less	Total	More	Same as usual	Somewhat less	Never gave food	Don't know/ missing	Total	Percentage given increased fluids and continued feeding[1,2]	Percentage who continued feeding and were given ORT and/or increased fluids[3]	Number of children with diarrhoea
Total	(6.6)	(80.0)	(10.8)	(2.6)	(100.0)	(1.5)	(75.9)	(18.5)	(1.5)	(2.6)	(100.0)	(6.6)	(47.7)	42

[1] Equivalent to the UNICEF/WHO indicator 'Home management of diarrhoea'. MICS Indicator 34.
[2] Continued feeding practices includes children who were given more, same as usual, or somewhat less food during the diarrhoea episode.
[3] Equivalent to UNICEF MICS Indicator 35.

10.10 KNOWLEDGE OF ORS PACKETS OR PRE-PACKAGED LIQUIDS

A simple and effective response to dehydration caused by diarrhoea is a prompt increase in the child's fluid intake through some form of ORT. This may include the use of a solution prepared from packets of ORS. To ascertain how widespread the knowledge of ORS treatment is in Tuvalu, respondents were asked whether they know about ORS packets.

Table 10.10 shows the percentage of mothers aged 15–49 who gave birth in the five years prior to the survey who know about ORS packets or ORS pre-packaged liquids for treatment of diarrhoea by background characteristics. The results show a high level of knowledge about ORS among these mothers. Mothers with knowledge of ORS account for 85%, and mothers with knowledge about ORS is higher in the outer islands (93%) than in Funafuti (77%).

Knowledge of ORS varies by mother's educational background; increasing from 81% for mothers with a lower education to 86% for mothers with a secondary education, and 89% percent for mothers with a tertiary education. There is no clear relationship between mothers' knowledge of ORS and wealth quintile.

Table 10.10: Knowledge of ORS packets or pre-packaged liquids

Percentage of mothers aged 15–49 who gave birth in the five years preceding the survey who know about ORS packets or ORS pre-packaged liquids for treatment of diarrhoea by background characteristics, Tuvalu 2007

Background characteristic	Percentage of women who know about ORS packets or ORS pre-packaged liquids	Number of women
Age		
15–19	*	8
20–24	83.3	60
25–34	87.4	140
35–49	84.9	84
Residence		
Funafuti	77.4	144
Outer islands	92.5	148
Education		
Less than secondary	81.0	70
Secondary	85.6	166
More than secondary	88.5	56
Wealth quintile		
Lowest	85.9	52
Second	86.2	65
Middle	79.0	68
Fourth	(87.0)	50
Highest	88.6	57
Total	85.1	292

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.
ORS = oral rehydration salts

10.11 DISPOSAL OF CHILDREN'S STOOLS

Appropriate sanitation practices are linked with a decrease in diarrhoea risk. Mothers were asked where they dispose of their children's stools. Table 10.11 shows the percentage of children under age 5 who live with their mother by the manner in which the child's most recent stools were disposed of, and the percentage of children whose stools are disposed of safely, according to background characteristics.

The stools of about 35% of children under age 5 are left uncontained. Of these, about 25% are disposed of into the garbage, 6% are placed or rinsed into a drain, ditch or the sea, and 4% are rinsed away. About 63% of children's stools are reported to be safely and hygienically disposed of. Of these, 24% are rinsed or washed into a toilet or latrine and 10% are buried. About 29% of children use a toilet or latrine, The stools of nearly 50% of children aged 12–23 months are also thrown into the garbage.

There is no clear association between a mother's educational attainment and the way in which she disposes of her children's stools. This may be due to the very small number of cases in each educational category. By place of residence, the stools of children living in the outer islands are more likely to be safely disposed of (77%) than those of children living in Funafuti (49%).

Table 10.11: Disposal of children's stools

Percent distribution of youngest children under age 5 living with the mother by the manner in which the child's most recent stools were disposed of, and the percentage of children whose stools are disposed of safely, according to background characteristics, Tuvalu 2007

Background characteristic	Manner of disposal of children's stools								Total	Percentage of children whose stools are disposed of safely	Number of mothers
	Child used toilet or latrine	Put/rinsed into toilet or latrine	Buried	Put/rinsed into drain/ditch or sea	Thrown into garbage	Rinsed away	Other	Missing			
Age in months											
<6	2.4	29.8	12.4	6.8	44.2	0.0	3.2	1.2	100.0	44.6	54
6–11	(18.9)	(23.6)	(18.8)	(19.2)	(19.6)	(0.0)	(0.0)	(0.0)	(100.0)	(61.2)	35
12–23	13.9	19.3	13.0	2.5	49.0	1.3	1.1	0.0	100.0	46.2	55
24–35	47.6	18.3	6.7	2.6	6.3	16.4	0.0	2.1	100.0	72.6	52
36–47	(63.7)	(22.8)	(1.8)	(5.3)	(3.2)	(0.0)	(3.2)	(0.0)	(100.0)	(88.3)	34
48–59	(54.3)	(40.6)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(5.1)	(100.0)	(94.9)	21
Toilet facility											
Improved, not shared[1]	30.3	25.3	8.3	4.9	24.7	3.9	1.1	1.4	100.0	63.9	205
Non-improved or shared	24.1	19.4	16.4	10.4	24.9	2.4	2.4	0.0	100.0	59.9	46
Residence											
Funafuti	21.1	24.6	3.5	1.8	43.0	2.6	1.8	1.8	100.0	49.1	124
Outer islands	37.0	23.9	15.9	10.0	7.0	4.7	1.0	0.5	100.0	76.9	127
Education											
Less than secondary	36.1	28.1	7.1	5.3	16.9	5.5	1.1	0.0	100.0	71.3	58
Secondary	22.3	24.7	12.2	5.5	27.9	4.3	2.0	1.2	100.0	59.2	141
More than secondary	(40.0)	(18.6)	(6.1)	(8.0)	(25.2)	(0.0)	(0.0)	(2.1)	(100.0)	(64.7)	52
Wealth quintile											
Lowest	32.0	28.2	16.0	10.3	13.5	0.0	0.0	0.0	100.0	76.3	45
Second	24.3	24.9	13.2	8.9	13.5	10.9	3.1	1.1	100.0	62.5	55
Middle	24.8	23.3	16.3	7.4	28.2	0.0	0.0	0.0	100.0	64.4	55
Fourth	(35.6)	21.0	2.4	2.9	32.0	4.7	1.3	0.0	100.0	59.0	46
Highest	(30.7)	23.9	0.0	0.0	36.9	2.1	2.2	4.3	100.0	54.5	50
Total	29.2	24.2	9.8	5.9	24.7	3.7	1.4	1.1	100.0	63.2	251

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

[1] Non-shared facilities include flush or pour flush into a piped sewer system/septic tank/pit latrine; ventilated, improved pit latrine; pit latrine with a slab; or a composting toilet.

10.12 KEY RESULTS

Overall, out of 447 children born in the five-year period preceding the survey, almost all (97.5%) had been weighed, with 6.1% weighing less than 2.5 kg at birth. Low birth weight is common among children whose mothers are older (aged 35–49), children whose mothers have a lower educational background and, more interestingly, among children residing in Funafuti.

Universal immunisation of children against the six vaccine-preventable diseases — tuberculosis, diphtheria, whooping cough (pertussis), tetanus, polio and measles — is crucial to reducing infant and child mortality. Out of 80 children aged 18–29 months at the time of the survey, one in two of these received all of the basic vaccinations, about three in four (74%) received measles and the majority (84%) had BCG vaccination at births. The proportion of these children receiving each single vaccination of DPT and polio declined. Vaccination coverage showed a low level of all basic vaccination coverage among children aged 18–29 months in Funafuti and among female children.

Measuring trends in vaccination coverage among children in different age groups is critical in determining the success of vaccinations programmes over time. According to the 2007 TDHS, there has been little improvement in vaccination coverage over the last four years. Data show that only 17% of children aged 12–59 months (out of 332 children) have been fully immunised, and the proportion of these has declined from about 50% for children aged 48–59 months to only 4% for younger children aged 12–23 months.

Data also show that among children under age 5, about 3% had symptoms of ARI in the two weeks preceding the survey. Symptoms of ARI are more likely to be common among children: 1) whose mothers smoke cigarettes and use tobacco, 2) who live in households with electricity or gas as the main cooking fuel, and 3) who live in lower and middle wealth quintile households. About one in five children under age 5 had a fever in the two weeks preceding the survey.

Out of 432 children under age 5, about 10% had diarrhoea in the two weeks before the survey. Diarrhoea is more common among young children aged 12–23 months and among children under age 5 living in households with poor toilet facilities. About 60% of children with diarrhoea received advice or treatment from the health facility, while 26% received no treatment at all. About 48% of those with diarrhoea continued feeding, and were treated with ORT and given increased fluids. The results also show a high level of knowledge of ORS (85%) among mothers aged 15–49 who had given birth in the five years preceding the survey.

Appropriate sanitation practices are linked with a decrease in diarrhoea risk. Results of the 2007 TDHS show that about 35% of children under age 5 who live with their mothers and whose stools are left uncontained (i.e. are disposed of into the garbage, are placed or rinsed into a drain, ditch or the sea). The stools of about 63% of these children were disposed of safely and hygienically.

CHAPTER 11 NUTRITIONAL STATUS OF CHILDREN AND ADULTS

This chapter discusses the nutritional status of children and women. Data are presented on: infant and young child feeding practices, including breastfeeding and feeding with solid and/or semisolid foods; anthropometric assessments of nutritional status; diversity of foods consumed, including micronutrient intake; and vitamin A deficiency in women and in children under age 5. The prevalence of anaemia in women, children and men is also presented.

Adequate nutrition is important for good health and development, and the period from birth to age 2 is critical. Unfortunately, this period is often marked by faltering growth, micronutrient deficiencies, and common childhood illnesses such as diarrhoea and acute respiratory infection (ARI). Optimal feeding practices include early initiation of breastfeeding, exclusive breastfeeding during the first six months of life, continued breastfeeding up to age 2, the timely introduction of complementary foods at age 6 months, frequency of feeding solid and/or semisolid foods, and the diversity of food groups fed to children aged 6–23 months.A summary indicator is included, which describes the quality of infant and young child (aged 6–23 months) feeding practices. This indicator is referred to as infant and young child feeding, or IYCF.

A woman's nutritional status has important implications for her health as well as the health of her children. Malnutrition in women results in reduced productivity, increased susceptibility to infections, slow recovery from illnesses, and heightened risks of adverse pregnancy outcomes. For example, a woman who has a poor nutritional status, as indicated by a low body mass index (BMI), short stature, anaemia, or other micronutrient deficiencies has a greater risk of: 1) obstructed labour; 2) having a baby with low birth weight; 3) producing lower quality breast milk; 4) mortality due to postpartum haemorrhage; and v) morbidity of both herself and her baby.

11.1 NUTRITIONAL STATUS OF CHILDREN

Malnutrition places children at increased risk of morbidity and mortality, and has been shown to be related to impaired mental development. Anthropometry provides one of the most important indicators of children's nutritional status. Height and weight measurements were obtained for children born in the five years preceding the survey. Height and weight data are used to compute three summary indices of nutritional status — height-for-age, weight-for-height and weight-for-age. These three indices are expressed as standardised scores (z-scores) or standard deviation (SD) units from the median, for the international reference population that was recently developed by the World Health Organization (WHO 2006). Children who are more than 2 SD units below the reference median are regarded as undernourished, while those who are more than 3 SD units below the reference median are considered severely undernourished.

Children whose height-for-age is less than 2 SD from the median of the reference population are considered to be stunted or short for their age. Stunting results from not receiving adequate nutrition over an extended period, and is affected by recurrent or chronic illness. Children whose weight-for-height is less than 2 SD from the median of the reference population are considered to be wasted (or thin). Wasting represents the failure to receive adequate nutrition in the period immediately before the survey and is typically the result of a recent illness, especially diarrhoea, or a rapid deterioration in food supplies.

Children whose weight-for-age is less than 2 SD from the median of the reference population are considered to be underweight. The measure reflects the effects of both acute and chronic malnutrition.

Table 11.1 shows three different indicators used to assess the nutritional status of children in Tuvalu — height-for-age, weight-for-height and weight-for-age. Outcomes for each of these indicators have been compared with an international reference population defined by the US National Center for Health Statistics and accepted by the US Centers for Disease Control and the World Health Organization (WHO). The level of malnourishment is estimated by the percentage

of children who are 2 (or more) SD below the median values for the international reference population.

The prevalence range used by WHO to categorise the public health significance of different measures of undernutrition (i.e. less than 2 SD) are outlined below.

	Height for age (stunted)	Weight for height (wasted)	Weight for age (underweight)
Low	<20	<5	<10
Medium	20–29	5–9	10–19
High	30–39	10–14	20–29
Very high	40+	15+	30+

Overall, 13.3% of children aged age 5 years had a height-for-age measure that was -2 to -3 SD below the median height-for-age value of the reference population. Of these, three-quarters of children had height-for-age measures 2 SD below the median score and the remaining quarter were 3 SD below the median. Using the WHO guide, this finding represents a low prevalence of stunting within the population of children under age 5 five years in Tuvalu.

In total, 4.2% of children aged less than 5 years had a weight-for-height measure 2 to 3 SD below the median value for the reference population. Of these, 78% had a height-for-age measure that was 2 SD below the median score, and the remaining 22% had a measure 3 SD below the median. Using the WHO guide, this finding represents a low prevalence of wasting within children under age 5 years in Tuvalu.

One in sixteen children (6.3%) under age 5 years also had a weight-for-height measure 2 SD above the median score for the reference population, suggesting a low prevalence of overweight and obesity in this age group.

In total, 1.9% of children under age 5 years had a weight-for-age measure 2 to 3 SD below the median value for the reference population. Of these, 84% had height-for-age measures that were 2 SD below the median score, and the remaining 16% had a measure 3 SD below the median. Using the WHO guide, this finding shows a low prevalence of underweight children aged less than 5 years in Tuvalu.

A summary of prevalence estimates for stunting, wasting, underweight and overweight are illustrated in Figure 11.1.

No definite trends were observed with regard to other background characteristics, with small numbers of people in some groups making statistics potentially unreliable.

Figure 11.1: Nutritional status of children under age 5 years, Tuvalu 2007

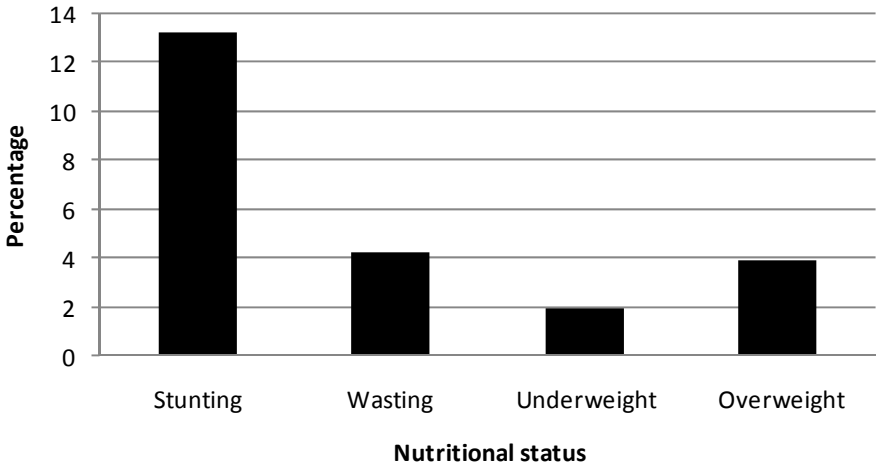


Table 11.1: Nutritional status of children

Percentage of children under age 5 classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Tuvalu 2007

	Height-for-age			Weight-for-height				Weight-for-age				
Background characteristic	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	Number of children
Age in months												
<6	(4.9)	(6.8)	(0.9)	(7.4)	(15.9)	(11.8)	(0.0)	(0.0)	(1.3)	(11.7)	(0.5)	55
6–8	*	*	*	*	*	*	*	*	*	*	*	16
9–11	(9.8)	(22.1)	(0.8)	(0.0)	(2.6)	(14.8)	(0.7)	(0.0)	(2.6)	2.5	0.0	28
12–17	(3.9)	(22.8)	(0.6)	(0.0)	(0.0)	(6.1)	(0.1)	(0.0)	(0.0)	(4.3)	(0.2)	39
18–23	(3.1)	(8.4)	(0.5)	(0.0)	(0.0)	(6.9)	(0.5)	(0.0)	(1.6)	(0.0)	(0.1)	38
24–35	0.0	3.7	0.3	0.0	0.8	3.7	0.2	0.0	0.8	2.9	0.0	93
36–47	3.0	9.4	0.4	0.0	3.0	2.3	0.2	1.5	3.0	1.5	0.1	89
48–59	3.7	11.3	0.5	0.0	1.8	5.6	0.3	0.0	1.8	4.5	0.0	73
Sex												
Male	2.8	9.9	0.2	0.6	4.4	7.4	0.2	0.3	1.9	3.9	0.0	216
Female	3.8	10.1	0.3	1.3	2.2	5.2	0.3	0.3	1.2	3.9	0.1	215
Birth interval in months[2]												
First birth[3]	1.3	6.5	0.1	1.3	5.9	3.9	0.2	1.3	2.6	4.0	0.1	102
<24	4.9	11.1	0.2	0.0	1.9	5.9	0.3	0.0	1.0	4.0	0.1	73
24–47	3.1	12.9	0.2	2.5	5.6	6.9	0.1	0.0	1.9	3.1	0.1	109
48+	6.2	10.2	0.4	0.0	1.4	5.2	0.3	0.0	2.6	7.9	0.0	52
Size at birth[2]												
Very small	*	*	*	*	*	*	*	*	*	*	*	11
Small	(2.9)	(9.6)	(0.7)	(0.0)	(1.8)	(3.3)	(0.0)	(1.5)	(4.8)	(3.3)	(0.4)	40
Average or larger	3.2	9.7	0.1	1.4	4.8	5.6	0.2	0.3	1.7	4.7	0.1	282
Mother's interview status												
Interviewed	3.4	10.1	(0.2)	1.2	4.2	5.5	0.2	0.4	2.0	4.3	0.0	336
Not interviewed but in household	*	*	*	*	*	*	*	*	*	*	*	10
Not interviewed, and not in the household[4]	1.6	9.2	0.4	0.0	0.0	8.6	0.5	0.0	0.0	2.8	0.1	84

Table 11.1 (continued)

Background characteristic	Height-for-age			Weight-for-height				Weight-for-age				Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	
Residence												
Funafuti	3.6	9.6	0.1	1.8	4.8	6.0	0.2	0.0	1.2	4.2	0.1	226
Outer islands	3.0	10.5	0.4	0.0	1.7	6.6	0.3	0.6	2.0	3.6	0.0	205
Mother's education[5]												
Less than secondary	4.2	10.7	0.5	1.8	6.2	1.8	0.2	0.8	3.4	0.0	0.4	75
Secondary	3.7	10.3	0.2	1.4	3.2	7.6	0.2	0.4	1.1	5.1	0.1	191
More than secondary	*	*	*	*	*	*	*	*	*	*	*	9
Wealth quintile												
Lowest	1.4	7.6	0.4	0.0	4.0	5.0	0.3	0.0	0.7	4.2	0.0	83
Second	3.7	10.5	0.6	0.0	2.2	7.9	0.1	0.6	1.4	1.5	0.2	94
Middle	2.1	8.0	0.2	1.4	2.1	6.7	0.2	0.7	2.2	5.9	0.0	100
Fourth	3.2	11.7	0.1	2.1	8.5	3.2	0.1	0.0	4.3	3.2	0.0	63
Highest	6.0	12.9	0.2	1.5	1.5	7.5	0.5	0.0	0.0	4.5	0.5	90
Total	3.3	10.0	(0.3)	0.9	3.3	6.3	0.3	0.3	1.6	3.9	0.0	430

Note: Table is based on children who slept in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards. 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 is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.
[1] Includes children who are below -3 SD from the International Reference Population median.
[2] Excludes children whose mothers were not interviewed.
[3] First born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval.
[4] Includes children whose mothers are deceased.
[5] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

11.2 INITIAL BREASTFEEDING OF CHILDREN

Early initiation of breastfeeding is encouraged for several reasons. Mothers benefit from early suckling because it stimulates breast milk production and facilitates the release of oxytocin, which helps contract the uterus and reduces postpartum blood loss. The first breast milk contains colostrum, which is highly nutritious and has antibodies that protect newborn babies from diseases. Early initiation of breastfeeding also fosters bonding between mother and child.

Table 11.2 shows the reported prevalence of ever breastfed for children born in the five years preceding the survey. Information on the timing of initial breastfeeding and the prevalence of prelacteal feeding is also shown for last-born children who were born in the five years preceding the survey and had ever breastfed. Prelacteal feeding has been defined as giving any fluid other than breast milk in the first three days of life.

Over nine in ten children born in five years preceding the 2007 TDHS had ever been breastfed. This finding remains fairly consistent across all six background characteristics.

Of the 447 children who were born in the five years preceding the survey, 273 (61%) were last-born children who had ever been breastfed. Of these, only 40% began feeding in either the first hour or day of birth. An additional 43% of children had received a prelacteal feed in the first three days following birth.

The prevalence of breastfeeding in both the first hour and first day following birth increases with mother's education level. The prevalence of breastfeeding within one hour of birth ranged from nearly 12% for mothers with less than a secondary education to nearly 19% for mothers with more than a secondary education. The prevalence of breastfeeding within one day of birth ranged from about 20% for mothers with less than a secondary education to 32% for mothers with more than a secondary education.

Table 11.2: Initial breastfeeding

Percentage of children born in the five years preceding the survey who were ever breastfed, and for the last children born in the five years preceding the survey ever breastfed, the percentage who started breastfeeding within one hour and within one day of birth, and the percentage who received a prelacteal feed, by background characteristics, Tuvalu 2007

	Breastfeeding among children born in the five years preceding the survey		Among last-born children ever breastfed			
Background characteristic	Percentage ever breastfed	Number of children born in five years preceding survey	Percentage who started breastfeeding within 1 hour of birth	Percentage who started breastfeeding within 1 day of birth[1]	Percentage who received a prelacteal feed[2]	Number of last-born children ever breastfed
Sex						
Male	91.9	233	15.0	24.4	42.1	142
Female	90.3	214	14.9	26.4	44.1	131
Residence						
Funafuti	91.0	230	16.0	30.4	44.0	136
Outer islands	91.2	217	14.0	20.3	42.1	137
Mother's education						
Less than secondary	88.5	100	11.8	20.3	41.5	63
Secondary	94.2	266	15.0	25.2	41.6	160
More than secondary	84.1	81	18.6	32.0	49.4	50
Assistance at delivery						
Health professional [3]	91.2	438	14.7	25.2	43.1	270
Traditional birth attendant	*	*	*	*	*	1
Other	*	*	*	*	*	1
No one	*	*	*	*	*	1
Place of delivery						
Health facility	91.0	416	12.8	23.4	41.9	257
At home	*	*	*	*	*	*
Other	*	*	*	*	*	*
Wealth quintile						
Lowest	92.7	72	19.0	27.3	41.4	49
Second	97.2	99	9.1	18.3	50.3	64
Middle	86.6	112	16.0	26.4	39.4	61
Fourth	86.9	78	(6.5)	(14.1)	(34.0)	43
Highest	92.5	86	23.7	39.5	46.9	55
Total	91.1	447	15.0	25.3	43.0	273

Note: Table is based on births in the last five years whether the children are living or dead at the time of interview. 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] Includes children who started breastfeeding within one hour of birth.

[2] Children given something other than breast milk during the first three days of life.

[3] Doctor, nurse or midwife, or auxiliary midwife.

11.3 BREASTFEEDING STATUS BY AGE

Table 11.3 shows the breastfeeding status and consumption of other liquids and foods in the 24 hours preceding the survey of youngest children under age 3 years who were living with their mother.

Exclusive breastfeeding was reported for 57% of babies aged up to age 3 months, decreasing to one-third of babies (35%) aged up to 5 months, and only (13.5%) for children aged 6–9 months.

Most children up to age 5 months (85%) received breast milk as a component of their diet in the 24 hours preceding the survey, as did three-quarters (77%) of children aged 6–9 months, and half of children (53%) aged 12–23 months.

Complementary foods were given in the 24 hours preceding the survey to one in six (16.2%) children aged up to 5 months, and nearly 40% of children aged 6–9 months. Only half (51%) of children aged 12–23 months received complementary foods in the 24 hours preceding the survey.

Nearly two in five breastfed children aged 12–23 months were also taking fluids from a bottle with a nipple.

Table 11.3: Breastfeeding status by age

Percent distribution of youngest children under age 3 years (who are living with their mother) by breastfeeding status and the percentage who are currently breastfeeding; and the percentage of all children under age 3 years using a bottle with a nipple, according to age in months, Tuvalu 2007

Age in months	Not breast-feeding	Breastfeeding and consuming					Total	Percentage currently breastfeeding	Number of youngest child under three years	Percentage using a bottle with a nipple[1]	Number of children
		Exclusively breastfed	Plain water only	Non-milk liquids/juice	Other milk	Complementary foods					
0–3	(9.3)	(57.1)	(7.7)	(2.0)	(20.4)	(3.5)	(100.0)	(90.7)	31	(26.9)	34
0–5	15.1	34.7	16.2	6.3	11.5	16.2	100.0	84.9	54	42.3	59
6–9	(22.7)	(13.5)	(0.0)	(10.6)	(13.5)	(39.6)	(100.0)	(77.3)	24	(60.0)	25
12–15	*	*	*	*	*	*	*	*	21	(68.1)	25
12–23	47.3	1.9	0.0	0.0	0.0	50.8	100.0	52.7	55	42.3	84
20–23	*	*	*	*	*	*	*	*	12	(25.2)	26

Note: Breastfeeding status refers to a '24-hour' period (yesterday and last night). Children who are classified as breastfeeding and consuming plain water only consumed no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, non-milk liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100%. Thus children who receive breast milk and non-milk liquids and who do not receive complementary foods are classified in the non-milk liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well. 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] Based on all children under age 3 years.

11.4 MEDIAN DURATION AND FREQUENCY OF BREASTFEEDING

Table 11.4 shows the median duration and frequency of breastfeeding for children born in the three years preceding the survey. Estimates of median and mean durations of breastfeeding are based on current status data; that is, the proportion of children born in the three years preceding the survey who were breastfed at the time of the survey.

Overall, the median reported duration of any breastfeeding for children born in the three years preceding the survey was 11.3 months. The median duration of exclusive breastfeeding was only 1.5 months, although the median duration of either exclusively breastfeeding or receiving breast milk and plain water (predominantly breastfeeding) was 3.6 months. These findings were similar for both sexes, although the median duration of any breastfeeding and predominantly breastfeeding was higher for children in the outer islands than for children in Funafuti. Mothers with less education are more likely to breastfeed their children longer than mother's with a higher education.

WHO and UNICEF recommended exclusive breastfeeding for the first 6 months and continued breastfeeding for at least 24 months. The mean duration of any breastfeeding was 15.4 months for children born in the three years preceding the survey, while the mean duration for exclusive breastfeeding was 3.2 months.

Four-fifths (79.3%) of children aged less than 6 months received six or more breast feedings in the 24 hours prior to the survey. The average number of daytime feedings was four, and the average number of night-time feedings was 3.6.

Table 11.4: Median duration and frequency of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey, percentage of breastfeeding children under 6 months living with the mother who were breastfed six or more times in the 24 hours preceding the survey, and mean number of feeds (day/night), by background characteristics, Tuvalu 2007

	Median duration (in months) of breastfeeding among children born in the preceding three years [1]			Frequency of breastfeeding among children under age 6 months [2]			
Background characteristic	Any breastfeeding	Exclusive breast-feeding	Predominant breastfeeding [3]	Percentage breastfed 6+ times in last 24 hours	Mean number of daytime feedings	Mean number of night-time feedings	Number of children
Sex							
Male	11.3	1.5	3.5	73.3	3.8	3.6	26
Female	11.1	1.4	3.8	86.8	4.3	3.6	21
Residence							
Funafuti	7.8	1.3	2.0	84.6	4.0	3.7	28
Outer islands	12.0	1.7	5.5	71.7	4.0	3.4	19
Mother's education							
Less than secondary	10.7	0.6	0.6	85.1	3.5	2.8	7
Secondary	11.5	1.6	3.7	77.1	4.0	3.7	35
More than secondary	4.8	0.8	0.8	87.0	4.8	4.2	5
Wealth quintile							
Lowest	12.2	2.2	7.4	67.9	3.9	3.4	7
Second	7.7	2.0	3.5	81.0	4.2	3.8	11
Middle	10.9	0.7	0.7	76.0	3.7	3.2	13
Fourth	0.8	0.4	0.4	100.0	3.8	3.2	5
Highest	12.5	1.9	6.5	80.0	4.4	4.2	11
Total	11.3	1.5	3.6	79.3	4.0	3.6	48

Note: Median and mean durations are based on current status. Includes children living and deceased at the time of the survey.
na = not applicable
[1] It is assumed that non-last-born children and last-born children not currently living with the mother are not currently breastfeeding.
[2] Excludes children without a valid answer on the number of times breastfed.
[3] Either exclusively breastfed or received breast milk and plain water, and/or non-milk liquids only.

11.5 FOOD AND LIQUIDS CONSUMED BY CHILDREN

UNICEF and WHO recommend introducing solid food to infants around the age of 6 months because by that age breast milk alone is no longer sufficient to maintain a child's optimal growth. In the transition to eating the family diet, children from the age of 6 months should be fed small quantities of solid and semisolid food throughout the day. During this transition period (ages 6–23 months), the prevalence of malnutrition increases substantially in many countries because of increased infections and poor feeding practices.

Table 11.5 shows the foods and liquids consumed by children aged less than 3 years in the 24-hour period before the survey, by their breastfeeding status.

While the best way to determine the nutritional adequacy of the diet is to undertake a comprehensive nutrition survey, using standard tools such as a comprehensive 24-hour diet recall tool[10], the 2007 TDHS does provide some useful information on the range of foods recently consumed by young children.

Liquids

About 17% of all breastfeeding children under age 3 years who are living with their mothers are reported to consume infant formula, about two in five (37%) of these children consume other milk while almost half (49.6%) of them consume other liquids.

The results show that all non-breastfed children are more likely to consume all other types of liquids than breastfed children. The most common liquids consumed is 'other liquids'.

Solid or semisolid foods

Food made from grains is reported to be the most common food consumed by breastfed children (54%) and non-breastfed children (85%). This is followed by protein-rich foods such as meat, fish, poultry and eggs, which account for 45% of breastfeeding children and 80% of non-breastfed children. Fruits and vegetables rich in vitamin A are consumed by 41% of breastfed children and 70% of non-breastfed children. Other commonly consumed foods include other fruits and vegetables, other food made from roots and tubers, and cheese, yogurt and other milk products. The same proportion of breastfed and non-breastfed children (3% each) consume food made from legumes and nuts.

Less than 20% of breastfed children and less than 40% of non-breastfed children consume foods made with oil, fat and sugar and as well as sugary foods.

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[10] Briony T. 2001. Manual of Dietetic Practice (p 30–37). The British Dietetic Association. Oxford, UK: Blackwell Science

Table 11.5: Foods and liquids consumed by children in the day or night preceding the interview

Percentage of youngest children under age 3 years who are living with the mother by type of foods consumed in the day or night preceding the interview, according to breastfeeding status, Tuvalu 2007

Age in months	Liquids			Solid or semisolid foods								Any solid or semi-solid food	Food made with oil, fat and butter	Sugary foods	Number of children
	Infant formula	Other milk[1]	Other liquids[2]	Fortified baby foods	Food made from grains[3]	Fruits and vegetables rich in vitamin A[4]	Other fruits and vegetables	Food made from roots and tubers	Food made from legumes and nuts	Meat, fish, poultry, and eggs	Cheese, yogurt, other milk product				
Breastfed Children															
Total	16.8	36.6	49.6	14.1	54.3	40.5	14.7	15.0	2.8	44.5	5.6	59.6	14.9	19.2	117
Non-breastfed Children															
Total	29.1	64.2	83.7	12.7	85.3	69.9	24.1	29.0	2.8	79.8	2.8	91.0	34.3	35.5	79

Note: Breastfeeding status and food consumed refer to a 24-hour period (yesterday and last night).

[1] Other milk includes fresh, tinned and powdered cow's milk or other animal milk.

[2] Does not include plain water.

[3] Includes fortified baby food.

[4] Includes pumpkin, squash, carrots, sweet potatoes, breadfruit, green leafy vegetables, banana and papayas.

11.6 INFANT AND YOUNG CHILD FEEDING PRACTICES

To ensure that nutritional requirements are met, it is recommended that children begin semisolid or solid foods from age 6 months. For breastfed children aged 6–8 months, it is recommended that solid foods are introduced two to three times daily, increasing to three to four times per day between ages 9 and 24 months with one to two snacks offered as required[11].

For non-breastfed children, four to five solid or semi-solid foods per day are recommended for children aged 6–24 months with one to two snacks offered as required[12].

To ensure that dietary requirements are met, it is advised that a protein-rich animal product such as meat, poultry, fish or eggs are consumed daily. It is also recommended that vitamin-A rich fruits and vegetables are included daily and that the diet contains adequate fat.

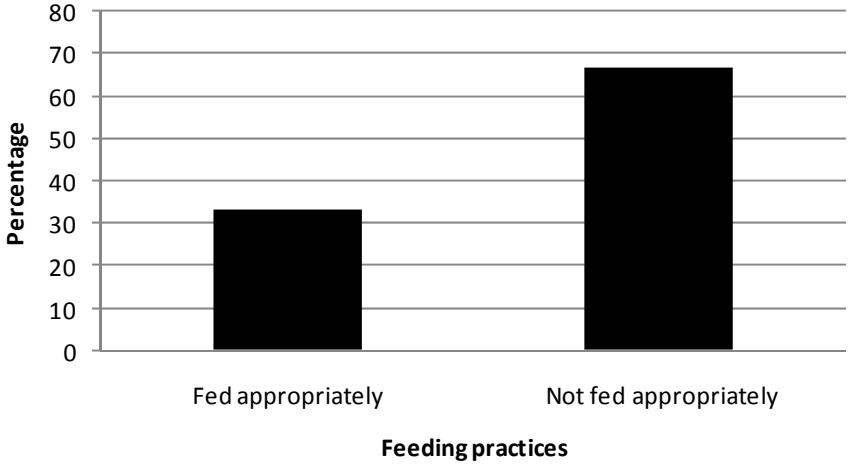
Foods from at least three food groups are recommended daily for breastfed children and at least four different food groups for non-breastfed children.

Table 11.6 shows the proportions of children that were fed according to these recommendations by breastfeeding status, sex and area of residence. Because of the small number of children aged 6–23 months, discussion is limited to general findings for all children aged 6–23 months.

Overall, 86% of children received breast milk or milk products in the 24 hours preceding the survey. Less than two-thirds of children received the recommended three or four different food groups, and less than half of all children surveyed were fed the minimum recommended number of times per day.

In total, only one-third of children met all three of recommended feeding practices (i.e. breast milk or milk products, at least three or four different food groups, and the recommended number of meals and snacks per day). These findings are presented in Figure 2.

Figure 11.2: Prevalence of appropriate feeding practices children aged 6–23 months, Tuvalu DHS 2007



[11] PAHO/WHO. 2003. Guiding Principles for Complementary Feeding of the Breastfed Child. Washington, D.C./Geneva, Switzerland: PAHO/WHO 2003.
[12] Guiding Principles for Feeding Nonbreastfed Children 6 to 24 Months of Age, Geneva, Switzerland: WHO 2005.

Table 11.6: Infant and young child feeding practices

Percentage of youngest children aged 6–23 months living with their mother who are fed according to three infant and young child feeding (IYCF) feeding practices based upon number of food groups and times they are fed during the day or night preceding the survey by breastfeeding status and selected background characteristics, Tuvalu 2007

	Among breastfed children aged 6–23 months, percentage fed:				Among non-breastfed children aged 6–23 months, percentage fed:					Among all children aged 6–23 months, percentage fed:				
Background characteristic	3+ food groups[1]	Minimum times or more[2]	Both 3+ food groups and minimum times or more	Number of breastfed children aged 5–23 months	Milk or milk products[3]	4+ food groups	4+ times or more	With 3 IYCF practices[4]	Number of non-breastfed children aged 6–23 months	Breast-milk or milk products[3]	3+ or 4+ food groups[5]	Minimum times or more[6]	With all 3 IYCF practices	Number of all children aged 6–23 months
Sex														
Male	(65.5)	(51.5)	(47.2)	25	*	*	*	*	19	(84.7)	(56.4)	(38.1)	(30.8)	44
Female	(67.3)	(55.3)	(43.8)	28	*	*	*	*	17	86.8	66.6	47.3	35.5	46
Residence														
Funafuti	*	*	*	21	*	*	*	*	(20)	(83.8)	(64.9)	(40.5)	(27.0)	40
Outer islands	(68.6)	(47.5)	(47.5)	33	*	*	*	*	17	87.4	58.9	44.6	38.3	50
Total	66.5	53.5	45.4	53	(64.9)	(54.4)	(27.0)	(15.3)	36	85.8	61.6	42.8	33.2	90

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] Food groups: a) infant formula, milk other than breast milk, cheese or yogurt or other milk products; b) foods made from grains, roots, and tubers, including porridge, fortified baby food from grains; c) vitamin A-rich fruits and vegetables (and red palm oil); d) other fruits and vegetables; e) eggs; f) meat, poultry, fish, and shellfish (and organ meats); g) legumes and nuts; h) foods made with oil, fat, butter.

[2] At least twice a day for breastfed infants aged 6–8 months and at least three times a day for breastfed children aged 9–23 months.

[3] Includes commercial infant formula, fresh, tinned and powdered animal milk, and cheese, yogurt and other milk products.

[4] Non-breastfed children aged 6–23 months are considered to be fed with a minimum standard of three IYCF practices if they receive other milk or milk products and are fed at least the minimum number of times per day with at least the minimum number of food groups.

[5] 3+ food groups for breastfed children and 4+ food groups for non-breastfed children.

[6] Fed solid or semi-solid food at least twice a day for infants aged 6–8 months, 3+ times for other breastfed children, and 4+ times for non-breastfed children.

11.7 PREVALENCE OF ANAEMIA IN CHILDREN

Iron deficiency anaemia is one of the most prevalent nutritional deficiencies in the world, and young children, as well as pregnant and postpartum women are the most susceptible because of the high iron demands during infant growth and pregnancy. Iron is one of the main components of haemoglobin and iron deficiency is estimated to be responsible for half of all anaemia globally.

Anaemia can be a serious problem for children because it can impair cognitive development, stunt growth and increase morbidity from infectious diseases.

The prevalence range proposed by WHO to categorise public health significance of anaemia are:

Classification	Public health significance	Prevalence range
Normal	(Acceptable)	<5.0%
Medium	(Poor)	5.0–19.9%
High	(Serious)	20.0–39.9%
Very high	(Critical)	40.0% or more

(Source: Iron Deficiency Anemia. Assessment, Prevention, and Control, A guide for programme managers WHO 2001)

Table 11.7 shows the prevalence of anaemia in children aged 6–59 months, by background characteristics. Haemoglobin levels were obtained using a HemoCue instrument. Children aged less than 6 months are not included because they have higher haemoglobin levels at birth and just after birth, and including them could distort the prevalence of anaemia.

Table 11.7 shows that nearly one-third of young children aged 6–59 months were found to have mild anaemia (32%) and over one-quarter (29%) were classified as having moderate anaemia. A very small proportion of children (0.6%) were found to have severe anaemia.

It is difficult to interpret age trends because only a very small number of children less than 59 months were tested. However, there is a trend towards a decreased prevalence of moderate anaemia with increasing age. Similar proportions of male and female children were found to have mild and moderate anaemia.

A lower proportion of children from the outer islands (23.5%) have moderate anaemia than those from Funafuti (33.8%). However, 1.2% of children from the outer islands have severe anaemia.

No definite trends were observed for other background characteristics.

Table 11.7: Prevalence of anaemia in children

Percentage of children aged 6–59 months classified as having anaemia, by background characteristics, Tuvalu 2007

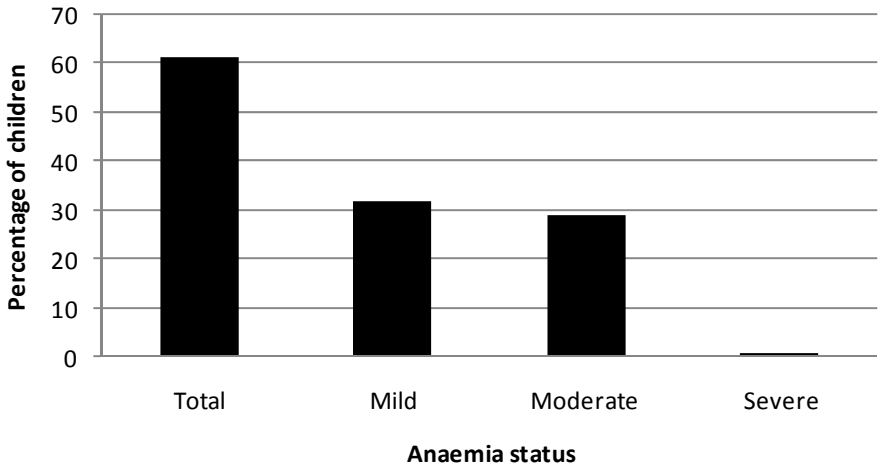
Background characteristic	Anaemia status by haemoglobin level			Any anaemia (<11.0 g/dl)	Number of children
	Mild (10.0–10.9 g/dl)	Moderate (7.0–9.9 g/dl)	Severe (below 7.0 g/dl)		
Age in months					
6–8	*	*	*	*	14
9–11	(31.6)	(45.4)	(0.0)	(77.0)	28
12–17	(39.9)	(47.1)	(0.0)	(87.0)	48
18–23	(37.2)	(32.4)	(0.0)	(69.6)	40
24–35	31.6	25.7	1.0	58.3	99
36–47	24.8	21.9	1.5	48.2	90
48–59	32.4	17.8	0.0	50.3	76
Sex					
Male	32.0	29.4	0.0	61.4	197
Female	31.7	28.2	1.2	61.1	199
Mother's interview status					
Interviewed	32.3	29.2	0.8	62.3	296
Not interviewed but in household	*	*	*	*	9
Not interviewed, and not in the household [1]	29.4	28.9	0.0	58.3	91
Residence					
Funafuti	29.8	33.8	0.0	63.6	204
Outer islands	34.0	23.5	1.2	58.7	191
Mother's education [2]					
Less than secondary	38.2	27.1	2.2	67.5	72
Secondary	29.9	29.9	0.4	60.3	163
More than secondary	*	*	*	*	5
Wealth quintile					
Lowest	31.7	22.4	2.2	56.3	79
Second	40.4	16.3	0.7	57.4	82
Middle	31.1	37.2	0.0	68.3	92
Fourth	26.9	45.9	0.0	72.8	63
Highest	27.9	24.9	0.0	52.8	80
Total	31.8	28.8	0.6	61.2	396

Note: Table is based on children who slept in the household the night before the interview. Prevalence of anaemia, based on haemoglobin levels, is adjusted for altitude using formulas in CDC, 1998. Haemoglobin in grams per decilitre (g/dl). 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] Includes children whose mothers are deceased.

[2] For women who are not interviewed, information is taken from the household questionnaire. Excludes children whose mothers are not listed in the household questionnaire.

Figure 11.3: Prevalence of anaemia in children aged 6–59 months, Tuvalu DHS 2007



11.8 MICRONUTRIENT INTAKE AMONG CHILDREN

Vitamin A is required for maintaining a healthy immune system and the body's epithelial tissue. Severe vitamin A deficiency (VAD) can cause eye damage (xerophthalmia) potentially resulting in blindness, increasing the severity of infections, and causing slow recovery from illness. Globally, VAD is the leading cause of childhood blindness. Children who have VAD have reduced immunity and are less likely to recuperate from common childhood illnesses, such as diarrhoea, ARI and measles.

VAD is common in dry environments where fresh fruits and vegetables are not readily available. Children can obtain vitamin A from foods such as breast milk, liver, eggs, fish, butter, red palm oil, mangos, papayas, carrots, pumpkins, and dark green leafy vegetables and fortified foods. Because vitamin A is a fat-soluble vitamin, it is necessary to consume oil or fat in order for it be be absorbed into the body. The liver can store an adequate amount of the vitamin for four to six months. Periodic dosing (every six months) with vitamin A supplements is a rapid, low-cost method of ensuring that children at risk do not develop VAD[13].

Dietary deficiency of iodine constitutes a major, global, public health concern. A lack of sufficient iodine is known to impair growth and development, cause goitre, cretinism (a severe form of neurological defect), spontaneous abortion, premature birth, infertility, stillbirth, and increased child mortality. Iodine deficiency disorder (IDD) is the single most common cause of preventable mental retardation and brain damage in the world. Because iodine cannot be stored for long periods by the body, tiny amounts are needed regularly. Where soil and, therefore, crops and grazing animals do not provide sufficient dietary iodine to the population, and where seafood is not regularly consumed, food fortification has proven to be a highly successful and sustainable intervention. Fortifying salt with iodine is the most common method of preventing IDD. Fortified salt that contains 15 parts per million of iodine is considered adequate for preventing IDD. When vulnerable populations do not have access to fortified foods such as iodised salt, a short-term solution is supplementation with capsules containing iodised oil[14].

Table 11.8 shows the consumption of micronutrients in the 24-hour period before the survey for children aged 6–35 months. Due to the small number of children in subgroups, differences in outcomes for background characteristics are often difficult to interpret.

[13] Beaton GH, Martorell R, L'Abbé, et al. Effectiveness of vitamin A supplementation in the control of young child morbidity and mortality in developing countries. UN, ACC/SCN State-of-the-art Series, Nutrition policy Discussion Paper No. 13, 1993.
[14] 2009 International Council for the Control of Iodine Deficiency Disorders, www.iccidd.org

Overall, approximately 87% of children aged 6–24 months consumed vitamin A-rich foods in the 24 hours preceding the survey. Similar proportions of males and females were found to have consumed vitamin A-rich foods. A higher proportion of non-breastfed children (96%) were found to have consumed vitamin A-rich foods than breastfed children (78%).

Over three-quarters (78%) of children aged 6–24 months were found to have consumed foods rich in iron in the 24 hours preceding the survey. This finding was almost identical for adult men (78%) and women (78%). No other definite trends are shown with respect to background characteristics.

Iron supplementation was given to 1 in 12 (8%) of children in the seven days preceding the survey. Iron supplementation was slightly more common among male children (10.4%) than female children (5.5%). There is a trend towards higher use of iron supplementation for children from lower wealth quintile households than those from higher wealth quintile households.

Approximately 1 in 11 children (9%) were given deworming medication in the six months preceding the survey. This finding was more common for non-breastfed children (11.3%) than breastfed children (2.9%).

Just over one-third of all Tuvaluan children (37.5%) were living in households with adequately iodised salt; of these, 52% were in Funafuti and 22% were from the outer islands.

Table 11.8: Micronutrient intake among children

Among youngest children aged 6–35 months who are living with their mother, the percentage who consumed vitamin A-rich and iron-rich foods in the day or night preceding the survey, and among all children aged 6–59 months, the percentage who were given vitamin A supplements in the six months preceding the survey, who were given iron supplements in the last seven days, and who were given deworming medication in the six months preceding the survey, and among all children aged 6–59 months who live in households that were tested for iodised salt, the percentage who live in households with adequately iodised salt, by background characteristics, Tuvalu 2007

	Among youngest children aged 6–35 months living with the mother			Among all children aged 6–59 months			Among children aged 6–59 months living in households tested for iodised salt	
Background characteristic	Percentage who consumed vitamin A-rich foods in last 24 hours[1]	Percentage who consumed iron-rich foods in last 24 hours[2]	Number of children	Percentage given iron supplements in last 7 days	Percentage given deworming medication in last 6 months[3]	Number of children	Percentage living in households with adequately iodised salt[4]	Number of children
Age in months								
6–8	*	*	13	*	*	13	*	13
9–11	*	*	22	(0.0)	(0.0)	29	(37.5)	27
12–17	(93.6)	(85.2)	33	(6.7)	(3.0)	44	(45.8)	44
18–23	*	*	22	(15.5)	(2.7)	40	(43.6)	38
24–35	93.8	86.3	52	8.4	12.9	89	38.3	86
36–47	na	na	na	10.6	9.5	84	37.0	81
48–59	na	na	na	4.6	15.3	75	32.1	72
Sex								
Male	86.1	78.5	70	10.4	10.1	193	34.1	187
Female	88.3	78.2	71	5.5	7.7	181	41.2	173
Breastfeeding status								
Breastfeeding	78.3	70.5	71	11.6	2.9	79	39.5	75
Not breastfeeding	96.0	85.7	69	7.2	11.3	273	36.5	264
Missing	*	*	2	*	*	21	*	21
Residence								
Funafuti	87.9	77.6	63	8.1	7.5	188	51.8	185
Outer islands	86.6	78.9	78	8.0	10.3	185	22.5	175
Mother's education								
Less than secondary	(80.6)	(74.9)	31	9.8	9.8	83	44.3	74
Secondary	88.8	82.8	80	9.2	9.7	215	32.7	210
More than secondary	(89.7)	(70.0)	31	2.9	5.7	76	44.3	76

Table 11.8 (continued)

Background characteristic	Among youngest children aged 6–35 months living with the mother			Among all children aged 6–59 months			Among children aged 6–59 months living in households tested for iodised salt	
	Percentage who consumed vitamin A-rich foods in last 24 hours[1]	Percentage who consumed iron-rich foods in last 24 hours[2]	Number of children	Percentage given iron supplements in last 7 days	Percentage given deworming medication in last 6 months[3]	Number of children	Percentage living in households with adequately iodised salt[4]	Number of children
Mother's age at birth								
15–19	*	*	5	(4.9)	(4.9)	26	(48.1)	25
20–29	87.9	78.9	86	5.8	10.1	228	31.7	224
30–39	(85.6)	(78.5)	42	12.7	9.1	98	48.5	91
40–49	*	*	9	*	*	20	*	20
Wealth quintile								
Lowest	*	*	24	14.1	6.4	62	26.7	60
Second	(91.7)	(91.7)	34	11.5	12.1	81	33.1	76
Middle	(87.6)	(76.4)	34	8.3	13.4	92	34.8	86
Fourth	(79.5)	(75.2)	29	1.7	4.4	65	40.4	65
Highest	*	*	21	4.4	5.9	73	51.7	73
Total	87.2	78.3	141	8.0	8.9	373	37.5	360

Note: Information on vitamin A and iron supplements and deworming medication is based on the mother's recall. 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.

na = not applicable

[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, dark green leafy vegetables, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A, and red palm oil (if data are collected).

[2] Includes meat, (including organ meat).

[3] Deworming for intestinal parasites is commonly done for helminthes and for schistosomiasis.

[4] Salt containing 15 parts per million of iodine or more. Excludes children in households in which salt was not tested.

11.9 PRESENCE OF IODISED SALT IN HOUSEHOLD

Table 11.9 shows the prevalence of households with salt, and shows the level of iodine in salt (in parts per million) for those households that were tested.

The majority of households (96%) were found to have salt and this finding did not differ by area of residence or by wealth quintile.

After testing, only one-third (34%) of households were found to have salt with the recommended iodine content. More than half of households (56%) had salt without any iodine, and a further 9.5% had salt with less than the recommended iodine content. Differences in iodine content were apparent by area of residence. A higher proportion of households in Funafuti (50%) were found to have salt with adequate iodine than households in the outer islands (24%). Conversely, a higher proportion of households in the outer islands had salt without added iodine (67%) than households in Funafuti (40%).

Among households the prevalence of adequately iodised salt increases with wealth quintile.

Table 11.9: Presence of iodised salt in household

Among all households, the percentage tested for iodine content and the percentage of households with no salt; and among households with salt tested, the percent distribution by level of iodine in salt (parts per million, ppm), according to background characteristics, Tuvalu 2007

Background characteristic	Among all households, the percentage:		Number of households	Among households with tested salt, the percent distribution by iodine content of salt			Total	Number of households
	With salt tested	With no salt		None (0 ppm)	Inadequate (<15 ppm)	Adequate (15+ ppm)		
Residence								
Funafuti	95.0	5.0	300	39.8	10.4	49.8	100.0	285
Outer islands	96.6	3.4	439	67.1	8.9	24.0	100.0	424
Wealth quintile								
Lowest	95.0	5.0	183	72.2	5.3	22.4	100.0	174
Second	95.1	4.9	166	63.0	11.0	26.0	100.0	158
Middle	97.7	2.3	141	54.4	11.3	34.3	100.0	137
Fourth	96.7	3.3	122	45.6	11.0	43.5	100.0	118
Highest	95.8	4.2	128	36.7	9.9	53.4	100.0	123
Total	95.9	4.1	739	56.1	9.5	34.4	100.0	709

11.10 NUTRITIONAL STATUS OF WOMEN AND MEN

Anthropometric data on height and weight were collected for women aged 15–49 and men aged 15 years and over. In this report, two indicators of nutritional status (based on these data) are presented: the percentage of women and men with very short stature (less than 145 cm) and body mass index (BMI).

BMI is used to measure thinness or obesity. BMI is defined as weight in kilograms divided by height squared in meters (kg/m^2). A cutoff point of 18.5 is used to define thinness or acute undernutrition, and a BMI of 25.0 or above usually indicates overweight or obesity. The height of a woman is associated with her past socioeconomic status and nutrition during childhood and adolescence. Low pre-pregnancy BMI and short stature are risk factors for poor birth outcomes and obstetric complications. In developing countries, maternal underweight is the leading risk factor for preventable death and diseases (WHO 2002).

11.10.1 Nutritional status of women

Table 11.10.1 shows the percentages of women less than 145 cm tall, mean BMI, and weight distribution of women by age group, residence, education and wealth quintile.

A very small proportion of women (0.4%) measured less than 145 cm, and these women were aged 40–49. Average BMI increases with age from 26.1 for women aged 15–19 to 36.3 for women aged 40–49.

Overall, only one in nine women (11%) were classified as having a normal BMI (i.e. between 18.5 and 24.9). The proportions decreased with age group from 44% for women aged 15–19 years to 2% for women aged 40–49 years.

Nearly 9 in 10 women were classified as being overweight or obese, with one-fifth (20%) classified as overweight, and nearly two-thirds as obese (67%). The prevalence of obesity increased substantially from 20% for women aged 15–19 to 86% for women aged 30–39. Figure 4 shows the proportions of overweight and obese women by age group.

Only a minor proportion of women were subsequently classified as mildly thin (0.5%) or moderately or severely thin (0.2%).

Figure 11.4: Prevalence of overweight and obesity by age group for women, Tuvalu DHS 2007

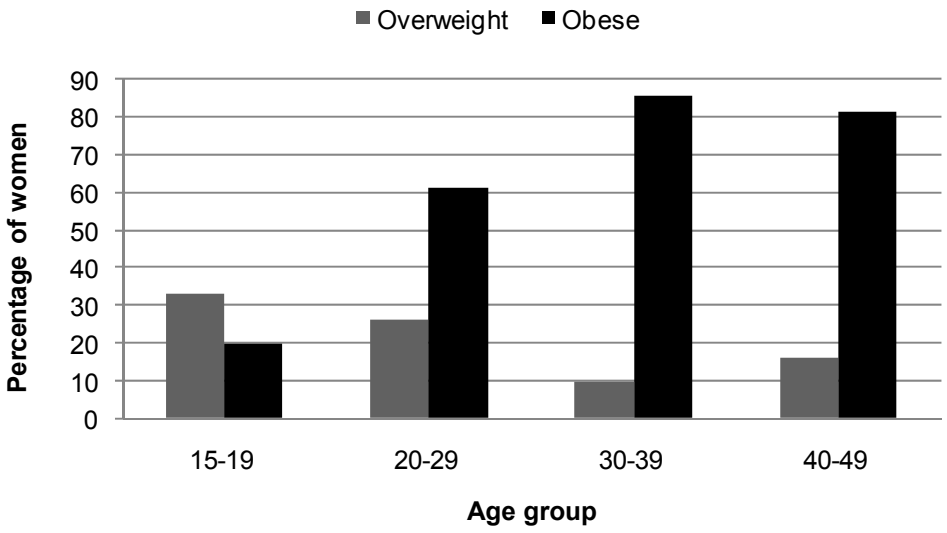


Table 11.10.1: Nutritional status of women

Among women aged 15–49, the percentage with height under 145 cm, mean body mass index (BMI), and the percentage with specific BMI levels, by background characteristics, Tuvalu 2007

	Height		BMI[1]								
Background characteristic	Percentage under 145 cm	Number of women	Mean BMI	18.5–24.9 (Total normal)	<18.5 (Total thin)	17.0–18.4 (Mildly thin)	<17.0 (Moderate- ly and severely thin)	≥25.0 Total overweight/ obese)	25.0–29.9 (Overweight)	≥30.0 (Obese)	Number of women
Age											
15–19	0.0	108	26.1	44.3	2.7	2.0	0.6	53.1	33.1	19.9	106
20–29	0.0	270	32.5	11.5	0.7	0.3	0.5	87.7	26.3	61.4	234
30–39	0.0	187	35.7	4.7	0.0	0.0	0.0	95.3	9.8	85.5	165
40–49	1.2	257	36.3	1.9	0.4	0.4	0.0	97.7	16.2	81.5	254
Residence											
Funafuti	0.3	393	33.3	12.0	1.2	0.9	0.3	86.8	19.5	67.4	363
Outer islands	0.5	429	33.8	10.9	0.3	0.2	0.2	88.8	21.0	67.8	396
Education											
Less than secondary	1.2	271	35.3	6.6	0.4	0.0	0.4	93.0	17.9	75.0	262
Secondary	0.0	423	32.3	15.1	1.0	0.9	0.2	83.9	22.6	61.4	383
More than secondary	0.0	129	33.6	10.1	0.6	0.6	0.0	89.4	18.0	71.4	114
Wealth quintile											
Lowest	0.0	150	33.3	10.1	0.5	0.0	0.5	89.4	24.0	65.3	138
Second	0.0	174	33.5	13.8	0.0	0.0	0.0	86.2	24.3	61.9	159
Middle	1.3	163	34.7	8.9	0.4	0.4	0.0	90.7	15.4	75.2	149
Fourth	0.7	167	33.6	11.4	0.7	0.7	0.0	87.9	16.9	71.0	156
Highest	0.0	169	32.5	12.5	2.1	1.4	0.7	85.4	20.8	64.6	156
Total	0.4	822	33.5	11.4	0.7	0.5	0.2	87.9	20.3	67.6	758

Note: BMI is expressed as the ratio of weight in kilograms to the square of height in meters (kg/m^2).
[1] Excludes pregnant women and women with a birth in the preceding two months.

11.10.2 Nutritional status of men

Table 11.10.2 shows mean BMI and weight distributions for men by age group, residence, education and wealth quintile.

Among men aged 15 and over, the mean BMI is 30.3, 23% of men were in the normal range, and nearly 1% were considered thin and mildly thin. Over three-quarters of men were classified as overweight or obese (77%), with a higher proportion classified as obese (46%) and (32%).

Average BMI increased with age group from 25.6 for men aged 15–19 to 33.4 for men aged 30–39. The prevalence of men with a normal BMI decreased from 47.8% for men aged 15–19 to 9.1% for men aged 30–39 years.

While the prevalence of overweight men was similar for all four age groups, the prevalence of obesity increased with age from 18% for men aged 15–19 years to 65% for those aged 30–39. Figure 5 shows the proportions of overweight and obese men by age group.

There were no definite trends for the prevalence of overweight or obesity and area of residence, level of education or wealth quintile.

Figure 11.5: Prevalence of overweight and obese men by age group, Tuvalu DHS 2007

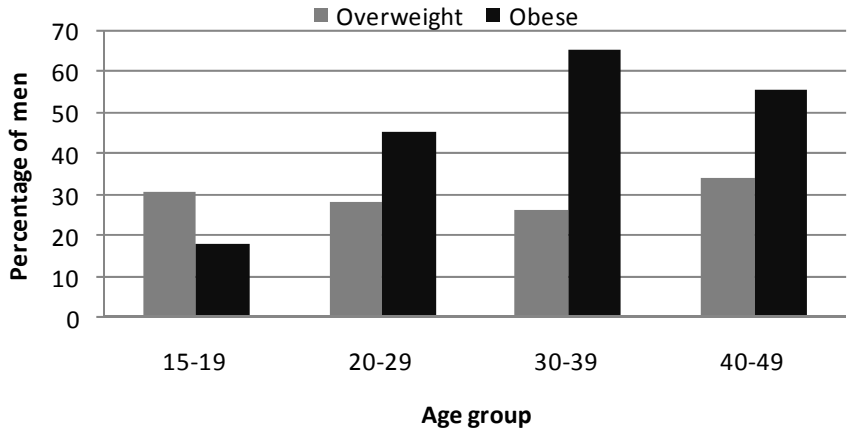


Table 11.10.2: Nutritional status of men

Among men aged 15–49, mean body mass index (BMI), and the percentage with specific BMI levels, by background characteristics, Tuvalu 2007

Background characteristic	BMI							
	Mean BMI	18.5–24.9 (Total normal)	<18.5 (Total thin)	17.0–18.4 (Mildly thin)	≥25.0 (Total over-weight or obese)	25.0–29.9 (Over-weight)	≥30.0 (Obese)	Number of men
Age								
15–19	25.6	47.8	3.9	3.9	48.3	30.5	17.7	78
20–29	30.1	27.3	0.0	0.0	72.7	27.9	44.9	124
30–39	33.4	9.1	0.0	0.0	90.9	25.8	65.1	77
40–49	31.6	10.8	0.0	0.0	89.2	33.6	55.5	118
Residence								
Funafuti	30.6	22.3	0.6	0.6	77.1	29.7	47.4	205
Outer islands	30.0	23.6	1.0	1.0	75.4	29.7	45.7	192
Education								
Less than secondary	31.4	15.4	0.5	0.5	84.1	30.1	54.0	135
Secondary	29.0	30.7	1.2	1.2	68.1	30.5	37.6	204
More than secondary	32.6	13.1	0.0	0.0	86.9	25.9	61.1	58
Wealth quintile								
Lowest	29.0	32.6	3.3	3.3	64.1	21.8	42.4	75
Second	29.8	20.4	0.0	0.0	79.6	36.9	42.8	87
Middle	31.5	15.2	0.8	0.8	84.0	29.7	54.3	84
Fourth	29.8	28.2	0.0	0.0	71.8	26.2	45.6	64
Highest	31.2	20.6	0.0	0.0	79.4	31.9	47.5	87
Total 15–49	30.3	22.9	0.8	0.8	76.3	29.7	46.6	398
50+	29.9	19.4	0.0	0.0	80.6	37.9	42.7	118
Total men 15+	30.2	22.1	0.6	0.6	77.3	31.6	45.7	515

Note: BMI is expressed as the ratio of weight in kilograms to the square of height in meters (kg/m^2).

11.11 FOODS CONSUMED BY MOTHERS IN THE 24 HOURS PRECEDING THE SURVEY

Adequate maternal nutrition is important for the health and reproductive outcomes of mothers and the survival and development of their children. A review of studies on the nutritional status of women in developing countries shows that, on average, women consume only two-thirds of the recommended daily intake of energy[15]. Because of women's childbearing and nurturing roles, their pre- and postnatal health and nutritional status are important determinants of the survival and development of the foetus and newborn child, in addition to their own health, productivity and well-being.

Table 11.11 presents the diversity of food groups consumed by mothers who gave birth in the three years preceding the survey, which provides important information on maternal eating patterns.

Liquids

Among mothers with children under age 3 years living with them, about 42% consumed milk, 74% drank tea or coffee, while the majority (86%) consumed other liquids during the day or night preceding the interview. Mothers living in Funafuti, those in the highest wealth quintile households, and those with higher education levels were more likely to drink milk than other mothers. Tea, coffee and other liquids were the most common drink for mothers in the outer islands

[15] McGuire J. and Popkin B.M. 1989. Beating the zero-sum game: women and nutrition in the third world. Part I. Food and Nutrition Bulletin (11):38–63.

Solid and semisolid foods

Protein-rich food and foods made from grains were the most commonly consumed foods among Tuvaluan mothers in the 24 hours preceding the survey, with 87% of mothers consuming protein-rich food and 84% consuming foods made from grain. Almost seven out of ten mothers (69.5%) consumed vitamin A-rich foods, 39% consumed foods made from roots and tubers, while about three out of ten mothers consumed fruits and vegetables. Few mothers consumed foods made from legumes, cheese or yogurt. Mothers from the outer islands were more likely to consume protein-rich and vitamin A-rich foods.

Table 11.11: Foods consumed by mothers in the day or night preceding the interview

Among mothers aged 15–49 with a child under age 3 years living with them, the percentage who consumed specific types of foods in the day or night preceding the interview, by background characteristics, Tuvalu 2007

Background characteristic	Liquids			Solid or semisolid foods										
	Milk	Tea/ coffee	Other liquids	Foods made from grains	Foods made from roots/ tubers	Foods made from legumes	Meat/ fish/ shellfish/ poultry/ eggs	Cheese/ yogurt	Vitamin A-rich fruits/ vegetables[1]	Other fruits/ vegetables	Other solid or semi-solid food	Foods made with oil/ fat/ butter	Sugary foods	Number of women
Age														
15–19	*	*	*	*	*	*	*	*	*	*	*	*	*	6
20–29	39.6	74.4	84.4	87.0	33.7	6.5	85.2	7.8	69.8	29.6	53.2	43.7	33.6	105
30–39	45.3	71.7	87.7	81.3	40.4	9.9	89.9	6.6	71.0	35.2	71.3	51.9	27.6	66
40–49	*	*	*	*	*	*	*	*	*	*	*	*	*	18
Residence														
Funafuti	42.7	68.5	84.3	87.6	32.6	12.4	83.1	11.2	65.2	43.8	67.4	56.2	43.8	97
Outer islands	41.4	80.1	88.1	80.3	44.3	3.2	91.1	2.8	73.8	14.4	54.3	39.2	22.1	99
Education														
Less than secondary	(35.6)	(82.3)	(90.2)	(74.8)	(37.1)	(10.8)	(86.6)	(5.2)	(70.0)	(19.6)	(68.9)	(44.7)	(29.0)	42
Secondary	41.6	74.6	86.1	88.2	40.9	6.2	88.9	8.7	69.0	28.1	58.1	44.9	29.6	119
More than secondary	(50.9)	(64.3)	(82.2)	(80.4)	(32.2)	(9.2)	(82.0)	(3.1)	(71.0)	(42.6)	(60.0)	(59.9)	(48.0)	36
Wealth quintile														
Lowest	(30.4)	(78.5)	(94.4)	(85.6)	(50.1)	(3.9)	(83.0)	(0.0)	(61.2)	(8.8)	(39.7)	(32.1)	(32.6)	32
Second	(33.3)	(79.2)	(87.6)	(89.9)	(27.4)	(3.8)	(95.0)	(6.9)	(71.3)	(18.8)	(58.4)	(38.4)	(17.2)	46
Middle	(39.5)	(65.7)	(87.5)	(83.9)	(30.6)	(8.2)	(89.5)	(8.2)	(65.9)	(34.4)	(75.8)	(56.1)	(30.9)	48
Fourth	(48.6)	(79.2)	(86.8)	(69.6)	(52.5)	(7.5)	(83.9)	(5.8)	(77.9)	(30.8)	(56.1)	(42.9)	(34.9)	37
Highest	(61.2)	(71.0)	(74.3)	(90.3)	(38.7)	(16.2)	(80.6)	(12.9)	(70.9)	(51.8)	(67.6)	(67.6)	(54.8)	34
Total	42.0	74.4	86.2	83.9	38.5	7.7	87.2	7.0	69.5	28.9	60.8	47.6	32.8	196

Note: Foods consumed in the '24-hour' period before the survey. 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] Includes pumpkin, squash, carrots, sweet potatoes, breadfruit, green leafy vegetables, banana and papayas.

11.12 PREVALENCE OF ANAEMIA AMONG WOMEN AND MEN

Anaemia may be an underlying cause of maternal mortality, spontaneous abortion, premature birth and low birth weight. Anaemia in developing countries is mainly due to the inadequate absorption of dietary iron, and the resulting iron deficiency leads to reduced production of haemoglobin and anaemia. In pregnant women, folate deficiency also plays a role in causing anaemia but to a lesser extent than iron deficiency. Iron deficiency anaemia is more common in young children and in women of reproductive age, especially pregnant and breastfeeding mothers. These population subgroups are more susceptible to anaemia because of their increased iron needs due to growth, pregnancy and lactation. Women of reproductive age also have increased iron losses from menstrual blood flow.

11.12.1 Anaemia among women

Table 11.12.1 presents anaemia prevalence among women aged 15–49 (based on haemoglobin levels), according to selected background characteristics. Unadjusted values of haemoglobin were obtained using a HemoCue instrument. Given that haemoglobin requirements differ substantially depending on altitude and smoking status, an adjustment was made before classifying women by anaemia level.

One in five women (20%) aged 15–49 were found to have mild anaemia, 1 in 20 women were classified as having moderate anaemia, and a very small proportion (0.8%) had severe anaemia. Figure 6 illustrates the proportions of women by anaemia status.

The prevalence of mild anaemia decreased with age from 36% for women aged 15–19 years to 14.1% for women aged 40–49 years. Conversely the prevalence of moderate anaemia increased marginally from 3% for women aged 15–19 years to 6% for those aged 40–49 years.

The prevalence of mild anaemia also decreased with the number of children born, suggesting that this finding is influenced by women's age.

A higher proportion of women from Funafuti were found to have mild anaemia (28%) than women from the outer islands (12%). Moderate anaemia was slightly more common among women from Funafuti (6.3%) than women from the outer islands (3.5%).

The prevalence of both mild and moderate anaemia increases with increasing wealth quintile. Dietary inhibitors of iron absorption include polyphenols and phytates (plant components in tea, coffee and vegetables) and calcium. Drinking black tea with meals has been shown to affect iron absorption.

Figure 11.6: Prevalence of anaemia in women, Tuvalu DHS 2007

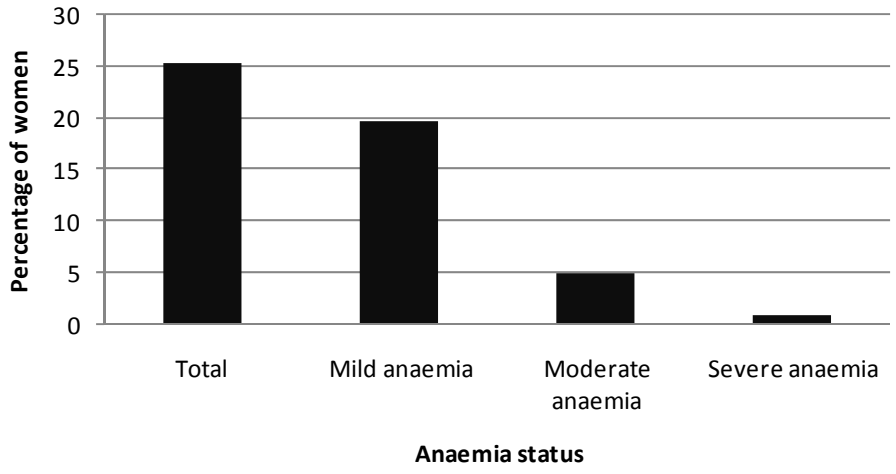


Table 11.12.1: Prevalence of anaemia in women

Percentage of women aged 15–49 with anaemia, by background characteristics, Tuvalu 2007

Background characteristic	Anaemia status by haemoglobin level			Any anaemia	Number of women
	Mild anaemia	Moderate anaemia	Severe anaemia		
Age					
15–19	36.0	3.0	0.0	39.0	107
20–29	19.8	4.1	1.8	25.7	269
30–39	17.8	5.6	0.4	23.8	188
40–49	14.1	6.0	0.3	20.3	258
Number of children ever born					
0	22.4	2.8	0.8	25.9	278
1	24.8	4.3	1.8	30.8	116
2–3	18.3	5.4	0.6	24.4	211
4–5	15.0	8.7	0.4	24.1	153
6+	14.3	4.3	0.0	18.6	64
Maternity status					
Pregnant	15.2	13.6	0.0	28.8	49
Breastfeeding	21.7	2.9	0.5	25.1	120
Neither	19.6	4.6	0.8	25.1	654
Using IUD					
Yes	*	*	*	*	8
No	19.5	4.9	0.8	25.1	815
Smoking status					
Smokes cigarettes/tobacco	16.5	4.4	0.9	21.8	232
Does not smoke	20.9	5.1	0.7	26.7	592
Residence					
Funafuti	28.0	6.3	0.0	34.3	395
Outer islands	12.0	3.5	1.4	16.9	428
Education					
Less than secondary	14.2	4.6	0.7	19.5	272
Secondary	23.8	5.1	1.0	29.9	421
More than secondary	17.6	5.0	0.0	22.6	130
Wealth quintile					
Lowest	15.5	2.4	0.4	18.3	150
Second	18.1	4.0	0.8	22.8	171
Middle	14.5	5.3	1.3	21.1	163
Fourth	21.6	7.4	1.3	30.3	168
Highest	28.0	5.1	0.0	33.0	171

Note: Prevalence is adjusted for altitude and for smoking status if known using formulas in CDC 1998. An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed.

11.12.2 Prevalence of anaemia in men

Table 11.12.2 presents the anaemia prevalence among men aged 15–49, based on haemoglobin levels, according to selected background characteristics. Unadjusted values of haemoglobin were obtained using a HemoCue instrument. Adjustment was made for altitude and smoking status, before classifying men by anaemia level.

Anaemia prevalence is low among men aged 15–49, with all cases occurring in men aged 15–19 years (4.4%). All men aged 15–19 who were diagnosed with mild anaemia were residing in Funafuti. One in sixteen (6%) men aged 50 years and older were found to have mild anaemia and a further 1% were diagnosed with moderate anaemia.

Table 11.12.2: Prevalence of anaemia in men

Percentage of men aged 15–49 with anaemia, by background characteristics, Tuvalu 2007

Background characteristic	Anaemia status by haemoglobin level		Any anaemia	Number of men
	Mild anaemia	Moderate anaemia		
Age				
15–19	4.4	0.0	4.4	79
20–29	0.0	0.0	0.0	127
30–39	0.0	0.0	0.0	77
40–49	0.0	0.0	0.0	118
Smoking status				
Smokes cigarettes/tobacco	0.5	0.0	0.5	232
Does not smoke	1.4	0.0	1.4	170
Residence				
Funafuti	1.7	0.0	1.7	209
Outer islands	0.0	0.0	0.0	192
Education				
Less than secondary	0.9	0.0	0.9	137
Secondary	1.1	0.0	1.1	206
More than secondary	0.0	0.0	0.0	58
Wealth quintile				
Lowest	1.6	0.0	1.6	75
Second	0.0	0.0	0.0	87
Middle	0.0	0.0	0.0	84
Fourth	1.8	0.0	1.8	65
Highest	1.3	0.0	1.3	90
Total 15–49	0.9	0.0	0.9	401
50+	6.0	1.0	6.9	120
Total men 15+	2.1	0.2	2.3	521

Note: Prevalence is adjusted for altitude and for smoking status if known using formulas in CDC 1998.

11.13 MICRONUTRIENT INTAKE AMONG MOTHERS

Breastfed children benefit from their mothers taking micronutrient supplements, especially vitamin A. Night blindness is an indicator of severe VAD, which pregnant women are especially prone to. In the 2007 TDHS, women are asked if they had had difficulty with their vision during daylight and if they also had suffered from night blindness during their last pregnancy. The percentage of women with adjusted night blindness is the percentage of women who only suffer from vision difficulties at night. This underestimates the occurrence of night blindness in women who also have daytime vision problems. VAD can be prevented through high dosages (200,000 IU) of vitamin A in the first six to eight weeks after delivery (when women are considered not at risk of being pregnant). A high dosage of vitamin A should not be given to pregnant women due to possible adverse effects (i.e. birth defects).

Anaemia is a key health status indicator for maternal nutrition. An estimated one-fifth of perinatal mortality and one-tenth of maternal mortality are attributable to iron deficiency anaemia. Anaemia also results in an increased risk of premature delivery and low birth weight. Iron deficiency, a major cause of anaemia, is one of the top 10 risk factors in developing countries for 'lost years of healthy life'[16]. Information on anaemia prevalence can be useful for developing health intervention programmes that are designed to prevent and control anaemia (e.g. iron supplementation and fortification programmes). Women who take iron supplements during pregnancy protect themselves and their infant.

Table 11.13 shows that a high proportion (94%) of women with children under age 3 years consumed vitamin A-rich foods in the 24 hours preceding the survey. This finding did not differ substantially by background characteristics.

Nearly 9 in 10 (87%) women with a child under age 3 years consumed iron-rich foods in the 24 hours preceding the survey. A higher proportion of women residing in the outer islands (91%) consumed iron rich-foods in the 24 hours preceding the survey than women from Funafuti (83%).

Approximately 1 in 20 women (5.6%) with a child born in the five years preceding the survey reported that they had night blindness during their last pregnancy. This prevalence was reduced to 2.8% after adjusting for daytime vision problems. After this adjustment, no women from Funafuti were considered to have experienced night blindness, while 5.6% of women from the outer islands did.

Nearly half of all women who had a child in the five years prior to the survey did not provide information on the length of time they took dietary iron supplements. A further 8% did not take iron supplements during their last pregnancy. About 20% of women took iron supplements for less than 60 days, 5% for 60–89 days, and 22% for more than 90 days.

A small proportion of women (4%) took a deworming medication during their last pregnancy.

Over one-third of women with a child born in the five years preceding the survey were living in a household with adequately iodised salt. The prevalence of women from households with adequately iodised salt was higher in Funafuti (52%) than in the outer islands (23%). Prevalence also increased with relative wealth, from 27% for women from the lowest wealth quintile households to 54% for women from households in the highest wealth quintile.

[16] World Health Report 2001.

Table 11.13: Micronutrient intake among mothers

Among women aged 15–49 with a child under age 3 years living with her, the percentages who consumed vitamin A-rich and iron-rich foods in the 24 hours preceding the survey; among women aged 15–49 with a child born in the last five years, the percentage who received a vitamin A dose in the first two months after the birth of the last child; among mothers aged 15–49 who during the pregnancy of the last child born in the five years prior to the survey, the percentage who suffered from night blindness, the percentage who took iron tablets or syrup for specific numbers of days, and the percentage who took deworming medication; and among women aged 15–49 with a child born in the last five years, who live in households that were tested for iodised salt, the percentage who live in households with adequately iodised salt, by background characteristics, Tuvalu 2007

	Among women with a child under three years living with her			Among women with a child born in the last five years									Among women with a child born in the last five years, who live in households that were tested for iodised salt	
				Percentage who suffered night blindness during pregnancy of last birth		Number of days women took iron tablets or syrup during pregnancy of last birth					Percentage of women who took deworming medication during pregnancy of last birth[3]			
Background characteristic	Percentage consumed vitamin A-rich foods[1]	Percentage consumed iron-rich foods	Number of women	Night blindness reported	Night blindness adjusted[2]	None	<60	60–89	90+	Don't know/ missing		Number of women	Percentage living in households with adequately iodised salt[4]	Number of women
Age														
15–19	*	*	6	*	*	*	*	*	*	*	*	8	*	5
20–29	93.7	85.2	105	3.2	0.4	8.0	25.6	5.3	20.5	40.6	1.6	144	37.3	141
30–39	95.1	89.9	66	5.3	3.5	5.6	11.8	5.1	22.9	54.5	7.4	98	40.1	95
40–49	*	*	18	(15.6)	(10.0)	(12.1)	(11.7)	(2.6)	(31.5)	(42.2)	(3.0)	42	(32.6)	42
Residence														
Funafuti	92.1	83.1	97	3.0	0.0	8.3	25.6	9.0	24.1	33.1	3.0	144	51.9	140
Outer islands	95.5	91.1	99	8.2	5.6	7.4	15.0	0.5	20.7	56.4	4.4	148	22.9	144
Education														
Less than secondary	(92.2)	(86.6)	42	5.5	3.0	6.6	15.1	5.6	30.8	41.9	9.0	70	38.1	67
Secondary	95.3	88.9	119	5.5	2.4	7.8	21.6	4.6	19.0	47.1	1.0	166	33.6	162
More than secondary	(91.2)	(82.0)	36	6.2	3.8	9.6	22.6	3.9	21.8	42.1	5.1	56	46.7	56
Wealth quintile														
Lowest	(92.4)	(83.0)	32	7.7	5.3	12.0	14.6	3.4	23.6	46.4	5.7	52	27.4	51
Second	(97.7)	(95.0)	46	4.3	3.2	7.5	18.9	3.3	25.6	44.6	0.9	65	34.1	61
Middle	(95.4)	(89.5)	48	1.9	1.0	5.7	18.4	6.4	25.6	43.8	4.1	68	33.4	66
Fourth	(88.5)	(83.9)	37	(13.3)	(5.5)	(10.0)	(18.6)	(2.2)	(14.3)	(54.9)	(4.7)	50	(37.2)	50
Highest	(93.5)	(80.6)	34	3.0	0.0	4.9	30.4	7.6	20.8	36.3	3.8	57	54.0	56
Total	93.9	87.2	196	5.6	2.8	7.8	20.2	4.7	22.4	44.9	3.7	292	37.2	284

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] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A, and red palm oil [if data are collected].

[2] Women who reported night blindness but did not report difficulty with vision during the day.

[3] Deworming for intestinal parasites is commonly done for helminthes and for schistosomiasis.

[4] Salt containing 15 parts per million of iodine or more. Excludes women in households where salt was not tested.

11.14 KEY RESULTS

Below are the main findings on the nutritional status of men, women and children from the 2007 TDHS. These findings were based on their anthropometric status, infant and child feeding practices, micronutrient intakes (of women and children), food consumption patterns (of mothers) and the consequences of inadequate nutrition.

1. Nearly 2% of children are underweight. Children from the outer islands are more likely to be underweight than those from Funafuti.
2. The majority of children (91%) born in the five years preceding the survey were ever breastfed. Less than one in five children born in the five years preceding the survey started breastfeeding within one hour after birth while more than one in four were breastfed within one day of birth.
3. Among breastfed children aged 6–23 months, 33% met the minimum IYCF requirements, which recommend the timely introduction of solid and/or semisolid foods from age 6 months.
4. More than half (61%) the number of children aged 6–59 months were identified as being anaemic. Anaemia is common among children: 1) aged 9–17 months, 2) whose mother attained only a primary education, and iii) living in the outer islands.
5. Over three-quarters (77%) of men were classified as being overweight or obese. The prevalence of overweight was similar for all age groups while the prevalence of obesity increased with age.
6. More women were classified as being overweight or obese (88%) than men (77%). More than half the number of women aged 15–19 were already overweight or obese. The prevalence of overweight and obese increases with age.
7. One in four women have some form of anaemia (25%). The prevalence of mild anaemia decreases with age.
8. Nearly 9 in 10 women with a child under age 3 years consumed iron-rich foods in the 24 hours preceding the survey. A higher proportion of women residing in the outer islands (91%) consumed iron-rich foods in the 24 hours preceding the survey than did women from Funafuti (83%).

CHAPTER 12 HIV AND AIDS RELATED KNOWLEDGE, ATTITUDES AND BEHAVIOURS

Acquired immune deficiency syndrome (AIDS) is caused by the human immunodeficiency virus (HIV) that depresses the immune system, making the body susceptible to opportunistic infections that ultimately result in death. The predominant type of HIV transmission is through heterosexual contact, followed in magnitude by prenatal transmission, in which the mother passes the virus to the child during pregnancy, delivery or breastfeeding. Other modes of transmission include infected blood products and unsafe injections. Male-to-male sex accounts for over one-quarter of all infections in the Pacific (excluding Papua New Guinea), and injecting drug use is a greater cause of HIV transmission than blood products[17].

In the Pacific Islands region, HIV remains a major public health challenge. In 2006, an estimated 7,100 people acquired HIV, bringing the total for the region to 81,000. Also in 2006, an estimated 4,000 people died of HIV-related illnesses; three-quarters of all people living with HIV in the region live in Papua New Guinea. Adult national HIV prevalence was estimated at around 1.8% in 2005, and could be as high as 3.5% among young men in urban areas. None of the other Pacific Island countries has reported more than 300 HIV cases since 1985, but risk factors associated with HIV are prevalent in the region[18].

Despite its isolation and remoteness, Tuvalu has not been spared from the effects of HIV. In 1995, the islands recorded their first case of HIV, and since then there have been 10 cases to date, one of the highest rates of HIV per capita in the Pacific. Out of the 10 cases, 8 people are still alive and 2 people have died of HIV-related illnesses. Seafarers, youth and women are among those identified as the most vulnerable in the community[19].

To respond to these challenges, Tuvalu's Ministry of Health, in partnership with non-governmental organisations, formed the national coordinating body now known as the Tuvalu National AIDS Committee (TUNAC). Taking a multi-sectoral approach, TUNAC combines the efforts of key government departments, non-governmental organisations, community-based organisations and civil society to work towards halting the spread of HIV and sexually transmitted infections (STIs) in Tuvalu. This committee, under the guidance of the Tuvalu's National Strategic Plan, coordinates all HIV- and STI-related activities in the country.

In December 2008, Tuvalu's Ministry of Health and TUNAC launched the second National Strategic Plan which operates from 2009–2013, and focuses on achieving an enabling environment, treatment, care and support, prevention, and improving programme management.

This chapter presents information on the level of awareness of HIV and AIDS, knowledge of HIV transmission and prevention, attitudes toward people living with HIV and AIDS, and appropriate sexual behaviour for the general adult Tuvaluan population aged 15–49 (for men, findings for those over age 50 are also included). Coverage of HIV testing, self-reported prevalence of STIs and related symptoms, and the prevalence of medical injections using a sterile syringe is also included. The chapter then focuses on HIV and AIDS knowledge and patterns of sexual activity among young people aged 15–24, because young adults are considered to be a high-risk group and subsequently an important target group for HIV prevention efforts. The final section of the chapter focuses on perceptions of abstinence and faithfulness.

Overall, 851 women and 428 men aged 15–49 participated in this component of the 2007 TDHS. An additional 130 men aged 50 and older also participated. However, it should be noted that components of this chapter do not include all participants, and are restricted on the basis of sexual behaviour and other factors.

[17] WHO Website. www.who.int/topics/hiv_aids/en/
[18] Buchanan-Aruwafu. H, Integrated Picture: HIV Risk and Vulnerability in the Pacific. February 2007.
[19] WHO 2006

The findings presented in the tables are reported in association with background characteristics including age group, marital status, education and wealth quintile. All percentages presented in the tables have been weighted to be proportional to the age and sex structure of the Tuvaluan adult population.

No statistical tests have been performed for the data presented; therefore, comparisons between population subgroups should not be considered to represent statistically significant differences. No comments or comparisons have been made for population subgroups with sample sizes of less than 50 respondents.

12.1 KNOWLEDGE OF HIV AND AIDS

The 2007 TDHS collected information on knowledge of and behaviour related to HIV and AIDS. All eligible respondents were provided with some brief information about HIV and AIDS and asked whether they had heard of HIV or the illness known as AIDS prior to the interview.

Table 12.1 shows the proportions of women and men who reported that they had heard of HIV or AIDS by age group, marital status, education level and wealth quintile.

Overall, 97% of women and 99% of men aged 15–49 had heard of HIV and AIDS. Among men, there was a trend of increasing awareness with increasing age. Awareness was highest for women aged 20–24 (99%) and universal among men aged 25–49.

For men, knowledge of AIDS was universal among those who were married compared with those who were never married and never had sex (97%). This trend was not seen among women.

There were no findings on the differences in knowledge among women who live in Funafuti and those in the outer islands, although women who had more than a secondary education (99%) were more knowledgeable about AIDS than those who had less than a secondary education (95%).

Awareness of AIDS was above 95% for both men and women in all wealth quintiles.

Table 12.1: Knowledge of AIDS

Percentage of women and men aged 15–49 who have heard of AIDS, by background characteristics, Tuvalu 2007

Background characteristic	Women		Men	
	Have heard of AIDS	Number of women	Have heard of AIDS	Number of men
Age				
15–24	98.1	257	97.6	164
..15–19	96.5	111	98.1	91
..20–24	99.3	145	96.9	74
25–29	97.9	134	100.0	62
30–39	97.4	191	100.0	79
40–49	96.0	269	100.0	121
Marital status				
Never married	97.4	193	97.9	194
..Ever had sex	(96.5)	31	98.3	141
..Never had sex	97.6	161	96.9	53
Married/Living together	97.4	598	100.0	224
Divorced/Separated/Widowed	94.7	60	*	9
Residence				
Funafuti	96.3	414	99.0	225
Outer islands	98.1	437	99.2	203
Education				
Less than secondary	95.4	282	100.0	141
Secondary	97.8	437	98.2	223
More than secondary	99.2	132	100.0	63
Wealth quintile				
Lowest	96.2	152	99.3	75
Second	99.4	179	97.6	94
Middle	95.2	169	100.0	89
Fourth	96.9	173	100.0	74
Highest	98.2	177	98.8	96
Total 15–49	97.2	851	99.1	428
50+	na	na	94.5	130
Total men 15+	na	na	98.0	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.
na = not applicable

12.2 KNOWLEDGE OF HIV PREVENTION METHODS

Respondents who had heard of HIV or AIDS, were asked three prompted questions on how to reduce the risk of acquiring HIV: 1) using a condom correctly every time a person has sexual intercourse; 2) having one mutually monogamous sex partner who is not infected with HIV; and 3) abstaining from sexual intercourse. Table 12.2 shows the proportions of women and men who correctly responded to each of these questions, by background characteristics. The table also shows the proportions of women and men who acknowledged that both using condoms *and* limiting sexual intercourse to one uninfected partner can reduce the risk of getting HIV. These proportions are presented as whole population estimates, so people who had not heard of HIV were included in the denominators of the proportions (i.e. were considered to have incorrectly answered these questions).

About 79% of women know that using condoms consistently, and limiting sexual intercourse to one uninfected partner can reduce the risk of acquiring HIV, while the corresponding proportion of men is 88%. More than 87% of women and 93% of men agree that abstaining from sexual intercourse can also reduce the risk of acquiring HIV.

Interestingly, knowledge of HIV prevention methods is generally higher among residents from the outer islands than from Funafuti. Knowledge of ways to prevent HIV tends to be highest among men aged 25–29; among women, however, patterns by age are less clear. Among women and men, knowledge of ways to prevent HIV shows no association with marital status, educational background or living conditions.

Table 12.2: Knowledge of HIV prevention methods

Percentage of women and men aged 15–49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse, by having one sex partner who is not infected and has no other partners, and by abstaining from sexual intercourse, by background characteristics, Tuvalu 2007

	Women					Men				
Background characteristic	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Abstaining from sexual intercourse	Number of women	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Abstaining from sexual intercourse	Number of men
Age										
15–24	79.0	89.0	73.2	83.9	257	88.4	87.0	81.7	92.2	164
..15–19	70.4	82.6	62.4	77.2	111	86.6	84.7	78.8	89.7	91
..20–24	85.6	93.9	81.5	89.0	145	90.6	89.9	85.2	95.3	74
25–29	88.9	95.5	86.5	90.2	134	93.6	100.0	93.6	98.1	62
30–39	84.3	90.1	80.8	91.4	191	91.9	96.2	89.6	91.8	79
40–49	80.2	88.9	78.4	86.1	269	93.5	96.4	92.6	91.3	121
Marital status										
Never married	76.5	86.3	69.7	83.6	193	89.1	88.9	83.5	92.7	194
..Ever had sex	(85.6)	(89.1)	(80.1)	(89.7)	31	93.6	90.4	87.4	93.2	141
..Never had sex	74.8	85.7	67.7	82.4	161	77.3	85.0	72.9	91.5	53
Married/Living together	83.7	91.5	80.9	88.3	598	92.7	96.8	91.4	92.7	224
Divorced/Separated/Widowed	84.7	90.1	84.7	88.9	60	*	*	*	*	9
Residence										
Funafuti	79.8	88.2	75.1	86.6	414	89.1	90.6	83.9	90.6	225
Outer islands	84.4	92.2	82.0	87.9	437	93.7	96.2	92.5	95.1	203
Education										
Less than secondary	79.7	88.0	77.0	86.0	282	93.7	94.9	92.4	95.4	141
Secondary	84.1	91.8	80.7	87.8	437	91.1	91.4	86.1	92.1	223
More than secondary	80.9	89.8	75.3	88.4	132	86.3	96.3	84.5	88.9	63

Table 12.2 (continued)

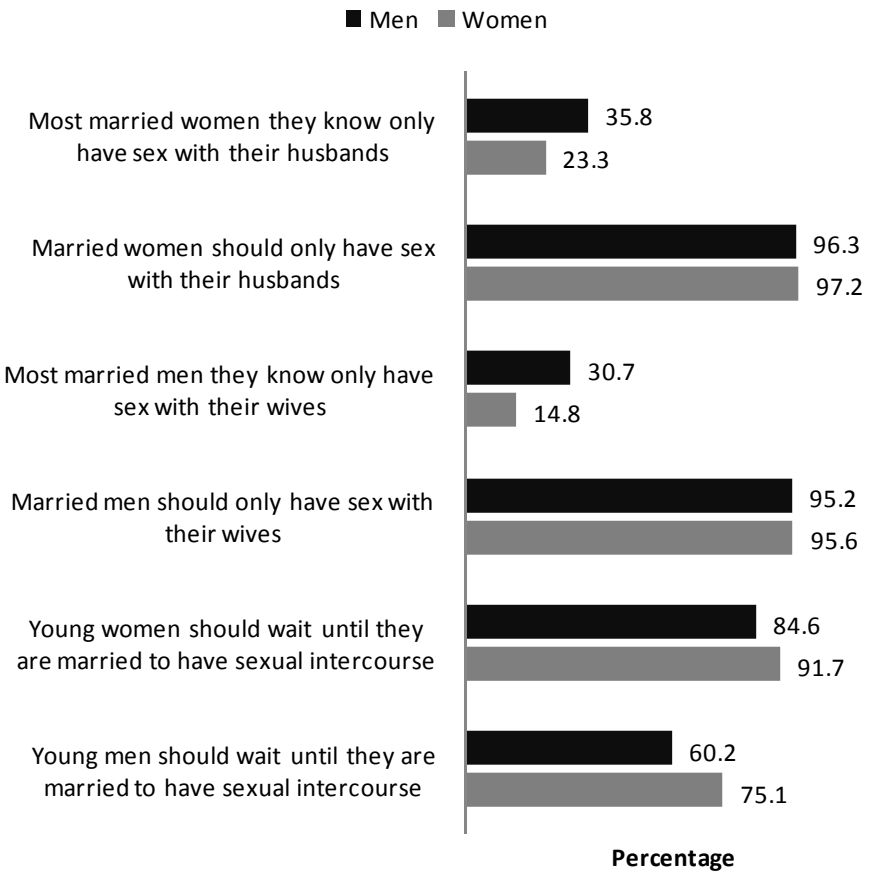
Background characteristic	Women					Men				
	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Abstaining from sexual intercourse	Number of women	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Abstaining from sexual intercourse	Number of men
Wealth quintile										
Lowest	89.1	91.4	86.3	90.4	152	91.2	94.2	88.7	89.8	75
Second	82.2	91.3	79.3	86.6	179	90.8	93.9	89.6	90.7	94
Middle	81.5	90.8	78.8	87.7	169	98.1	94.2	94.2	96.0	89
Fourth	79.0	85.6	72.4	86.8	173	91.4	96.2	87.5	94.6	74
Highest	79.9	92.0	77.4	85.4	177	85.3	89.0	80.4	92.6	96
Total 15–49	82.1	90.2	78.6	87.3	851	91.3	93.3	88.0	92.7	428
50+	na	na	Na	na	na	89.5	89.5	84.6	88.6	130
Total men 15+	na	na	na	na	na	90.9	92.4	87.2	91.8	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.
na = not applicable.
[1] Using condoms every time they have sexual intercourse.
[2] Partner who has no other partners.

Figure 12.1 shows the proportion of all women and men aged 15–49 and their perceptions and beliefs about abstinence and faithfulness. The majority of both women and men believe that married women and men should only have sex with their husband and wife. More women than men believe that young people should wait until they are married to have sex.

Also, while the majority of people believe that married women and men should only have sex with their husbands and wives, in practice a much smaller number are actually doing that: 36% of men and 23% of women responded that most married women they know only have sex with their husbands, while 31% of men and 15% of women responded that most married men they know only have sex with their wives.

Figure 12.1: Percentage of women and men aged 15–49 and their perception and beliefs about abstinence and faithfulness



12.3 REJECTION OF MISCONCEPTIONS ABOUT HIV AND AIDS

In addition to knowing about effective ways of avoiding HIV, it is also useful to be able to identify incorrect beliefs about HIV and AIDS in order to eliminate misconceptions. Common misconceptions about HIV and AIDS include the idea that all HIV-infected people always appear ill and that the virus can be transmitted by 1) mosquito or other insect bites; 2) sharing food with someone who is infected; or 3) witchcraft or other supernatural means. Other misconceptions include the belief that the virus cannot be transmitted through anal or oral sex and that a person cannot be infected by being exposed to open wounds or sores. Respondents were asked about these misconceptions, and the findings are presented in Tables 12.3 and 12.4.

About the same proportion of women (83%) and men (86%) know that a person cannot become infected by sharing food with a person who has HIV. More men (92%) than women (67%) know that a healthy-looking person can be infected with HIV, and know that HIV cannot be transmitted

by supernatural means (91% men, 78% women). Almost the same proportion of women and men (71% women, 75% men) know that HIV cannot be transmitted by mosquito bites.

Tables 12.3 and 12.4 also present the proportion of respondents who reject common misconceptions about HIV and AIDS. Specifically, they show that 44% of women and 66% of men know that a healthy-looking person can be infected with HIV, that HIV cannot be transmitted by mosquito bites, and that HIV cannot be transmitted by sharing food or utensils with an infected person.

Rejection of misconceptions regarding HIV and AIDS is higher among respondents in Funafuti, among single men who ever had sex, and among women who are married or in a living together arrangement. Educational attainment and increasing wealth quintile are positively associated with rejection of misconceptions.

12.4 COMPREHENSIVE KNOWLEDGE OF HIV AND AIDS

An indicator of comprehensive knowledge about HIV and AIDS combines several individual indicators previously discussed. It is the percentage of respondents aged 15–49 who say that: 1) people can reduce their chances of getting HIV by using a condom every time they have sex; 2) people can reduce their chances of getting HIV by having sex with just one partner who is not infected and who has no other partners; 3) people cannot get HIV from mosquito bites; 4) people cannot get HIV from sharing food with a person is infected with HIV; and 5) that a healthy-looking person can have HIV. The results are presented in Tables 12.3 for women and 12.4 for men.

Overall, comprehensive knowledge about HIV and AIDS is much higher among men (60%) than women (38%). The people who are the least knowledgeable about HIV and AIDS are young women aged 15–19, women who are in a divorced, separated or widowed marital status, and women living in the outer islands. On the other hand, older men, married men and men living in the outer islands are also the least knowledgeable about HIV and AIDS.

Table 12.3: Comprehensive knowledge about HIV and AIDS — Women

Percentage of women aged 15–49 who say that a healthy-looking person can have HIV and who, in response to prompted questions, correctly reject local misconceptions about HIV transmission or prevention, and the percentage with a comprehensive knowledge about HIV and AIDS by background characteristics, Tuvalu 2007

Background characteristic	Percentage of women who say that				Percentage who say that a healthy looking person can have HIV and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about HIV and AIDS[2]	Number of women
	A healthy-looking person can have HIV	HIV cannot be transmitted by mosquito bites	HIV cannot be transmitted by supernatural means	A person cannot become infected by sharing food with a person who has HIV			
Age							
15–24	69.4	73.7	78.3	83.9	46.3	39.4	257
..15–19	63.8	67.2	78.2	76.5	39.6	31.1	111
..20–24	73.6	78.7	78.4	89.6	51.5	45.7	145
25–29	78.8	77.8	79.9	88.5	56.0	50.0	134
30–39	68.3	72.4	79.4	87.0	42.3	35.3	191
40–49	62.8	63.1	76.5	75.5	37.6	33.3	269
Marital status							
Never married	69.5	69.4	74.9	81.1	41.8	34.4	193
..Ever had sex	(66.0)	(62.2)	(80.4)	(80.2)	(37.2)	(35.3)	31
..Never had sex	70.2	70.8	73.8	81.3	42.7	34.2	161
Married/Living together	70.0	71.4	80.5	84.2	46.2	40.5	598
Divorced/Separated/Widowed	51.1	68.4	66.3	72.5	31.3	27.8	60
Residence							
Funafuti	73.5	76.4	79.0	84.3	50.7	44.4	414
Outer islands	63.9	65.4	77.5	81.2	38.1	32.4	437
Education							
Less than secondary	61.0	60.1	71.2	73.7	30.8	25.3	282
Secondary	69.7	73.1	80.2	85.2	46.7	42.8	437
More than secondary	81.0	85.6	86.8	93.3	64.4	50.3	132
Wealth quintile							
Lowest	62.3	56.3	71.3	79.9	29.8	26.0	152
Second	64.5	63.6	74.2	78.0	35.5	31.3	179
Middle	67.6	73.4	78.0	83.3	44.4	41.1	169
Fourth	73.6	74.1	84.5	82.2	51.1	42.0	173
Highest	73.9	84.4	82.5	89.6	58.3	49.2	177
Total 15–49	68.5	70.7	78.2	82.7	44.2	38.2	851

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

[1] Two most common local misconceptions: 'A healthy-looking person can have HIV' and 'HIV cannot be transmitted by mosquito bites'.

[2] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV, knowing that a healthy-looking person can have HIV, and rejecting the two most common local misconceptions about HIV transmission or prevention.

Table 12.4: Comprehensive knowledge about HIV and AIDS — Men

Percentage of men aged 15–49 who say that a healthy-looking person can have HIV and who, in response to prompted questions, correctly reject local misconceptions about HIV transmission or prevention, and the percentage with a comprehensive knowledge about HIV and AIDS by background characteristics, Tuvalu 2007

Background characteristic	Percentage of men who say that				Percentage who say that a healthy looking person can have HIV and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about HIV and AIDS[2]	Number of men
	A healthy-looking person can have HIV	HIV cannot be transmitted by mosquito bites	HIV cannot be transmitted by supernatural means	A person cannot become infected by sharing food with a person who has HIV			
Age							
15–24	89.9	77.7	90.6	87.1	68.5	60.7	164
..15–19	90.7	75.3	91.7	84.4	66.2	57.2	91
..20–24	88.9	80.7	89.2	90.5	71.3	65.0	74
25–29	95.5	77.5	90.8	90.6	70.3	67.6	62
30–39	94.5	80.1	91.2	90.0	72.0	63.0	79
40–49	92.1	65.6	90.6	80.2	57.4	54.5	121
Marital status							
Never married	91.1	78.1	91.1	86.3	68.9	61.9	194
..Ever had sex	92.4	81.4	90.1	89.3	70.8	65.3	141
..Never had sex	87.7	69.7	93.5	78.4	63.9	52.9	53
Married/Living together	92.8	72.2	90.3	86.3	64.4	59.2	224
Divorced/Separated/Widowed	*	*	*	*	*	*	9
Residence							
Funafuti	93.2	78.6	92.7	87.5	70.8	61.5	225
Outer islands	91.1	70.3	88.5	84.8	61.2	59.2	203
Education							
Less than secondary	91.0	63.9	87.7	80.4	54.7	52.6	141
Secondary	92.6	78.5	91.8	89.4	70.5	64.4	223
More than secondary	93.6	85.4	93.6	88.1	77.2	63.6	63
Wealth quintile							
Lowest	88.4	65.1	88.8	86.3	57.1	53.9	75
Second	89.4	72.2	81.0	84.5	58.8	55.0	94
Middle	94.7	71.7	100.0	79.9	67.2	65.8	89
Fourth	100.0	81.4	93.0	89.1	74.4	65.8	74
Highest	89.7	82.3	91.4	91.4	73.8	61.5	96
Total 15–49	92.2	74.7	90.7	86.2	66.3	60.4	428
50+	90.8	65.1	77.4	79.6	53.1	51.7	130
Total men 15+	91.9	72.5	87.6	84.7	63.2	58.4	558

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

[1] Two most common local misconceptions: 'A healthy-looking person can have HIV' and 'HIV cannot be transmitted by mosquito bites'.

[2] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV, knowing that a healthy-looking person can have HIV, and rejecting the two most common local misconceptions about HIV transmission or prevention.

12.5 KNOWLEDGE OF PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV

It is important for adults to know that HIV can be transmitted from mother to child, and that drugs are available that can reduce the risk of mother-to-child transmission. The 2007 TDHS assessed respondents' knowledge about whether women who have HIV can pass the virus on to their babies during pregnancy, childbirth or breastfeeding, and that mother-to-child transmission can be prevented through anti-retroviral therapy and by avoiding breastfeeding.

Survey respondents were first asked if HIV can be transmitted from a mother to her child. Those who acknowledged this were then asked whether the virus could be transmitted during pregnancy, during delivery, and/or during breastfeeding. Respondents were also asked if there are any special drugs that a doctor or nurse can give to a pregnant woman who is infected with HIV in order to reduce the risk of transmission to the baby.

Table 12.5 shows the proportions of women and men who know that HIV can be transmitted by breastfeeding and that a mother can reduce the risk of transmitting HIV to her baby by taking special drugs during pregnancy, by age group, marital status, education level and wealth quintile.

About 82% of women are knowledgeable about HIV transmission by breastfeeding compared with 70% of men. When asked if the risk of mother-to-child transmission can be reduced by mothers taking special drugs during pregnancy, only 34% of women and 38% of men answered correctly. However, when combining the two questions on HIV transmission by breastfeeding and the risk of mother-to-child transmission reduction by mother taking special drugs during pregnancy, the numbers were even lower at 30% each for women and men. Those in the 15–24 age group were less knowledgeable than those in the 25–49 age group.

Individuals who are married are more knowledgeable about preventing mother-to-child transmission than those who have never married; however, divorcees and those separated and widowed reported very low knowledge (17.8%). Women who were pregnant at the time of the survey had the same amount of knowledge of mother-to-child transmission as women who were not pregnant.

Respondents living in Funafuti had the same level of knowledge about mother-to-child transmission as those living in the outer islands, and this level increases with increasing education level.

Table 12.5: Knowledge of prevention of mother-to-child transmission of HIV

Percentage of women and men who know that HIV can be transmitted from mother to child by breastfeeding and that the risk of mother-to-child transmission (MTCT) of HIV can be reduced by mother taking special drugs during pregnancy, by background characteristics, Tuvalu 2007

	Women				Men			
	Percentage who know that:				Percentage who know that:			
Background characteristic	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of women	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of men
Age								
15–24	78.8	31.6	26.7	257	66.1	30.5	25.0	164
..15–19	71.3	31.3	26.4	111	64.2	31.2	24.5	91
..20–24	84.5	31.9	27.0	145	68.5	29.6	25.6	74
25–29	87.4	39.1	37.5	134	76.3	42.7	36.0	62
30–39	83.6	39.7	35.4	191	73.7	49.8	39.0	79
40–49	80.1	28.0	26.4	269	68.9	37.7	28.8	121
Marital status								
Never married	77.7	34.8	30.3	193	67.6	32.4	25.4	194
..Ever had sex	(78.2)	(30.6)	(27.1)	31	73.3	33.0	26.6	141
..Never had sex	77.7	35.6	30.9	161	52.8	31.0	22.0	53
Married/Living together	83.8	34.5	31.5	598	72.4	42.9	35.0	224
Divorced/Separated/Widowed	72.8	18.9	17.8	60	*	*	*	9
Currently pregnant								
Pregnant	84.7	43.2	36.9	51	na	na	na	0
Not pregnant or not sure	81.4	32.8	29.9	800	na	na	na	0
Residence								
Funafuti	79.8	40.4	34.9	414	72.9	40.1	32.8	225
Outer islands	83.4	26.9	25.9	437	66.4	35.4	27.5	203
Education								
Less than secondary	80.7	23.8	22.5	282	67.7	32.4	25.4	141
Secondary	82.0	33.6	30.0	437	70.4	37.2	30.2	223
More than secondary	82.6	53.5	47.8	132	72.3	52.5	41.6	63

Table 12.5 (continued)

	Women				Men			
	Percentage who know that:				Percentage who know that:			
Background characteristic	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of women	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of men
Wealth quintile								
Lowest	81.4	28.8	26.7	152	48.8	30.6	15.1	75
Second	80.6	28.6	27.7	179	67.0	37.8	31.5	94
Middle	83.9	33.4	29.5	169	77.0	43.4	38.6	89
Fourth	83.8	34.7	31.2	173	79.4	34.1	26.1	74
Highest	78.7	41.2	35.7	177	75.0	41.6	36.7	96
Total 15–49	81.6	33.5	30.3	851	69.8	37.9	30.3	428
50+	na	na	na	na	68.7	34.8	28.9	130
Total men 15+	na	na	na	na	69.5	37.2	30.0	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.
na = not applicable

12.6 STIGMA ASSOCIATED WITH AIDS AND ATTITUDES TOWARD HIV AND AIDS

Respondents who had ever heard of HIV and AIDS were asked four questions to measure attitudes toward people living with HIV and AIDS: 1) willingness to care for a family member with HIV in the respondent's home; 2) willingness to buy vegetables from a shopkeeper who has HIV; 3) opinion of whether a female teacher with HIV, but who is not sick, should be allowed to continue teaching; and 4) preference for keeping it secret that a family member is infected with HIV.

Table 12.6 shows the proportions of women with accepting attitudes toward each of the four questions, and for all four questions by age group, marital status, education level and wealth quintile.

Accepting attitudes were highest for the indicators 1) willingness to care for a family member with HIV (81%); 2) not wanting to keep it a secret that a family member has HIV (64%); and 3) a female teacher with HIV should be able to continue teaching (64%). Accepting attitudes were lowest for the indicator buying fresh vegetables from a shop keeper with HIV (57%). The combined percentage of accepting attitudes for all four indicators was 31% for women aged 15–49.

More women who are married or in a living together arrangement (82%) are willing to care for a family member with HIV than women who have never married (78%). Women's attitudes towards those living with HIV are no different in the outer islands than in Funafuti. However, educated women with more than a secondary education are more accepting with regard to all four indicators (43%) than women who have less than a secondary education (29%).

Table 12.7 shows the proportions of men with accepting attitudes toward the four questions and for all four questions by age group, marital status, education level and wealth quintile.

Accepting attitudes of men towards those living with HIV are highest for the indicators willing to care for a family member (86%) and not wanting to keep it a secret that a family member has HIV (72%). Accepting attitudes are lowest for the indicators willing to buy fresh vegetables from a shop keeper with HIV (67%) and a female teacher with HIV should be able to continue teaching (66%).

The combined percentage expressing accepting attitudes toward all four indicators was 31% for all men aged 15–49.

The majority of men who are married or in a living together arrangement (88%) are more willing to care for a family member with HIV than those who have never married (85%). A very high proportion of married men (80.3%) would not want to keep it a secret that a family member was infected with HIV compared with men who have never married (62%). Men's attitudes toward those living with HIV are no different in the outer islands than in Funafuti. However, educated men with more than a secondary education are more accepting toward all four indicators (43%) than men who have less than a secondary education (24%).

Table 12.6: Accepting attitudes toward those living with HIV and AIDS — Women

Among women aged 15–49 who have heard of HIV and AIDS, the percentage expressing specific accepting attitudes toward people with HIV and AIDS, by background characteristics, Tuvalu 2007

Background characteristic	Percentage of respondents who:				Percentage expressing acceptance attitudes on all four indicators	Number of respondents who have heard of HIV and AIDS
	Are willing to care for a family member with HIV in the respondent's home	Would buy fresh vegetables from shopkeeper who has HIV	Say that a female teacher with HIV and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with HIV		
Age						
15–24	78.6	57.5	63.4	57.2	23.6	252
..15–19	77.9	50.5	54.7	49.6	13.8	107
..20–24	79.2	62.6	69.8	62.9	31.0	144
25–29	83.6	65.6	72.8	62.7	37.2	131
30–39	82.1	53.6	62.1	71.5	35.0	186
40–49	79.9	54.3	61.9	66.5	30.6	258
Marital status						
Never married	77.6	54.5	61.5	57.0	22.2	188
..Ever had sex	(72.4)	(49.0)	(56.3)	(63.2)	(28.6)	30
..Never had sex	78.6	55.6	62.5	55.8	20.9	158
Married/Living together	81.7	57.9	65.3	65.3	32.3	583
Divorced/Separated/ Widowed	79.2	54.1	60.4	76.6	39.8	57
Residence						
Funafuti	79.3	62.1	68.4	60.8	32.4	399
Outer islands	81.8	52.0	60.1	67.4	28.7	429
Education						
Less than secondary	77.6	46.9	53.8	72.0	29.0	269
Secondary	79.6	57.9	66.9	60.0	27.3	427
More than secondary	90.1	73.8	76.2	62.0	43.9	131
Wealth quintile						
Lowest	80.4	52.6	58.3	73.6	33.5	146
Second	74.7	53.3	59.6	66.2	29.1	178
Middle	85.1	60.2	69.4	58.9	30.4	161
Fourth	79.4	52.6	66.0	63.1	27.1	168
Highest	83.8	65.2	67.0	60.2	32.7	174
Total 15–49	80.6	56.9	64.1	64.2	30.5	827

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

Table 12.7: Accepting attitudes toward those living with HIV and AIDS — Men

Among men aged 15–49 who have heard of HIV and AIDS, the percentage expressing specific accepting attitudes toward people with HIV and AIDS, by background characteristics, Tuvalu 2007

Background characteristic	Percentage of respondents who:				Percentage expressing acceptance attitudes on all four indicators	Number of respondents who have heard of HIV and AIDS
	Are willing to care for a family member with HIV in the respondent's home	Would buy fresh vegetables from shopkeeper who has HIV	Say that a female teacher with HIV and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with HIV		
Age						
15–24	85.9	70.2	66.0	63.7	29.2	161
..15–19	81.2	66.1	66.6	56.9	19.8	89
..20–24	91.8	75.3	65.2	72.3	40.9	71
25–29	90.6	69.9	72.0	72.7	39.7	62
30–39	85.3	70.3	74.6	83.7	38.7	79
40–49	84.3	59.6	56.8	75.3	22.5	121
Marital status						
Never married	84.7	68.4	64.7	61.7	25.9	190
..Ever had sex	87.1	73.5	65.2	66.2	29.3	138
..Never had sex	78.3	54.7	63.3	49.8	16.7	52
Married/Living together	87.9	66.5	67.3	80.3	34.4	224
Divorced/Separated/Widowed	*	*	*	*	*	9
Residence						
Funafuti	82.1	66.8	64.2	62.1	26.3	223
Outer islands	90.4	67.5	67.7	83.2	35.4	201
Education						
Less than secondary	83.6	55.9	58.3	80.0	24.0	141
Secondary	86.3	69.1	68.9	68.1	31.4	219
More than secondary	90.7	85.2	72.2	68.4	42.6	63
Wealth quintile						
Lowest	83.1	58.3	57.3	83.0	26.3	75
Second	92.1	74.8	65.0	75.3	37.4	92
Middle	86.7	58.3	67.8	70.6	25.0	89
Fourth	88.2	74.8	75.5	62.8	33.1	74
Highest	80.2	69.0	64.2	69.0	30.8	95
Total 15–49	86.0	67.1	65.9	72.1	30.6	424
50+	83.1	62.8	70.6	87.3	37.3	123
Total men 15+	85.4	66.2	66.9	75.5	32.1	547

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

12.7 ATTITUDES TOWARD NEGOTIATING SAFER SEX

Monitoring attitudes toward safer sex practices is important for evaluating initiatives to reduce unsafe practices. Table 12.8 shows the proportions of women and men who agreed that if a husband has an STI, his wife is justified in refusing to have sexual intercourse with him, by age group, marital status, education level and wealth quintile.

Overall, almost nine in ten women (88%) and almost all men (95%) agreed that a wife is justified in refusing to have sexual intercourse with her husband if he has an STI.

Lower proportions of women aged 15–24 believe that a wife is justified in refusing to have sex with her husband if he has an STI, than women aged 25–49.

Lower proportions of people who have never been married agree that a wife is justified in refusing to have sex with her husband if he has an STI than women who have ever been married.

For women, those with more than a secondary education are more likely to agree that a wife is justified in refusing to have sex with her husband (92.3%) than women with only a secondary education (86.6%). Men with higher education are less likely to agree that a wife is justified in refusing to have sex with her husband, or requesting that he use a condom, if the husband has an STI.

Table 12.8: Attitudes toward negotiating safer sexual relations with husband

Percentage of women and men aged 15–49 who believe that, if a husband has a sexually transmitted disease, his wife is justified in refusing to have sexual intercourse with him or asking that they use a condom, by background characteristics, Tuvalu 2007

	Women			Men		
Background characteristic	Refusing to have sexual intercourse	Refusing sexual intercourse or asking that they use a condom	Number of women	Refusing to have sexual intercourse	Refusing sexual intercourse or asking that they use a condom	Number of men
Age						
15–24	82.2	82.2	257	95.7	95.7	164
..15–19	72.5	72.5	111	96.7	96.7	91
..20–24	89.7	89.7	145	94.4	94.4	74
25–29	90.6	90.6	134	92.5	92.5	62
30–39	91.8	91.8	191	95.6	95.6	79
40–49	89.9	89.9	269	94.3	94.3	121
Marital status						
Never married	80.8	80.8	193	93.7	93.7	194
..Ever had sex	(89.6)	(89.6)	31	91.7	91.7	141
..Never had sex	79.1	79.1	161	98.8	98.8	53
Married/Living together	90.3	90.3	598	95.6	95.6	224
Divorced/Separated/ Widowed	89.6	89.6	60	*	*	9
Residence						
Funafuti	88.5	88.5	414	92.2	92.2	225
Outer islands	87.8	87.8	437	97.7	97.7	203
Education						
Less than secondary	88.5	88.5	282	95.9	95.9	141
Secondary	86.6	86.6	437	96.8	96.8	223
More than secondary	92.3	92.3	132	85.1	85.1	63
Total 15–49	88.1	88.1	851	94.8	94.8	428
50+	na	na	na	96.3	96.3	130
Total men 15+	na	na	na	95.2	95.2	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.
na = not applicable

12.8 SEXUAL BEHAVIOUR

This section analyses data on sexual behaviour related to the spread of HIV and other STIs, and includes parameters such as the number of sex partners, sex with non-marital and non-cohabitating partners, and payment or receipt of money for sex. This section also includes respondents' reports of STI symptoms, efforts to seek treatment for STIs, and the extent of voluntary counselling and testing for HIV.

12.8.1 Multiple sexual partners and higher-risk sexual intercourse — Women

Sexual behaviour that places people at greater risk of acquiring HIV and other STIs includes unprotected vaginal and anal sex with two or more partners[20]. Higher-risk sex involves having sex with a person who is neither a spouse nor a cohabiting partner. In order to assess indicators of multiple sex partners and higher-risk sex, the 2007 TDHS included questions that asked both women and men aged 15–49 who had sexual intercourse in the 12 months preceding the survey about the number of partners they had and about whether a condom was used or not.

Table 12.9 shows the percentage of women aged 15–49 who had sexual intercourse in the 12 months preceding the survey, the percentage who had intercourse with more than one partner, the percentage who had higher-risk intercourse in the 12 months preceding the survey, and the mean number of sexual partners during her lifetime, by background characteristics.

Among women aged 15–49 who had sexual intercourse in the 12 months preceding the survey, only 1% had intercourse with more than one partner and about 4% had higher-risk sex in the same period. The mean number of sexual partners among women aged 15–49 who ever had sexual intercourse was 1.4.

More women in Funafuti have more than two partners than women in the outer islands. A similar trend is shown for women who have higher-risk sex.

12.8.2 Multiple sexual partners and higher-risk sexual intercourse — Men

Among men, more than 4% had sex with two or more partners in the 12 months preceding the survey (Table 12.10). More than one in five men had higher-risk sex in the 12 months preceding the survey. Out of 58 men aged 15–49 who had higher-risk sex, about 45% reported using a condom.

Men from Funafuti were more likely to have more than two partners and were more likely to have higher-risk sex in the 12 months preceding the survey than men from the outer islands.

[20] World Health Organization 2006. Second Generation Surveys of HIV, other STIs and risk behaviours in six Pacific Island countries (2004–2005).

Table 12.9: Multiple sexual partners and higher-risk sexual intercourse in the 12 months preceding the survey — Women

Among women aged 15–49 who had sexual intercourse in the 12 months preceding the survey, the percentage who had intercourse with more than one partner, the percentage who had higher-risk sex, and the mean number of sexual partners during their lifetime for women who ever had sexual intercourse, by background characteristics, Tuvalu 2007

	Among respondents who had sexual intercourse in the 12 months preceding the survey			Among respondents who ever had sexual intercourse	
Background characteristic	Percentage who had 2+ partners in 12 months preceding survey	Percentage who had higher-risk intercourse in 12 months preceding survey[1]	Number of women	Mean number of sexual partners in lifetime	Number
Age					
15–24	2.6	14.0	92	1.4	113
..15–19	*	*	12	*	17
..20–24	1.4	10.9	80	1.3	97
25–29	1.9	5.9	113	1.3	124
30–39	0.4	0.4	163	1.4	183
40–49	0.5	1.1	210	1.4	257
Marital status					
Never married	14.0	87.3	17	(1.6)	31
Married or living together	0.1	0.1	551	1.3	589
Divorced/Separated/Widowed	*	*	10	2.1	58
Residence					
Funafuti	1.2	4.5	263	1.4	317
Outer islands	0.9	3.3	315	1.4	361
Education					
Less than secondary	1.1	1.7	210	1.5	254
Secondary	1.0	5.5	273	1.4	322
More than secondary	1.1	4.1	95	1.3	102
Wealth quintile					
Lowest	0.0	5.7	102	1.4	125
Second	2.3	6.4	121	1.5	144
Middle	1.3	2.1	134	1.4	148
Fourth	1.4	3.3	119	1.4	134
Highest	0.0	2.1	102	1.3	127
Total 15–49	1.1	3.9	578	1.4	678

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] Sexual intercourse with a partner who neither was a spouse nor who lived with the respondent.

Table 12.10: Multiple sexual partners and higher-risk sexual intercourse in the past 12 months — Men

Among men aged 15–49 who had sexual intercourse in the 12 months preceding the survey, the percentage who had intercourse with more than one partner, the percentage who had higher-risk sex; and among those having higher-risk sex, the percentage who used a condom at last higher-risk sex; and the mean number of sexual partners during their lifetime, by background characteristics, Tuvalu 2007

	Among respondents who had sexual intercourse in 12 months preceding survey:			Among respondents who had higher risk intercourse in 12 months preceding survey:		Among respondents who ever had sexual intercourse	
Background characteristic	Percentage who had 2+ partners in 12 months preceding survey	Percentage who had higher-risk intercourse in 12 months preceding survey[1]	Number	Percentage who reported using a condom at last higher-risk intercourse	Number	Mean number of sexual partners in lifetime	Number
Age							
15–24	16.0	48.9	82			4.5	96
..15–19	(14.1)	(55.4)	38			(3.6)	48
..20–24	(17.6)	(43.4)	44			(5.3)	49
25–29	(2.6)	(17.4)	45			(9.8)	39
30–39	1.0	9.8	60			(7.3)	42
40–49	0.0	3.9	94			10.3	76
Marital status							
Never married	14.5	58.6	95			5.7	117
Married or living together	0.6	0.6	184			9.3	131
Divorced/Separated/Widowed	*	*	1			*	6
Residence							
Funafuti	8.8	28.1	134			8.1	121
Outer islands	2.2	13.6	147			7.0	133
Education							
Less than secondary	0.6	9.2	101			9.5	85
Secondary	9.9	33.7	133			5.7	136
More than secondary	(2.5)	(7.4)	47			(9.8)	32
Wealth quintile							
Lowest	3.8	12.9	47			6.5	46
Second	3.8	17.7	68			6.7	68
Middle	0.0	19.6	64			8.1	56
Fourth	(11.4)	(20.0)	41			(9.7)	38
Highest	9.6	30.6	61			(7.1)	46
Total 15–49	5.3	20.5	281	44.6	58	7.5	254
50+	0.0	5.9	89	*	5	10.2	84
Total men 15+	4.0	17.0	370	44.5	63	8.2	338

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] Sexual intercourse with a partner who neither was a spouse nor who lived with the respondent.

12.8.3 Payment for sexual intercourse

Sex workers are at a higher risk of acquiring HIV because of their increased number of sexual partners, including non-regular partners, and their increased frequency of sexual intercourse. Men who have sexual intercourse with sex workers are at higher risk of acquiring HIV if they do not use condoms[21]. Table 12.11 presents the percentage of men aged 15 and over who paid for sex in the 12-month period preceding the survey.

Table 12.11: Payment for sexual intercourse and condom use at last paid sexual intercourse

Percentage of men aged 15–49 reporting payment for sexual intercourse in the 12 months preceding the survey by background characteristics, Tuvalu 2007

	Payment for sexual intercourse in the 12 months preceding the survey	
Background characteristic	Percentage who paid for sexual intercourse	Number of men
Age		
15–24	1.8	164
..15–19	0.0	91
..20–24	4.1	74
25–29	1.9	62
30–39	0.0	79
40–49	0.0	121
Marital status		
Never married	2.1	194
Married or living together	0.0	224
Divorced/Separated/Widowed	*	9
Residence		
Funafuti	1.6	225
Outer islands	0.3	203
Education		
Less than secondary	0.0	141
Secondary	1.9	223
More than secondary	0.0	63
Wealth quintile		
Lowest	0.0	75
Second	0.7	94
Middle	1.3	89
Fourth	0.0	74
Highest	2.5	96
Total 15–49	1.0	428
50+	0.0	130
Total men 15+	0.7	558

Payment for sexual intercourse is common among men in the 20–24 age group, among single men, men living in Funafuti and among men in the highest wealth quintile.

[21] UNAIDS/07.12E/JC1318E. Monitoring the Declaration of Commitment on HIV and AIDS: Guidelines on construction of core indicators: 2008 reporting.

12.8.4 Coverage of HIV testing

People's knowledge of their HIV status is considered a key motivating factor for behaviour change and a critical link to care, treatment and support services for infected individuals. Tuvalu's HIV and AIDS programme has been increasing coverage of HIV counselling and testing services based on a multiple programme approach. Tables 12.12 and 12.13 show the percentage of women and men who know where to get an HIV test, the percent distribution of women and men by testing status and whether they received the results of the last test, the percentage of both women and men ever tested for HIV, and the percentage who received their results the last time they were tested (in the 12 months preceding the survey).

The majority of women (89%) and men (93%) know where to go for HIV testing. About 10% of women and 26% of men have ever been tested and received results. Very few women (2%) and men (4%) had ever been tested for HIV but never received their results. Even though the majority of women and men knew where to go for HIV testing, the results show that about 88% of women and 71% of men have never been tested for HIV. There was a low prevalence of current HIV testing for both women (3%) and men (13%) who received their results in the 12 months preceding the survey (Tables 12.12 and 12.13).

HIV testing was more common among 1) women and men in the 25–39 age group; 2) women and men who are married or in a living together arrangement; 3) single men who had ever had sex; and 4) women and men living in Funafuti. Higher education and increasing wealth quintile were positively associated with knowledge of where to get HIV testing.

Those who have never had an HIV test are more likely to be women and men from the outer islands, women and men with less education, and those living in the lowest and second lowest wealth quintiles.

The prevalence of HIV testing is more common among women and men in Funafuti than those from the outer islands. Higher education and increasing wealth quintiles were positively associated with the increasing proportion of women who received their HIV results from the last test taken in the 12 months preceding the survey.

Table 12.12: Coverage of prior HIV testing — Women

Percentage of women aged 15–49 who know where to get an HIV test, the percent distribution of women aged 15–49 by testing status and by whether they received the results of the last test, the percentage of women ever tested, and the percentage of women aged 15–49 who received their test results the last time they were tested for HIV in the 12 months preceding the survey, according to background characteristics, Tuvalu 2007

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of women/men by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who received results from last HIV test taken in the 12 months preceding the survey	Number of women
		Ever tested and received results	Ever tested did not receive results	Never tested[1]				
Age								
15–24	89.8	7.0	3.7	89.3	100.0	10.7	3.5	257
..15–19	83.7	3.5	1.2	95.3	100.0	4.7	2.5	111
..20–24	94.5	9.7	5.6	84.6	100.0	15.4	4.2	145
25–29	91.6	14.3	3.5	82.2	100.0	17.8	7.7	134
30–39	91.6	12.3	1.1	86.6	100.0	13.4	2.8	191
40–49	85.6	7.7	1.5	90.9	100.0	9.1	1.5	269
Marital status								
Never married	87.0	5.5	2.0	92.4	100.0	7.6	2.3	193
..Ever had sex	(87.6)	(7.6)	(7.0)	(85.4)	(100.0)	(14.6)	(0.0)	31
..Never had sex	86.9	5.1	1.1	93.8	100.0	6.2	2.7	161
Married/Living together	90.4	11.3	2.3	86.4	100.0	13.6	3.7	598
Divorced/Separated/Widowed	83.5	5.4	4.7	89.9	100.0	10.1	3.6	60
Residence								
Funafuti	89.0	15.2	3.1	81.6	100.0	18.4	5.8	414
Outer islands	89.4	4.2	1.6	94.1	100.0	5.9	1.1	437
Education								
Less than secondary	85.5	5.3	1.8	92.8	100.0	7.2	2.0	282
Secondary	89.2	6.3	2.3	91.4	100.0	8.6	2.5	437
More than secondary	96.8	29.3	3.7	67.0	100.0	33.0	9.0	132
Wealth quintile								
Lowest	86.3	4.4	2.1	93.5	100.0	6.5	0.8	152
Second	91.1	2.8	0.3	96.8	100.0	3.2	1.0	179
Middle	87.5	13.3	3.6	83.1	100.0	16.9	2.9	169
Fourth	87.8	9.7	2.8	87.4	100.0	12.6	4.4	173
Highest	92.7	17.1	3.1	79.8	100.0	20.2	7.3	177
Total 15–49	89.2	9.6	2.4	88.1	100.0	11.9	3.4	851

Note: Figures in parentheses are based on 25–49 cases.
[1] Includes 'don't know/missing'.

Table 12.13: Coverage of prior HIV testing — Men

Percentage of men aged 15–49 who know where to get an HIV test, the percent distribution of men aged 15–49 by testing status and by whether they received the results of the last test, the percentage of men ever tested, and the percentage of men aged 15–49 who received their test results the last time they were tested for HIV in the 12 months preceding the survey, according to background characteristics, Tuvalu 2007

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of women/men by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who received results from last HIV test taken in 12 months preceding the survey	Number of men
		Ever tested and received results	Ever tested did not receive results	Never tested[1]				
Age								
15–24	86.5	11.4	2.9	85.7	100.0	14.3	8.1	164
..15–19	87.2	4.4	0.0	95.6	100.0	4.4	3.1	91
..20–24	85.7	20.1	6.4	73.6	100.0	26.4	14.4	74
25–29	99.0	42.7	3.8	53.6	100.0	46.4	23.1	62
30–39	98.6	39.0	7.2	53.8	100.0	46.2	19.1	79
40–49	93.6	27.4	3.0	69.6	100.0	30.4	10.6	121
Marital status								
Never married	87.9	18.9	3.0	78.1	100.0	21.9	11.9	194
..Ever had sex	89.3	23.5	1.7	74.8	100.0	25.2	13.9	141
..Never had sex	84.2	6.6	6.6	86.8	100.0	13.2	6.6	53
Married/Living together	96.6	31.3	4.4	64.3	100.0	35.7	14.3	224
Divorced/Separated/Widowed	*	*	*	*	*	*	*	9
Residence								
Funafuti	93.2	32.3	4.7	63.0	100.0	37.0	18.8	225
Outer islands	91.9	18.3	2.9	78.9	100.0	21.1	6.7	203
Education								
Less than secondary	93.3	20.7	4.9	74.4	100.0	25.6	9.6	141
Secondary	90.5	22.2	3.2	74.6	100.0	25.4	11.4	223
More than secondary	98.1	48.8	3.7	47.5	100.0	52.5	26.8	63
Wealth quintile								
Lowest	89.3	11.0	2.3	86.7	100.0	13.3	3.9	75
Second	91.1	13.7	2.6	83.7	100.0	16.3	7.8	94
Middle	93.9	36.7	3.2	60.1	100.0	39.9	16.4	89
Fourth	95.2	38.6	4.8	56.7	100.0	43.3	24.5	74
Highest	93.4	28.7	6.1	65.2	100.0	34.8	13.5	96
Total 15–49	92.6	25.6	3.8	70.5	100.0	29.5	13.1	428
50+	87.8	15.9	2.3	81.8	100.0	18.2	10.4	130
Total men 15+	91.5	23.4	3.5	73.1	100.0	26.9	12.4	558

Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed.
[1] Includes 'don't know/missing'.

12.8.5 HIV testing during antenatal care

As part of antenatal care and programmes for preventing mother-to-child transmission of HIV and AIDS, Tuvalu's health policy encourages counselling for women about HIV during their antenatal care and offers a test. Women aged 15–49 who gave birth in the two years preceding the survey were asked whether they received HIV counselling during antenatal care for their most recent birth, whether they were tested for HIV, and whether they received the results. Table 12.14 shows the percentage of women aged 15–49 who gave birth in the two years preceding the survey who were offered and accepted an HIV testing during antenatal care.

More than one in five pregnant women (22%) received HIV counselling during their antenatal care, of which only 10% received their results and very few (3%) did not receive any results at all. An estimated 7% received all three services: HIV counselling, HIV testing and test results (Table 12.14).

Women in Funafuti were more likely to receive HIV counselling, testing and receive test results than women in the outer islands.

Table 12.14: Pregnant women counselled and tested for HIV

Among all women aged 15–49 who gave birth in the two years preceding the survey, the percentage who received HIV counselling during antenatal care for their most recent birth, and the percentage who accepted an offer of HIV testing by whether they received their test results, according to background characteristics, Tuvalu 2007

Background characteristic	Percentage who received HIV counselling during antenatal care[1]	Percentage who were offered and accepted an HIV test during antenatal care and [2]		Percentage who were counselled, were offered and accepted an HIV test, and who received results[2]	Number of women who gave birth in the two years preceding survey[3]
		Received results	Did not receive results		
Age					
15–24	32.5	8.8	6.2	6.7	52
..15–19	*	*	*	*	7
..20–24	(34.2)	(7.7)	(7.1)	(7.7)	46
25–29	(19.1)	(11.7)	(3.4)	(7.6)	51
30–39	17.5	9.2	0.0	7.2	54
40–49	*	*	*	*	13
Residence					
Funafuti	28.0	11.0	4.9	8.5	89
Outer islands	15.8	7.9	0.8	5.3	81
Education					
Less than secondary	(17.8)	(7.3)	(0.0)	(7.3)	32
Secondary	20.0	5.9	3.4	4.0	114
More than secondary	(37.8)	(28.7)	(4.4)	(20.3)	25
Total 15–49	22.2	9.5	2.9	7.0	170

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] In this context, 'counselled' means that someone talked with the respondent about all three of the following topics: 1) mother-to-child transmission of HIV, 2) HIV prevention, and 3) getting tested for HIV.
[2] Only women who were offered the test are included here; women who were either required or asked for the test are excluded from the numerator of this measure.
[3] Denominator for percentages includes women who did not receive antenatal care for their last birth in the two years preceding the survey.

12.9 MALE CIRCUMCISION

Given that the risk of HIV and AIDS transmission is higher among men who are not circumcised, the 2007 TDHS asked men about their circumcision status[22]. This question is important for assessing the risk in which AIDS can be acquired or transmitted in Tuvalu. Table 12.15 presents the percentage of men who are circumcised.

Overall, three in four men have been circumcised. By background characteristics, the proportion of men who are circumcised is more than 90%.

Table 12.15: Male circumcision

Percentage of men aged 15–49 who report having been circumcised, by background characteristics, Tuvalu 2007

Background characteristic	Percentage circumcised	Number of men
Age		
15–24	100.0	164
..15–19	100.0	91
..20–24	100.0	74
25–29	100.0	62
30–39	97.2	79
40–49	98.6	121
Residence		
Funafuti	100.0	225
Outer islands	98.1	203
Ethnicity		
Tuvaluan	99.0	400
Part Tuvaluan	*	21
I-Kiribati	*	1
Other	*	5
Don't know	*	1
Education		
Less than secondary	97.3	141
Secondary	100.0	223
More than secondary	100.0	63
Total 15–49	99.1	428
50+	0.0	130
Total men 15+	76.0	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.

[22] http://www.cdc.gov/hiv/resources/factsheets/PDF/circumcision.pdf

12.10 PREVALENCE OF SEXUALLY TRANSMITTED INFECTIONS

STIs are closely associated with HIV because they increase the likelihood of contracting HIV and share similar risk factors. In the 2007 TDHS, all respondents who ever had sex were asked if they had had an STI or symptoms of an STI (including bad-smelling or abnormal genital discharge and genital sore or ulcer) in the 12 months preceding the survey. The results are presented in Table 12.16.

Less than 1% of women and about 2.0% of men reported that they had an STI or symptoms of an STI in the 12 months preceding the survey. Women and men aged 15–24 have the highest likelihood of reporting symptoms of an STI. Never-married women and women with less education are less likely to report symptoms of an STI. Men in the outer islands are more likely to report symptoms of an STI than men in Funafuti, whereas there is no meaningful difference between women and place of residence.

Respondents who reported having an STI or symptoms of an STI in the 12 months preceding the survey were asked if they sought treatment. As shown in Figure 12.2, out of the 21 women and 8 men reporting an STI or symptoms of an STI, 46% of women and 63% of men sought treatment from a public or private health facility. Another 21% of women sought treatment from a shop or pharmacy, or other source, while none of the men sought treatment. Almost the same proportion of women and men (38% women, 37% men) did not seek treatment or advice from any source.

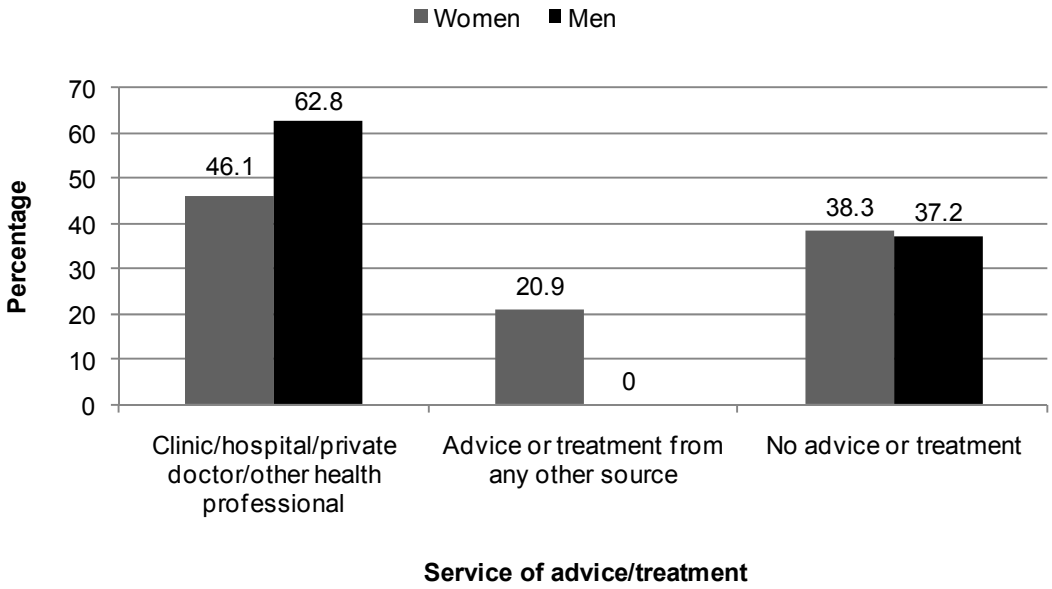
Table 12.16: Self-reported prevalence of sexually transmitted infections and symptoms

Among women and men aged 15–49 who ever had sexual intercourse, the percentage reporting having an sexually transmitted infection (STI) and/or symptoms of an STI in the 12 months preceding the survey, by background characteristics, Tuvalu 2007

	Women					Men				
Background characteristic	STI	Bad smelling/ abnormal genital discharge	Genital sore/ulcer	STI/genital discharge/sore or ulcer	Number of women who ever had sexual intercourse	STI	Bad smelling/ abnormal genital discharge	Genital sore/ulcer	STI/genital discharge/sore or ulcer	Number of men who ever had sexual intercourse
Age										
15–24	2.5	3.0	1.8	7.3	115	3.2	2.2	0.6	3.2	114
..15–19	*	*	*	*	17	3.4	3.4	1.2	3.4	55
..20–24	2.2	1.8	2.2	6.1	98	3.1	1.1	0.0	3.1	59
25–29	0.0	0.0	0.0	0.0	126	2.7	2.7	2.7	2.7	61
30–39	0.0	3.4	0.0	3.4	189	2.9	2.9	0.0	2.9	78
40–49	0.0	0.8	1.5	2.3	260	0.0	0.0	0.0	0.0	121
Marital status										
Never married	(0.0)	(3.5)	(0.0)	(3.5)	31	2.6	1.8	0.5	2.6	141
Married or living together	0.5	1.7	1.0	3.2	598	1.5	1.5	0.7	1.5	224
Divorced/Separated/Widowed	0.0	1.0	0.0	1.0	60	*	*	*	*	9
Male circumcision										
Circumcised	na	na	na	na	na	2.1	1.7	0.6	2.1	371
Not circumcised	na	na	na	na	na	*	*	*	*	2
Residence										
Funafuti	0.7	2.4	1.0	4.1	322	1.2	0.6	0.0	1.2	193
Outer islands	0.2	1.2	0.7	2.1	368	2.9	2.9	1.3	2.9	181
Education										
Less than secondary	0.0	1.1	0.7	1.7	257	2.6	1.7	0.0	2.6	132
Secondary	0.5	2.5	0.3	3.4	324	1.4	1.4	0.4	1.4	183
More than secondary	1.0	1.0	2.9	4.9	109	2.8	2.8	2.8	2.8	59
Total 15–49	0.4	1.7	0.9	3.0	690	2.0	1.7	0.6	2.0	374
50+	na	na	na	na	na	0.4	0.0	0.0	0.4	130
Total men 15+	na	na	na	na	na	1.6	1.3	0.5	1.6	504

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.
na = not applicable

Figure 12.2: Percentage of women and men aged 15–49 reporting an STI or symptoms of an STI in the 12 months preceding the survey who sought advice or treatment



12.11 PREVALENCE OF MEDICAL INJECTIONS

Non-sterile injections can pose a risk of infection with HIV and other diseases. To measure the potential risk of transmission of HIV associated with medical injections, respondents in the 2007 TDHS were asked if they had received an injection in the 12 months preceding the survey, and if so, the number of injections. Those who had received injections were further asked if the syringe and needle were taken from a new, previously unopened pack. Table 12.17 shows that 25% of women and 34% of men reported receiving an injection in the past 12 months.

The average number of injections was almost the same for both woman and man (0.8 and 1). The vast majority of respondents reported that the syringe and needle used for their last injection was taken from a previously unopened pack (96% of women and 92% of men).

Table 12.17: Prevalence of medical injections

Percentage of women and men aged 15–49 who received at least one medical injection in the 12 months preceding the survey, the average number of medical injections per person in the 12 months preceding the survey, and among those who received a medical injection, the percentage of last medical injections for which the syringe and needle were taken from a new, unopened package, by background characteristics, Tuvalu 2007

	Women					Men				
Background characteristic	Percentage who received a medical injection in the 12 months preceding survey	Average number of medical injections per person in the 12 months preceding survey	Number of women	For last injection, syringe and needle taken from a new, unopened package	Number of respondents receiving medical injections in the 12 months preceding survey	Percentage who received a medical injection in the 12 months preceding survey	Average number of medical injections per person in the 12 months preceding survey	Number of men	For last injection, syringe and needle taken from a new, unopened package	Number of respondents receiving medical injections in the 12 months preceding survey
Age										
15–24	27.2	1.0	257	99.1	70	39.0	0.9	164	93.5	64
..15–19	22.2	0.5	111	(100.0)	25	38.7	0.8	91	(93.5	35
..20–24	31.0	1.4	145	(98.7)	45	39.2	1.1	74	(93.6	29
25–29	26.1	0.6	134	(97.0)	35	36.9	1.4	62	*	23
30–39	29.9	1.0	191	94.5	57	25.4	1.2	79	*	20
40–49	17.4	0.5	269	92.5	47	32.3	0.9	121	(90.0)	39
Residence										
Funafuti	25.7	1.0	414	98.0	106	34.4	1.3	225	95.5	77
Outer islands	23.4	0.5	437	94.0	102	34.1	0.7	203	88.5	69
Education										
Less than secondary	24.4	0.8	282	94.9	69	36.5	1.2	141	(85.8)	51
Secondary	26.4	0.9	437	96.8	115	37.1	1.1	223	95.0	83
More than secondary	18.6	0.5	132	(95.6)	25	19.4	0.4	63	*	12
Wealth quintile										
Lowest	25.0	0.6	152	95.5	38	31.7	1.8	75	*	24
Second	30.5	0.7	179	93.8	55	34.7	0.7	94	(89.6)	33
Middle	25.7	0.7	169	(97.6)	43	39.0	0.9	89	(89.6)	35
Fourth	19.7	0.6	173	(100.0)	34	37.2	1.4	74	*	27
Highest	21.8	1.2	177	(94.4)	39	29.2	0.7	96	*	28
Total 15–49	24.5	0.8	851	96.0	209	34.3	1.0	428	92.2	147
Total men 15+	na	na	na	na	na	34.5	1.3	558	92.0	192

Note: Medical injections are those given by a doctor, nurse, pharmacist, dentist or other health worker. 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.
na = not applicable

Respondents who had had an injection in the 12 months preceding the survey were asked where they obtained their last injection. The information is summarised in Figure 12.3. The majority of women (94%) and men (85%) aged 15–49 received a medical injection from a public sector or from either the government hospital or government health centre. All men reported receiving medical injections from the government hospital compared with 75% of women. The other remaining women (16%) received medical injections from another government health centre. Very few women (1%) and men (9%) received medical injections from a private medical facility, including a private hospital, clinic, doctor or other private medical services (Figure 12.3).

Figure 12.3: Percentage of women and men aged 15–49 reporting an STI or symptoms of an STI who receive medical injection in the 12 months preceding the survey by type of facility

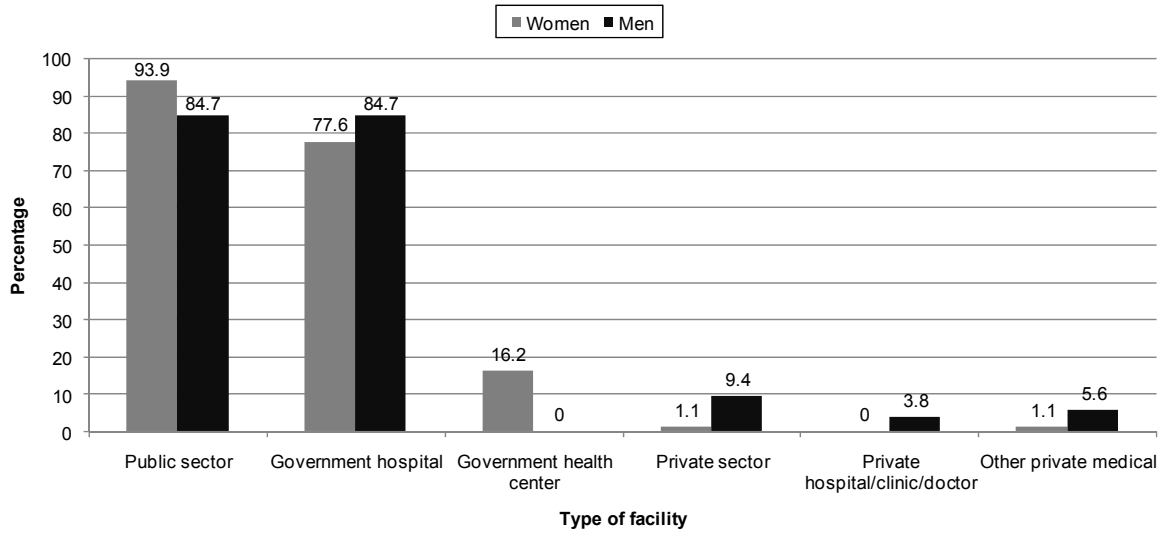
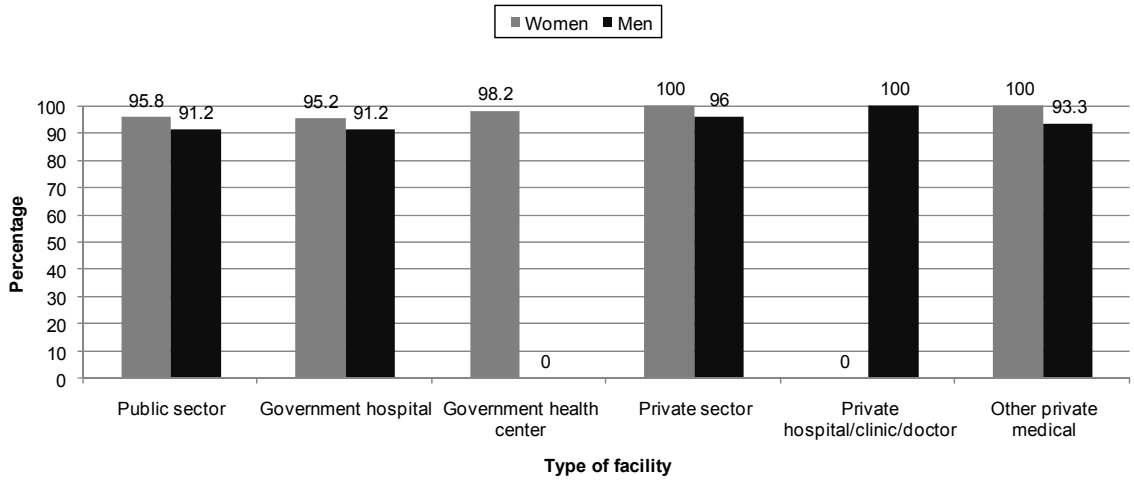


Figure 12.4 shows that injections from both public sector and government hospital are highly likely to be given using a needle and syringe from a new, previously unopened package.

Figure 12.4: Percentage of women and men whose last injection was given with a syringe and needle taken from a new unopened package according to type of facility



12.12 HIV AND AIDS KNOWLEDGE AND SEXUAL BEHAVIOUR AMONG YOUTH

This section addresses HIV- and AIDS-related knowledge and sexual behaviour among youth aged 15–24. Special attention is paid to this group because it accounts for half of all new HIV infections worldwide (Ross et al. 2006). In addition to knowledge of HIV transmission, data are presented on age at first sex, condom use, age differences between sexual partners, sex related to alcohol use and voluntary counselling and testing for HIV.

12.12.1 HIV-related knowledge and knowledge of condom source among youth

Young respondents were asked the same set of questions on facts and beliefs about HIV transmission as other respondents. Information on the overall level of knowledge of major methods of avoiding HIV and rejection of major misconceptions were shown in Tables 12.2, 12.3, and 12.4. In general, the results indicate that young adults are as likely as older adults to have knowledge of HIV prevention and to reject common misconceptions about HIV transmission.

Table 12.18 shows the level of the composite indicator, 'comprehensive knowledge,' among young people by background characteristics. About 39% of young women and 61% of young men have a comprehensive knowledge of HIV and AIDS. The young women most likely to have a comprehensive knowledge are those who have ever married and those who live in the outer islands. Comprehensive knowledge of HIV and AIDS among young men was almost the same for those living in Funafuti as in the outer islands.

Table 12.18 also shows that the majority of young women (91%) and young men (93%) have knowledge of where to get condoms. The most knowledgeable are young women who have ever married and those living in Funafuti. Young men who have never married but have ever had sex and those young men living in the outer islands are the most knowledgeable about where to get condoms.

Table 12.18: Comprehensive knowledge about AIDS and of a source of condoms among youth

Percentage of young women and young men aged 15–24 with comprehensive knowledge about HIV and AIDS and the percentage with knowledge of a source of condoms, by background characteristics, Tuvalu 2007

	Women			Men		
Background characteristic	Percentage with comprehensive knowledge of HIV and AIDS[1]	Percentage who know a condom source[2]	Number of women	Percentage with comprehensive knowledge of HIV and AIDS[1]	Percentage who know a condom source[2]	Number of men
Age						
15–19	31.1	85.9	111	57.2	92.2	91
..15–17	28.3	78.1	61	(58.8)	(89.8)	41
..18–19	34.4	95.4	50	55.9	94.1	50
20–24	45.7	94.2	145	65.0	93.8	74
..20–22	46.8	95.0	79	58.8	92.0	50
..23–24	44.4	93.3	67	(77.7)	(97.7)	24
Marital status						
Never married	37.5	88.0	158	60.6	92.0	146
..Ever had sex	*	*	16	65.9	93.7	95
..Never had sex	36.6	86.7	142	50.7	88.8	51
Ever married	42.3	94.8	99	*	*	18
Residence						
Funafuti	38.0	92.0	149	60.0	91.8	100
Outer islands	41.3	88.8	108	61.7	94.7	65
Education						
Less than secondary	(18.7)	(78.0)	26	*	*	17
Secondary	41.3	92.4	198	60.7	93.2	137
More than secondary	(43.7)	(89.7)	33	*	*	11

Table 12.18 (continued)

Background characteristic	Women			Men		
	Percentage with comprehensive knowledge of HIV and AIDS[1]	Percentage who know a condom source[2]	Number of women	Percentage with comprehensive knowledge of HIV and AIDS[1]	Percentage who know a condom source[2]	Number of men
Wealth quintile						
Lowest	33.5	96.7	38	(55.3)	(89.2)	22
Second	33.8	83.4	62	(53.4)	(86.0)	41
Middle	(51.6)	(100.0)	38	*	*	21
Fourth	(41.6)	(87.1)	55	(67.0)	(96.3)	31
Highest	39.1	91.5	64	(66.5)	(95.2)	49
Total	39.4	90.6	257	60.7	92.9	164

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] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting HIV, knowing that a healthy-looking person can have HIV, and rejecting the two most common local misconceptions about HIV transmission or prevention. The components of comprehensive knowledge are presented in Tables 12.2, 12.3, and 12.4.

[2] For this table, the following responses are not considered sources for condoms: friends, family members and home.

12.12.2 Age at first sexual intercourse among youth

Age at first sexual intercourse marks the time at which most individuals first risk exposure to HIV and other STIs and also expose themselves to unplanned pregnancy leading to early childbirth. Table 12.19 shows the percentage of young women and men who had sexual intercourse before reaching age 12, age 15 and age 18, by background characteristics.

About 2% of young women and 14% of young men in the 15–24 age group first had sex before they were age 15. About 13% of young women and 52% of young men had sex before they turned age 18. Among women, 2% of those aged 15–19 had sex before age 15, compared with 1% of women aged 20–24. Among men, the same pattern prevails, with 19% of those aged 15–19 having sex before age 15 compared with 10% of those aged 20–24. Ever-married women aged 15–24 are more likely to initiate sexual activity before age 15 than those women who have never married.

Early sexual initiation varies by place of residence. While women in the outer islands are more likely than women in Funafuti to initiate sex before age 15 and age 18, the opposite is true for men who initiate sex before age 15. For young women, having sex at early ages is negatively correlated with educational attainment. For example, among women aged 15–24 with more than a secondary education, only 3% had sex before age 18, compared with 15% of those with only a secondary education.

Table 12.19: Age at first sexual intercourse among youth

Percentage of young women and young men aged 15–24 who had sexual intercourse before age 15, and the percentage of young women and young men aged 18–24 who had sexual intercourse before age 18, by background characteristics, Tuvalu 2007

	Women				Men			
Background characteristic	Percentage who had sexual intercourse before age 15	Number of women (15–24)	Percentage who had sexual intercourse before age 18	Number of women (18–24)	Percentage who had sexual intercourse before age 15	Number of men (15–24)	Percentage who had sexual intercourse before age 18	Number of men (18–24)
Age								
15–19	2.1	111	na	na	18.9	91	na	na
..15–17	1.0	61	na	na	(24.2)	41	na	na
..18–19	3.4	50	14.1	50	14.5	50	60.5	50
20–24	1.4	145	12.9	145	9.6	74	45.7	74
..20–22	2.7	79	14.7	79	(9.5)	50	(46.1)	50
..23–24	0.0	67	10.8	67	(9.8)	24	(44.8)	24
Marital status								
Never married	0.4	158	1.1	99	15.1	146	54.0	106
Ever married	3.9	99	25.7	97	*	18	*	17
Knows condom source[1]								
Yes	1.9	232	13.7	185	14.7	153	51.5	116
No	*	24	*	11	*	12	*	8
Residence								
Funafuti	0.7	149	10.2	117	15.3	100	51.5	80
Outer islands	3.1	108	17.8	79	13.8	65	52.1	44
Education								
Less than secondary	(4.3)	26	*	13	*	17	*	5
Secondary	1.7	198	14.5	152	12.5	137	51.4	107
More than secondary	(0.0)	33	(3.4)	31	*	11	*	11
Wealth quintile								
Lowest	4.5	38	(30.0)	28	(16.6)	22	*	14
Second	1.0	62	13.8	48	(13.9)	41	56.7	34
Middle	(5.6)	38	(17.2)	29	*	21	*	14
Fourth	(0.0)	55	(6.9)	41	(14.9)	31	*	23
Highest	0.0	64	(6.4)	51	(12.0)	49	44.7	39
Total	1.7	257	13.2	196	14.7	164	51.7	124

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.
na = not available
[1] For this table, the following responses are not considered a source for condoms: friends, family members and home.

12.12.3 Condom use at first sexual intercourse among youth

HIV prevention programmes advocate consistent use of condoms in order to reduce the risk of sexual transmission of HIV among sexually active young adults. Young adults who use condoms at first sex are more likely to continue using condoms later in life. Condom use at first sex serves as an indicator of reduced risk of exposure at the beginning of sexual activity.

Table 12.20 shows the percentage of young women and young men aged 15–24 who have ever had sexual intercourse and the percentage who used a condom the first time they had sexual intercourse.

Table 12.20: Condom use at first sexual intercourse among youth

Among young women and young men aged 15–24 who have ever had sexual intercourse, the percentage who used a condom the first time they had sexual intercourse, by background characteristics, Tuvalu 2007

	Women		Men	
Background characteristic	Percentage who used a condom at first sexual intercourse	Number of women who have ever had sexual intercourse	Percentage who used a condom at first sexual intercourse	Number of men who have ever had sexual intercourse
Age				
15–19	6.4	*	19.9	55
..15–17	0.0	*	*	19
..18–19	8.2	*	(20.2)	36
20–24	1.1	98	21.9	59
..20–22	(2.3)	46	(23.0)	41
..23–24	0.0	51	*	18
Marital status				
Never married	*	16	22.5	95
Ever married	1.1	99	*	18
Knows condom source[1]				
Yes	2.0	109	21.5	108
No	*	5	*	6
Residence				
Funafuti	3.5	62	28.3	70
Outer islands	0.0	53	9.0	43
Education				
Less than secondary	*	9	*	9
Secondary	1.2	90	20.4	96
More than secondary	*	16	*	8
Wealth quintile				
Lowest	5.7	19	*	12
Second	3.2	34	(10.9)	34
Middle	*	21	*	13
Fourth	*	22	*	24
Highest	*	20	(30.3)	31
Total	1.9	115	21.0	114

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] For this table, the following responses are not considered a source for condoms: friends, family members and home.

Among young adults aged 15–24 who have ever had sex, 2% of females and 21% of males used a condom the first time they had sex (Table 12.20). Females aged 15–19 are more likely to have used a condom at first sex than those aged 20–24 while the opposite pattern is apparent among males. Males aged 20–24 are less likely than all other age groups to have used a condom at first sex. Young adults in Funafuti are more likely to use a condom at first sex than those in the outer islands.

12.12.4 Premarital sex

Table 12.21 shows the percentage of never-married young adults who have never had sex in the 12 months preceding the survey, and among those, the percentage who used a condom at last sex.

Among never-married young adults, 90% of never-married women aged 15–24 have never had sex, compared with 35% of never-married men. The percentage of never-married young adults who have never had sex drops substantially from the 15–19 age group to the 20–24 age group (Table 12.21). The percentage of those who had sex in the 12 months preceding the survey was much higher among young adult men (48%) than among young adult women (7%). About 34% of young adult men used a condom at last sexual intercourse. Primary abstinence is slightly more common among those in the outer islands.

Table 12.21: Premarital sexual intercourse and condom use among youth

Among never-married women and men aged 15–24, the percentage who have never had sexual intercourse; the percentage who had sexual intercourse in the 12 months preceding the survey; and among men who had premarital sexual intercourse in the past 12 months, the percentage who used a condom at the last sexual intercourse, by background characteristics, Tuvalu 2007

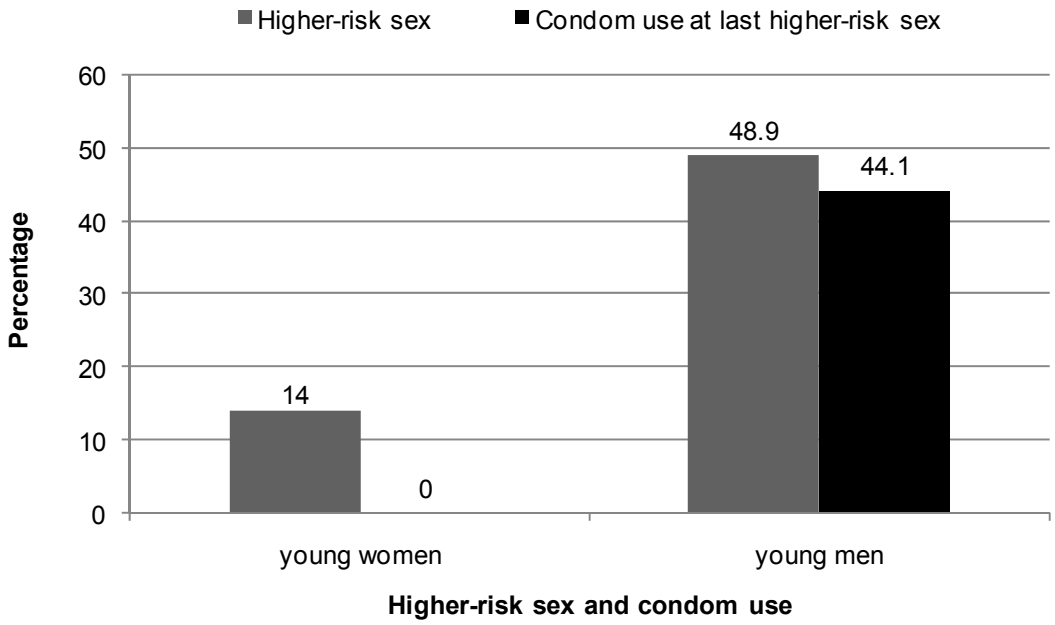
	Never-married women aged 15–24			Never-married men aged 15–24				
Background characteristic	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the 12 months preceding the survey	Number of never married women	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the 12 months preceding the survey	Number of never married men	Percentage who used condom at last sexual intercourse	Number of men
Age								
15–19	95.4	3.5	99	41.3	43.2	88		
..15–17	97.7	2.3	58	(55.6)	31.0	40		
..18–19	(92.0)	(5.4)	41	29.5	53.3	48		
20–24	81.2	12.9	59	25.1	54.8	58		
..20–22	(80.6)	(16.1)	40	(21.2)	56.4	42		
..23–24	*	*	19	*	*	17		
Knows condom source[1]								
Yes	88.7	8.0	139	33.6	49.3	135		
No	*	*	19	*	*	12		
Residence								
Funafuti	87.9	8.8	99	32.5	45.5	90		
Outer islands	93.8	4.0	59	38.7	51.7	56		
Education								
Less than secondary	*	*	18	*	*	16		
Secondary	89.6	7.7	121	33.5	49.4	120		
More than secondary	*	*	19	*	*	10		
Wealth quintile								
Lowest	(84.4)	(9.7)	22	(48.1)	(37.4)	21		
Second	(85.1)	(8.4)	33	(24.1)	(57.0)	32		
Middle	*	*	19	*	*	18		
Fourth	(91.1)	(8.9)	37	(24.9)	(46.4)	30		
Highest	(95.3)	(2.3)	47	(39.6)	(50.1)	45		
Total	90.1	7.0	158	34.8	47.8	146	33.8	70

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] For this table, the following responses are not considered a source for condoms: friends, family members and home.

12.12.5 Higher-risk sex and condom use at last higher-risk sex among youth

Figure 12.5 shows the percentage of young men and women aged 15–24 who had higher-risk sex in the 12 months preceding the survey, and those who used a condom at last higher-risk sex.

Figure 12.5: Percentage of young adults who had higher-risk sex in the 12 months preceding the survey, and those who used a condom at last higher-risk sex



About half of all young men aged 15–24 (49%) had higher-risk sex in the 12 months preceding the survey compared with only 14% of young women in the same age category. Among young men having higher-risk sex, 44% used a condom at the last higher-risk sex while none of the young women used condom at their last higher-risk sex.

12.12.6 Sexual intercourse among young adults while under the influence of alcohol

Engaging in sex under the influence of alcohol can impair judgment, compromise power relations, and increase risky sexual behaviour. Respondents who had sex in the 12 months prior to the survey were asked whether they or any of their partners drank alcohol the last time they had sex with that partner, and whether they or their partner was drunk. Table 12.22 shows the percentage of young women and young men aged 15–24 who had sexual intercourse while drunk in the 12 months preceding the survey, and the percentage who had sexual intercourse in the 12 months preceding the survey when drunk or with a partner who was drunk, by background characteristics.

Table 12.22: Sexual intercourse among youth while under the influence of alcohol

Among all young women and young men aged 15–24, the percentage who had sexual intercourse in the 12 months preceding the survey while being drunk and percentage who had sexual with a partner who was drunk, by background characteristics, Tuvalu 2007

	Women			Men		
Background characteristic	Percentage who had sexual intercourse when drunk in the 12 months preceding the survey	Percentage who had sexual intercourse with a partner who was drunk in the 12 months preceding the survey	Number of women	Percentage who had sexual intercourse when drunk in the 12 months preceding the survey	Percentage who had sexual intercourse with a partner who was drunk in the 12 months preceding the survey	Number of men
Age						
15–19	0.0	2.1	111	11.9	11.9	91
..15–17	0.0	1.0	61	(8.6)	(8.6)	41
..18–19	0.0	3.4	50	14.6	14.6	50
20–24	2.2	8.5	145	26.6	27.5	74
..20–22	4.1	9.0	79	(29.4)	(30.8)	50
..23–24	0.0	7.8	67	(20.7)	(20.7)	24
Marital status						
Never married	1.3	3.1	158	20.0	20.0	146
Ever married	1.1	9.8	99	*	*	18
Knows condom source[1]						
Yes	0.9	5.5	232	19.1	19.6	153
No	*	*	24	*	*	12
Residence						
Funafuti	1.5	5.8	149	21.2	21.2	100
Outer islands	1.0	5.5	108	14.3	15.4	65
Education						
Less than secondary	(0.0)	(0.0)	26	*	*	17
Secondary	1.1	6.9	198	19.2	19.7	137
More than secondary	(3.3)	(3.3)	33	*	*	11
Wealth quintile						
Lowest	2.8	7.9	38	(13.7)	(13.7)	22
Second	0.0	9.0	62	(12.2)	(12.2)	41
Middle	(0.0)	(1.7)	38	*	*	21
Fourth	(2.0)	(5.9)	55	(14.9)	(14.9)	31
Highest	1.7	3.4	64	(29.7)	(29.7)	49
Total 15–24	1.3	5.7	257	18.5	18.9	164

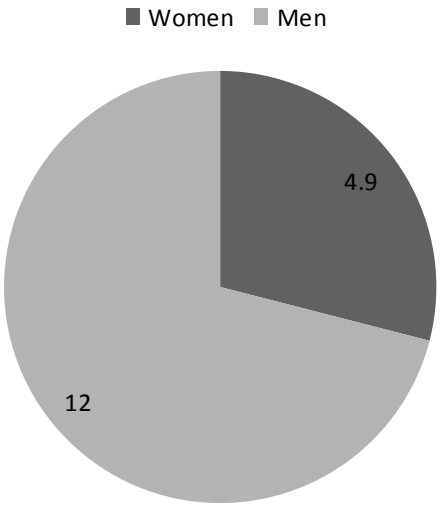
Note: An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed. Figures in parentheses are based on 25–49 cases.
[1] For this table, the following responses are not considered a source for condoms: friends, family members and home

As shown in Table 12.22, more than 1% of women and about 19% of men aged 15–24 reported that they or their partners were drunk the last time they had sex in the 12 months preceding the survey. Having sex under the influence of alcohol is more common among females in Funafuti than among women in the outer islands. Women and men aged 20–22 are more likely to be drunk during sex.

12.12.7 HIV tests among youth

Figure 12.6 shows the percentage of young women and young men aged 15–24 who have been tested for HIV and received the results in the 12 months preceding the survey. As shown in Figure 12.6, more young men (12%) have been tested and received their results than young women (5%).

Figure 12.6: Percentage of young women and young men aged 15–24 who have been tested for HIV and received results in the 12 months preceding the survey.



12.13 KEY RESULTS

Knowledge about HIV and AIDS is nearly universal among Tuvaluan adults. A very high proportion of women (99%) and men (97%) have heard of the disease, although, men are more knowledgeable about it than women. The level of knowledge is quite high for both women and men at different ages and marital status, place of residence, education levels and household wealth quintiles.

Men and women were specifically asked if it is possible to reduce the risk of acquiring HIV through consistently using condoms, limiting sexual intercourse to one uninfected partner, and abstaining from sexual intercourse. About 82% of women and 91% of men agree that using a condom at every sexual intercourse can reduce the risk of getting HIV, while 90% of women and 93% of men agree that limiting sexual intercourse to one uninfected partner is a way to avoid contracting HIV. Generally, most women (87%) and men (93%) know that abstaining from sex and using condoms are other ways to avoid contracting HIV (known by 79% women, 93% men).

About 67% of women and 92% of men know that a healthy-looking person can have HIV. Knowledge that people cannot get HIV by mosquito bites is higher among men (75%) than women (71%), and knowledge that people cannot get HIV by supernatural means is higher for men (91%) than for women (78%).

Women in Funafuti are more likely to have a comprehensive knowledge about HIV and AIDS (44%) than women in the outer islands (32%). Women who are married or living together with a spouse or partner, who have more than a secondary education, and who live in the wealthiest

quintile households are more likely to have a comprehensive knowledge about HIV and AIDS than other women. Comprehensive knowledge is more common among men in Funafuti, men who have never married but have had sex, men who have more than a secondary education, and men who live in higher wealth quintile households.

About 82% of women and 70% of men know that HIV can be transmitted from a mother to her child by breastfeeding. A low proportion of women and men (each 30%) know that HIV can be transmitted through breastfeeding and that the risk of transmission can be reduced by special drugs. About 34% of women and 38% of men know that there are special drugs that a doctor or nurse can give to an HIV-infected pregnant woman to reduce the risk of transmitting the virus to the baby.

Less women than men expressed positive attitudes and opinions about a family member with HIV. For example, 64% of women and 72% of men would not want to keep it a secret that a family member has HIV while only 81% of women and 86% of men are willing to care for an HIV-infected family member. Meanwhile, only 57% of women and 67% of men reported that they would buy vegetables from a shopkeeper who has HIV.

More men (95%) than women (88%) in the 15–49 age group agree that a wife is justified in refusing to have sexual intercourse with her husband if she knows that he has an STI. The same proportion of women and men also agree that a wife is justified in refusing sexual intercourse or asking her husband to use a condom.

About 2% of young women and 14% of young men in the 15–24 age group had their first sexual intercourse before age 15. About 13% of young women and 52% of young men had sex before they turned age 18. Women in the outer islands are more likely to initiate sex earlier than women in Funafuti, while the opposite pattern is true for men. Women with less education tend to initiate sex much earlier than women with more education.

Out of the 21 women and 8 men reporting an STI or symptoms of an STI in the 12 months preceding the survey, 46% of women and 63% of men sought treatment from a public or private health facility. Another 21% of women sought treatment from a shop or pharmacy, or other source, while none of the men sought treatment. Almost the same proportion of women (38%) and men (37%) did not seek treatment or advice from any source.

About half the number of young men aged 15–24 (49%) had higher-risk sex in the 12 months preceding the survey compared with only 14% of young women in the same category. Among young men having higher-risk sex, 44% used a condom at the last higher-risk sex while none of the young women used a condom at their last higher-risk sex.

About 19% of men aged 15–24 reported that they or their partners were drunk the last time they had sex with any partner in the 12 months preceding the survey. Having sex under the influence of alcohol is more common among females in Funafuti than among those in the outer islands. Women and men aged 20–22 are more likely to be drunk during sex.

CHAPTER 13 WOMEN'S EMPOWERMENT AND DEMOGRAPHIC HEALTH OUTCOMES

13.1 INTRODUCTION

The study of women's empowerment has raised considerable concerns and issues because of its association with other demographic and health outcomes. The 2007 TDHS women's questionnaire collected data on the general background characteristics of women (e.g. age, education, wealth and employment status) as well as data more specific to women's empowerment. This chapter examines women's empowerment through types of earnings, the magnitude of a woman's earnings relative to those of her husband or partner, and control over the use of her own earnings and those of her husband or partner.

The women's questionnaire also collected data on women's participation in household decision-making, on the circumstances under which they feel they are justified in refusing to have sexual intercourse with their husband or partner, and their attitudes towards wife beating. For this report, two separate indices of empowerment were developed based on the number of household decisions in which the respondent participates and her opinion on the number of reasons that justify wife beating. The ranking of women on these two indices is then related to selected demographic and health outcomes, including contraceptive use, ideal family size and unmet need for contraception, and the receipt of healthcare services during pregnancy, childbirth and the postnatal period.

13.2 EMPLOYMENT AND FORMS OF EARNINGS

As with education, employment can be a source of empowerment for both women and men. It may be particularly empowering for women if it puts them in control of income. Currently married respondents were asked whether they were employed at the time of the survey and if not, whether they were employed in the 12 months preceding the survey. Table 13.1 shows the distribution of currently married women and men aged 15–49 who were employed in the 12 months preceding the survey by type of earnings and age group. Only 57% of currently married women and almost 93% of currently married men were employed at some time in the year prior to the 2007 TDHS.

More women than men in the 25–34 age group are employed. The low employment rate at young ages is expected because part of the labour force in those ages are students at secondary and higher learning institutions who are therefore not available for work.

For those who are working, most women and men are likely to be paid in cash (85% women, 71% men). Men are more likely to do any type of work without any payment (23%) than women (4%). In contrast, women are more likely to be paid in cash and in-kind (9%) than men (1%).

Table 13.1: Employment and cash earnings of currently married women and men

Percentage of currently married women and men aged 15–49 who were employed at any time in the 12 months preceding the survey, and the percent distribution of currently married women and men employed in the 12 months preceding the survey by type of earnings, and according to age group, Tuvalu 2007

Age	Currently married respondents:		Percent distribution of currently married respondents employed in the 12 months preceding the survey, by type of earnings					
	Percentage employed	Number of women	Cash only	Cash and in-kind	In-kind only	Not paid	Total	Number of women
				Women				
15–19	*	9	*	*	*	*	*	2
20–24	57.4	78	(82.6)	(2.4)	(2.4)	(7.9)	(100.0)	45
25–29	65.5	112	93.3	4.3	0.0	2.4	100.0	74
30–34	62.3	89	90.7	5.1	1.2	3.1	100.0	55
35–39	53.1	84	(87.3)	(4.9)	(3.9)	(3.9)	(100.0)	44
40–44	54.8	111	75.8	22.1	0.0	2.1	100.0	61
45–49	50.5	116	81.2	14.1	1.9	2.8	100.0	58
Total 15–49	56.6	598	85.0	9.3	1.3	3.7	100.0	339
				Men				
15–19	*	2	*	*	*	*	*	2
20–24	*	15	*	*	*	*	*	12
25–29	(92.8)	40	(75.3)	(0.0)	(0.0)	(24.7)	(100.0)	37
30–34	*	24	*	*	*	*	*	24
35–39	(100.0)	35	(64.7)	(3.3)	(3.3)	(28.7)	100.0	35
40–44	(92.8)	50	(65.1)	(1.5)	(7.1)	(26.4)	100.0	47
45–49	89.8	58	81.1	2.3	5.8	10.9	100.0	52
Total 15–49	93.3	224	70.6	1.4	4.7	23.2	100.0	209
50+	84.2	109	56.4	2.8	0.0	40.8	100.0	91
Total men 15+	90.4	333	66.3	1.8	3.3	28.6	100.0	301

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.

13.2.1 Control and relative magnitude of women's earnings

Currently married and employed women who earn cash for their work were asked about the relative magnitude of their earnings in comparison to their husband's or partner's earnings. In addition, they were asked who the main decision-maker is with regard to the use of their earnings. This information may provide some insight into women's empowerment in the family, and the extent of their control over household decision-making. It is expected that employment and earnings are more likely to empower women if women themselves control their own earnings and perceive their earnings as significant relative to those of their husband or partner. The 2007 TDHS only asked about cash earnings of married women.

Table 13.2 shows women's control over their own earnings, and their perception of the magnitude of their earnings relative to those of their husband or partner. Overall, about three in ten women (33%) decide by themselves how their earnings should be spent. More than half of all women (52%) make this decision jointly with their husband or partner, while 13% report that the decision is mainly made by their husband or partner.

Younger women are more independent than older women with regard to making their own decisions about how their cash earnings are spent. Similarly, women in Funafuti are more likely to make their own decisions (36%) than women in the outer islands (29%). Joint decisions are more frequent in the outer islands (60%) than in Funafuti (47%) and are more likely to involve older women than younger women.

The proportion of women who independently decide how to use their earnings generally increases with education, while less educated women, and women from poor households, are more likely to be involved in joint household decision. An interesting situation is observed with regard to parity and decision-making on use earnings. Women with a low parity are more independent in making

their own decisions than women with higher parities who are more dependent on their husbands to decide how her earnings should be used. Joint decision-making among couples increases with parity.

Over 60% of working women reported that their earnings were less than those of their husband or partner, and 24% reported that their earnings were more than those of their husband or partner. Few women had the same earnings as their husband or partner (5%) or reported that their husband or partner did not bring in any money (8%).

The proportion of women who earn as much or more than their husband or partner significantly increases with education. About 40% of women with more than a secondary education earn as much or more than their husband or partner, compared with 29% with a secondary education, and only 16% with less than a secondary education. About the same proportion of women living in Funafuti and the outer islands earn less than their husband or partner.

Table 13.2: Control over women's cash earnings and relative magnitude of women's earnings — Women

Percent distribution of currently married women aged 15–49 who received cash earnings for employment in the 12 months preceding the survey by person who decides how a wife's cash earnings are used and by whether she earned more or less than her husband, according to background characteristics, Tuvalu 2007

	Person who decides how the wife's cash earnings are used						Women's cash earnings compared with husband's cash earnings						
Background characteristic	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	More	Less	About the same	Husband/ partner has no earnings	Don't know/ Missing	Total	Number of women
Age													
15–19	*	*	*	*	*	*	*	*	*	*	*	*	1
20–24	(43.0)	(36.7)	(17.4)	(0.0)	(2.8)	(100.0)	(15.7)	(65.4)	(2.8)	(7.5)	(8.5)	(100.0)	38
25–29	36.8	49.4	12.3	1.5	0.0	100.0	33.8	51.6	6.2	3.0	5.3	100.0	72
30–34	21.8	70.0	6.2	0.0	2.1	100.0	19.9	70.4	4.5	3.2	2.1	100.0	53
35–39	(38.9)	(46.1)	(14.9)	(0.0)	(0.0)	(100.0)	(23.7)	(59.9)	(5.3)	(11.1)	(0.0)	(100.0)	41
40–44	22.2	65.2	12.6	0.0	0.0	100.0	24.5	53.9	6.6	11.9	3.0	100.0	59
45–49	41.6	41.1	15.4	0.0	2.0	100.0	18.7	66.7	2.0	10.6	2.0	100.0	56
Number of living children													
0	51.0	40.3	8.7	0.0	0.0	100.0	22.7	63.1	6.5	2.9	4.8	100.0	59
1–2	29.8	52.0	16.3	0.0	2.0	100.0	25.0	59.8	4.1	6.3	4.8	100.0	111
3–4	33.5	54.7	9.6	1.1	1.1	100.0	23.0	56.8	6.0	11.4	2.8	100.0	100
5+	(20.1)	(62.3)	(17.6)	(0.0)	(0.0)	(100.0)	(23.1)	(67.2)	(1.4)	(8.2)	(0.0)	(100.0)	49
Residence													
Funafuti	36.4	47.2	14.2	0.6	1.7	100.0	25.0	61.4	5.1	4.5	4.0	100.0	191
Outer islands	28.9	59.9	11.2	0.0	0.0	100.0	21.6	59.4	4.2	12.1	2.7	100.0	128
Education													
Less than secondary	33.5	54.4	10.8	0.0	1.3	100.0	14.2	66.2	1.3	15.0	3.4	100.0	85
Secondary	35.3	51.8	12.2	0.0	0.8	100.0	25.2	64.1	3.6	4.8	2.3	100.0	145
More than secondary	30.2	51.1	16.3	1.2	1.2	100.0	30.1	49.5	9.8	5.0	5.5	100.0	89
Wealth quintile													
Lowest	22.4	59.5	18.1	0.0	0.0	100.0	22.8	49.6	8.7	18.9	0.0	100.0	42
Second	37.9	57.8	4.3	0.0	0.0	100.0	21.0	69.4	0.0	8.3	1.3	100.0	48
Middle	42.1	49.2	8.7	0.0	0.0	100.0	28.6	57.4	0.9	9.2	3.9	100.0	72
Fourth	23.6	59.4	13.8	1.6	1.6	100.0	26.7	61.6	4.9	3.6	3.2	100.0	67
Highest	36.4	43.1	18.0	0.0	2.4	100.0	19.2	62.8	8.3	3.6	6.0	100.0	90
Total	33.4	52.3	13.0	0.3	1.0	100.0	23.6	60.6	4.7	7.6	3.5	100.0	320

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.

13.2.2 Control over men's cash earnings

Table 13.3 shows men's and women's perceptions about who decides how men's cash earnings are spent.

There are large discrepancies between men's and women's perceptions of how a husband's cash earnings are spent. Although one in five men and women perceive men to be the main decision-makers, almost 60% of women and just under 40% of men perceive decision-making to be a joint process, and 22% of women and 33% of men perceive women to be the main decision-makers.

Table 13.3: Control over men's cash earnings

Percent distribution of currently married men aged 15–49 who receive cash earnings and of currently married women aged 15–49 whose husband receives cash earnings, by person who decides how men's cash earnings are used, according to background characteristics, Tuvalu 2007

	Women						Men						
	Person who decides how husband's cash earnings are used						Person who decides how husband's cash earnings are used						
Background characteristic	Mainly wife	Husband and wife jointly	Mainly husband	Other	Total	Number of women	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number of men
Age													
15–19	*	*	*	*	*	1	*	*	*	*	*	*	1
20–24	(38.4)	(41.5)	(20.1)	(0.0)	(100.0)	35	*	*	*	*	*	*	8
25–29	21.2	55.0	22.2	1.6	100.0	69	(29.7)	38.9	29.0	2.4	0.0	100.0	28
30–34	20.7	64.5	14.8	0.0	100.0	51	*	*	*	*	*	*	16
35–39	(20.1)	(63.1)	(16.8)	(0.0)	(100.0)	36	*	*	*	*	*	*	24
40–44	(23.4)	(65.8)	(10.7)	(0.0)	(100.0)	52	(42.1)	36.5	17.6	0.0	3.8	100.0	31
45–49	(13.1)	(58.8)	(28.1)	(0.0)	(100.0)	50	(27.7)	48.7	18.1	0.0	2.7	97.3	43
Number of living children													
0	35.8	45.2	19.0	0.0	100.0	57	*	*	*	*	*	*	25
1–2	27.3	49.3	23.4	0.0	100.0	103	(26.6)	(43.1)	(25.0)	(2.9)	(2.5)	(100.0)	48
3–4	13.2	72.5	13.1	1.2	100.0	89	(44.2)	(26.1)	(24.8)	(0.0)	(0.0)	(95.0)	47
5+	(10.0)	(68.3)	(21.6)	(0.0)	(100.0)	45	(25.0)	(52.4)	(15.1)	(0.0)	(7.5)	(100.0)	31
Residence													
Funafuti	22.8	55.1	21.6	0.6	100.0	181	38.9	26.4	25.0	0.0	6.9	97.2	84
0uter island	20.8	63.9	15.2	0.0	100.0	113	25.9	53.3	17.7	3.1	0.0	100.0	67
Education													
Less than secondary	14.6	72.0	13.4	0.0	100.0	73	31.3	40.4	21.6	1.1	1.9	96.2	62
Secondary	27.5	53.9	18.6	0.0	100.0	137	33.8	35.7	21.0	2.7	6.9	100.0	51
More than secondary	19.5	54.4	24.9	1.3	100.0	85	(35.5)	(38.3)	(23.2)	(0.0)	(3.1)	(100.0)	38

Table 13.3 (continued)

Background characteristic	Women: Person who decides how husband's cash earnings are used: Mainly wife	Husband and wife jointly	Mainly husband	Other	Total	Number of women	Men: Person who decides how husband's cash earnings are used: Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number of men
Wealth quintile													
Lowest	(25.7)	(61.7)	(12.5)	(0.0)	(100.0)	34	(41.1)	(37.2)	(13.0)	(2.0)	(3.4)	(96.6)	34
Second	(24.5)	(65.5)	(10.0)	(0.0)	(100.0)	44	(24.4)	(37.6)	(35.4)	(2.5)	(0.0)	(100.0)	27
Middle	19.3	59.7	21.0	0.0	100.0	64	(24.0)	(46.6)	(25.8)	(0.0)	(0.0)	(96.4)	32
Fourth	26.7	54.1	17.5	1.7	100.0	65	*	*	*	*	*	*	22
Highest	17.8	56.0	26.2	0.0	100.0	87	(36.9)	(36.3)	(13.4)	(0.0)	(13.4)	(100.0)	35
Total 15–49	22.0	58.5	19.1	0.4	100.0	294	33.2	38.3	21.8	1.4	3.9	98.4	151
50+	na	na	na	na	na	na	16.1	67.6	11.1	0.0	3.1	97.8	54
Total men 15+	na	na	na	na	na	na	28.7	46.0	19.0	1.0	3.7	98.3	205

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.
na = not applicable

13.3 WOMEN'S CONTROL OVER THEIR OWN EARNINGS AND OVER THOSE OF THEIR HUSBANDS

The 2007 TDHS included questions that addressed women's control over their own earnings and also those of their husbands. This information may help provide further insight into women's direct empowerment within the family and their indirect empowerment within the community.

Over two in five women (44%) are more likely to decide mainly for themselves how their cash earnings are used if their husband or partner has no earnings or did not work in the preceding 12 months (see Table 13.4). The same proportion of women (44%) also reported to make joint decisions with husband or partner. Women are more likely to make joint decisions with their husband or partner about the use of their earnings if they earn more than their husband or partner.

Meanwhile, almost the same proportion of women and men make joint decisions about the use of wife's and husband's cash earnings regardless of who earns more than the other. About 50% of women who did not work in the 12 months preceding the survey reported that they jointly decided with their husband or partner on how to use his cash earnings.

Table 13.3: Women's control over her own earnings and over those of her husband

Percent distributions of currently married women age 15–49 with cash earnings in the 12 months preceding the survey by person who decides how the woman's cash earnings are used and of currently married women aged 15–49 whose husbands have cash earnings by person who decides how the husband's cash earnings are used, according to the relation between woman's and husband's cash earnings, Tuvalu 2007

	Person who decides how the wife's cash earnings are used:							Person who decides how husband's cash earnings are used:						
Women's earnings relative to husband's earnings	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women
More than husband/partner	28.3	60.0	11.6	0.0		100.0	76	22.0	60.3	17.7	0.0		100.0	74
Less than husband/partner	35.9	49.5	14.0	0.6		100.0	194	21.9	57.3	20.3	0.6		100.0	194
Same as husband partner	*	*	*	*		*	15	*	*	*	*		*	15
Husband/ partner has no cash earnings/did not work	(44.3)	(43.9)	(11.8)	(0.0)		(100.0)	24	na	na	na	na		na	na
Woman has no cash earnings	na	Na	na	na		na	na	*	*	*	*		*	19
Woman did not work in 12 months preceding survey	na	Na	na	na		na	na	27.1	49.5	19.7	1.6		100.0	239
Don't know/ Missing	*	*	*	*		*	11	*	*	*	*		*	11
Total[1]	33.4	52.3	13.0	0.3		100.0	320	24.2	54.7	19.4	0.9		100.0	552

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.
na = not applicable
[1] Excludes cases where a woman or her husband or partner has no earnings and includes cases where a woman does not know whether she earned more or less than her husband or partner

13.4 WOMEN'S EMPOWERMENT

The Tuvaluan government emphasises gender and gender mainstreaming in all of its policies. The overall direction of the national gender policy is to mainstream gender concerns in the national development process in order to improve the social, legal, civic, political, economic and cultural conditions of Tuvaluan people, especially women.

In addition to educational attainment, employment status and control over earnings, some direct measures of women's autonomy and status were recorded. Specifically, questions were asked about women's participation in household decision-making, their acceptance of wife beating, and their opinions about the conditions under which a wife should be able to deny her husband sex. Such information provides insights into a woman's control over her environment and her attitudes toward gender roles, both of which are relevant to understanding demographic pattern of the country and health behaviour of women in a country.

The first measure — women's participation in decision-making — requires little explanation because the ability to make decisions about one's own life is of obvious importance to women's empowerment. The other two measures derive from the notion that gender equality is essential to empowerment. Responses that indicate that wife beating is justified reflect a low status of women, and signify an acceptance of norms that give men the right to use force against women, which is a violation of women's human rights. Similarly, beliefs about whether and when a woman can refuse to have sex with her husband reflect issues of gender equality regarding sexual rights. Besides yielding an important measure of empowerment, information about women's attitudes toward sexual rights is useful for improving and monitoring reproductive health programmes that depend on women's willingness and ability to control their own sexual lives.

13.4.1 Women's participation in decision-making

To assess women's decision-making autonomy, the 2007 TDHS sought information on women's participation in four different types of household decisions: 1) the respondent's own health care; 2) major household purchases; 3) household purchases for daily needs; and 4) visiting her family or relatives. Women are considered to participate in a decision if they alone, or jointly with their husband or partner, have the final say in that decision.

Table 13.5 shows that currently married women in Tuvalu do not often make decisions on their own, and that the person (or persons) who makes household decisions depends on what is being decided. While 35% of women say that they make decisions about daily household purchases on their own, only 24% say that they make decisions about major household purchases by themselves. Less than four in ten (37%) married women independently make decisions about their own health care. Some women reported that their husbands or partners are more likely to make independent decisions. About 20% of women reported that their husband or partner makes decisions about large household purchases by themselves while nearly one in five (16%) women reported that their husband or partner makes decisions about their health care. Women are most likely to report that they make decisions about visits to their family or relatives jointly with their husband or partner (41%). Women are also likely to report that all four decisions are made jointly with their husband or partner.

Table 13.5: Women's participation in decision making

Percent distribution of currently married women by person who usually makes decisions about four kinds of issues, Tuvalu 2007

Decision	Mainly wife	Wife and husband jointly	Mainly husband	Someone else	Other	Missing	Total	Number of women
Own health care	37.3	44.9	16.0	1.1	0.6	0.1	100.0	598
Major household purchases	23.9	44.1	17.3	12.6	2.0	0.1	100.0	598
Purchases of daily household needs	34.6	36.3	14.8	12.2	2.0	0.1	100.0	598
Visits to her family or relatives	36.4	41.1	21.7	0.1	0.6	0.1	100.0	598

The 2007 TDHS survey also asked currently married men about who they think should have a greater say in making decisions about five different issues: 1) major household purchases; 2) household purchases for daily needs; 3) visits to wife's family or relatives; 4) what to do with the money the wife earns; and 5) how many children to have. Table 13.6 presents the percent distribution of currently married men aged 15–49 by the person that they think should have a greater say in making decisions about five kinds of issues.

Table 13.6 indicates that 28% of men think that mainly husbands should make decisions about major household purchases. About 14% think that mainly husbands should make decisions about visits to the wife's family or relatives whereas 63% think that it should be a joint decision. Almost three-quarters (72%) of men think that mainly wives should make decisions about purchasing daily household needs whereas 25% think that it should be a joint decision. Only 10% of currently married men believe that the number of children to have should be decided mainly by the husband, while almost nine in ten men (87%) say that it should be a joint decision between a husband and wife.

Table 13.6: Women's participation in decision-making according to men

Percent distribution of currently-married men aged 15–49 by person who they think should have a greater say in making decisions about five kinds of issues, Tuvalu 2007

Decision	Wife	Wife and husband equally	Husband	Don't know/ depends	Total	Number of men
Major household purchases	6.9	64.8	27.8	0.5	100.0	224
Purchases of daily household needs	72.2	24.7	2.6	0.5	100.0	224
Visits to wife's family or relatives	13.9	62.5	22.6	1.0	100.0	224
What to do with the money wife earns	23.4	63.4	12.2	1.0	100.0	224
How many children to have	2.1	87.0	10.1	0.8	100.0	224

Table 13.7 shows how women's participation in decision-making varies by background characteristics. Although 60% of currently married women participate in making all four types of decisions, 12% have no say in any of the four.

Table 13.7: Women's participation in decision-making by background characteristics

Percentage of currently married women aged 15–49 who usually make specific decisions either by themselves or jointly with their husband, by background characteristics, Tuvalu 2007

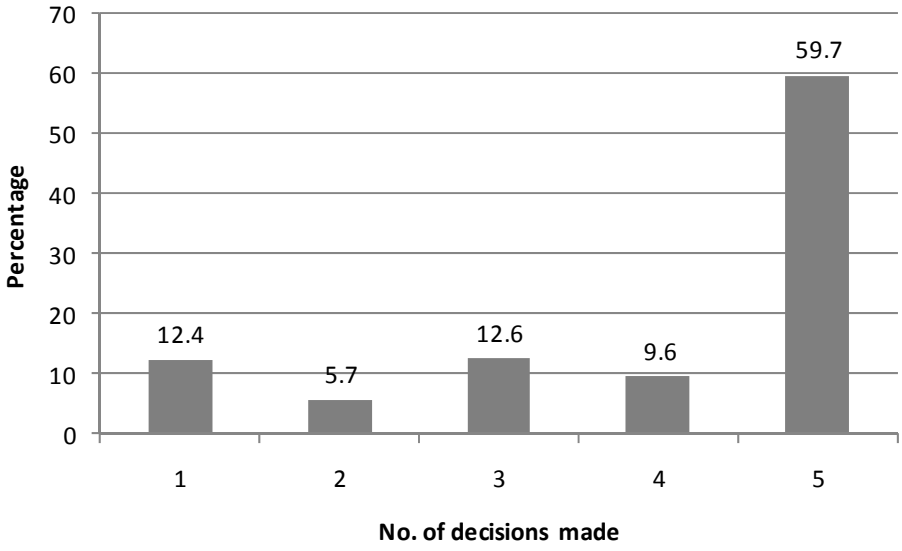
Background characteristic	Specific decisions				Percentage who participate in all four decisions	Percentage who participate in none of the four decisions	Number of women
	Own health care	Making major household purchases	Making purchases for daily household needs	Visits to her family or relatives			
Age							
15–19	*	*	*	*	*	*	9
20–24	79.9	50.5	53.3	82.9	44.0	9.2	78
25–29	84.0	62.9	65.8	77.1	56.5	12.2	112
30–34	83.8	71.9	79.7	78.1	61.3	8.8	89
35–39	85.0	65.5	69.6	71.3	56.5	13.7	84
40–44	80.6	75.4	77.2	74.4	65.3	15.5	111
45–49	80.5	77.5	77.8	80.7	70.3	14.0	116
Employment (last 12 months)							
Not employed	77.9	59.1	61.3	72.0	52.4	17.8	259
Employed for cash	85.5	76.4	79.8	82.0	66.6	7.9	320
Employed not for cash	*	*	*	*	*	*	17
Number of living children							
0	89.8	62.8	63.8	84.3	54.6	4.7	108
1–2	80.9	65.1	69.4	78.2	57.6	11.6	191
3–4	81.3	71.6	74.6	76.8	63.6	14.6	199
5+	78.1	71.5	73.9	70.0	61.6	18.0	99
Residence							
Funafuti	85.5	67.5	72.2	80.8	59.2	9.8	277
Outer islands	79.4	68.4	69.7	74.7	60.1	14.6	321
Education							
Less than secondary	81.3	72.0	74.6	76.4	63.9	14.0	220
Secondary	81.7	62.1	65.2	76.7	53.5	11.9	277
More than secondary	85.6	75.2	78.0	82.3	67.6	10.2	101
Wealth quintile							
Lowest	86.7	75.1	77.6	79.0	64.9	7.0	105
Second	77.3	67.2	67.6	75.9	54.9	14.6	119
Middle	80.9	67.4	70.1	72.3	57.7	15.3	137
Fourth	81.2	61.5	69.2	80.3	57.2	11.8	122
Highest	85.8	69.7	70.7	81.1	65.0	12.3	115
Total	82.2	67.9	70.9	77.5	59.7	12.4	598

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

Women's participation in all four decisions generally increases with age, from 44% among women aged 20–24 to 70% among those aged 45–49.Women who are not employed are less likely than other women to participate in making household decisions. Almost 67% of employed women participate in making all decisions regarding the household, compared with just over half (52%) of unemployed women. This implies that wage or salaried employment is associated with an increase in women's decision-making power. Similarly, education increases women's decision-making power, with about 68% of women who have more than a secondary education participating in all four decisions, compared with 64% of those with less than a secondary education, and 54% of those with a secondary education. The percent of women who have a say in all four areas of decision-making are almost the same between those who reside in Funafuti (59%) and those who reside in the outer islands (60%). However, women in the outer islands are 50% more likely to not participate in any of the four decisions than women in Funafuti (15% compared with 10%).Women in the highest and lowest wealth quintile households are equally likely to participate in all four types of decisions (65%), whereas those in the three middle wealth quintiles are somewhat less likely (55–58%) to do so.

Figure 13.1 gives the percentage of currently married women according to the number of decisions in which they participate, either alone or in conjunction with their husbands or partners. The total number of decisions refers to the sum of decisions made alone plus the number of decisions made jointly with the husband. The total number of decisions made is an indication of the strength of women's empowerment. The percentage of women who participate in decision-making decreases from about 60% who participate in all five decisions to about 6% who participate in only two of the five decisions, increasing again to more than 12% who participate in only one and in three of the five decisions.

Figure 13.1: Number of decision in which women participate



13.4.2 Men's attitude toward their wife's participation in decision-making

Table 13.8 shows the percentage of currently married men who believe that a wife should make decisions alone or jointly with her husband on five different issues: 1) major household purchases; 2) household purchases for daily needs; 3) visits to wife's family or relatives; 4) what to do with the money the wife earns; and 5) the number of children to have.

Table 13.8: Men's attitude toward their wife's participation in decision making

Percentage of currently-married men aged 15–49 who think a wife should have a greater or equal say with her husband about five specific kinds of decisions, by background characteristics, Tuvalu 2007

Background characteristic	Specific decision about:					All five decisions	None of the five decisions	Number of men
	Major household purchases	Purchases for daily household needs	Visits to her family or relatives	What to do with the money the wife earns	How many children to have			
Age								
15–19	*	*	*	*	*	*	*	2
20–24	*	*	*	*	*	*	*	15
25–29	(62.4)	(98.3)	(76.5)	(81.0)	(81.3)	(45.1)	(1.7)	40
30–34	*	*	*	*	*	*	*	24
35–39	(72.5)	(96.7)	(74.1)	(78.4)	(87.0)	(52.9)	(0.0)	35
40–44	(85.5)	(96.4)	(81.5)	(92.8)	(95.1)	(63.5)	(1.3)	50
45–49	75.3	96.1	75.4	93.1	89.0	57.8	3.9	58
Employment (12 months preceding survey)								
Not employed	*	*	*	*	*	*	*	15
Employed for cash	66.9	96.4	75.6	87.8	86.9	50.0	1.2	151
Employed not for cash	89.4	100.0	78.8	90.2	97.1	66.3	0.0	58
Number of living children								
0	(66.5)	(96.5)	(84.4)	(92.5)	(82.8)	(51.3)	(0.0)	34
1–2	72.2	96.0	65.7	83.6	87.0	45.8	2.4	73
3–4	71.5	95.9	75.0	80.6	87.2	52.2	2.5	72
5+	(75.2)	(100.0)	(89.8)	(97.4)	(100.0)	(68.5)	(0.0)	46
Residence								
Funafuti	67.0	95.5	85.2	85.2	86.4	52.3	1.1	103
Outer islands	75.7	98.0	68.9	88.1	91.4	54.2	2.0	121
Education								
Less than secondary	74.7	97.7	70.6	85.9	90.9	53.0	2.3	104
Secondary	67.2	98.4	76.2	85.4	86.9	47.6	0.0	75
More than secondary	(72.3)	(92.3)	(90.0)	(91.2)	(88.6)	(63.4)	(2.6)	46
Wealth quintile								
Lowest	74.6	97.2	65.6	90.4	83.4	54.5	2.8	47
Second	69.7	97.8	65.3	81.4	82.9	43.7	2.2	50
Middle	68.2	100.0	76.2	82.1	89.5	47.6	0.0	56
Fourth	(67.5)	(92.8)	(96.4)	(92.8)	(100.0)	(63.9)	(0.0)	32
Highest	(79.3)	(94.1)	(86.9)	(91.1)	(94.1)	(63.3)	(3.0)	40
Total 15–49	71.7	96.8	76.4	86.8	89.1	53.3	1.6	224
50+	69.7	95.7	91.1	93.9	90.0	62.6	1.1	109
Total men 15+	71.1	96.5	81.2	89.1	89.4	56.3	1.4	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.

The results show that over half of the men aged 15–49 (53%) are of the opinion that a wife should have a greater or equal say with her husband about all five specified decisions. Only 1% of men believe that a wife should not participate in any of the specified decisions. Only 1% of men from Funafuti and 2% of men from the outer islands feel that women should not have a say in any of the specified decisions.

About 97% of men aged 15 and over think that decisions about purchases for daily household needs should be made by a wife alone or jointly with her husband or partner; 89% think that decisions about how to use the money that a wife earns should be made by the wife alone or jointly with her husband or partner; 81% think that decisions about visits to the wife's family or relatives should be made by the wife alone or jointly with her husband or partner; 89% think that decisions about how many children to have should be made by the wife alone or jointly with her husband or partner; and 71% think that decisions about major household purchases should be made by the wife alone or jointly with her husband or partner.

Men with a higher level of education are more likely to state that wives should be involved in household decision-making. Men who are employed, or who live in the outer islands, or who are from the wealthiest quintile households are more likely to think that a wife alone or with her husband or partner should participate in all five specified decisions.

13.4.3 Attitudes toward wife beating

Violence against women has serious consequences for their mental and physical well-being, including their reproductive and sexual health (WHO 1999). One of the most common forms of violence against women worldwide is physical abuse by a husband or partner (Heise et al. 1999).

The 2007 TDHS gathered information on women's attitudes toward wife beating, which is a proxy for women's perception of their status. Women who believe that a husband is justified in hitting or beating his wife for any specified reason may believe themselves to have a low status, both absolutely and relative to men. Such a perception acts as a barrier to accessing health care for themselves and their children, affects their attitude toward contraceptive use, and impacts their general well-being. Women were asked whether a husband is justified in beating his wife under a series of circumstances: 1) if the wife burns the food; 2) argues with him; 3) goes out without telling him; 4) neglects the children; and 5) refuses sexual relations. Table 13.9 summarises women's attitudes toward wife beating in these five specific circumstances.

Most women find wife beating justified in certain circumstances. For example, 70% of women agree that at least one of the five reasons is sufficient justification for wife beating. This indicates that Tuvaluan women generally accept violence as part of male–female relationships, which is not surprising because traditional norms teach women to accept, tolerate and even rationalise battery.

The most widely accepted reasons for wife beating are: neglecting the children (66%), going out without informing the husband or partner (42%), and arguing with the husband or partner (28%). About 21% of women feel that burning the food is also a justification for wife beating, as is denying a husband sex (18%).

Acceptance of wife beating for at least one of the specified reasons is generally lower among: 1) women in the outer islands; 2) women with more than a secondary education; 3) women who are not married and women who are married; and 4) women who have more than five children.

Table 13.9: Attitude toward wife beating — Women

Percentage of all women aged 15–49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Tuvalu 2007

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number of women
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Age							
15–19	25.6	29.0	40.7	66.3	13.4	69.0	111
20–24	25.4	31.0	49.5	72.9	19.7	76.3	145
25–29	10.9	22.6	32.5	70.7	11.0	72.8	134
30–34	17.3	21.3	32.1	62.2	15.4	65.0	97
35–39	30.9	28.9	50.4	68.4	19.9	70.9	94
40–44	19.4	28.0	46.1	61.2	18.4	68.4	129
45–49	22.3	30.1	41.0	60.5	26.3	65.8	140
Employment (12 months preceding survey)							
Not employed	19.5	27.0	42.7	63.5	15.4	68.7	414
Employed for cash	22.9	27.5	40.4	67.8	19.7	70.4	405
Employed not for cash	(27.9)	(36.4)	(53.7)	(84.3)	(30.3)	(87.9)	30
Marital status							
Never married	27.5	30.5	45.4	68.0	15.4	69.9	193
Married or living together	19.1	25.5	39.2	65.2	17.0	69.6	598
Divorced/separated/widowed	24.4	37.6	57.5	70.0	34.9	74.8	60
Number of living children							
0	22.0	26.5	40.7	67.2	14.4	69.0	289
1–2	20.6	27.3	42.2	68.3	18.0	73.0	235
3–4	20.0	27.3	43.9	65.4	20.1	70.5	223
5+	24.5	31.0	40.1	60.1	22.9	64.9	105
Residence							
Funafuti	27.3	35.7	46.5	70.3	18.9	75.6	414
Outer islands	15.8	19.7	37.6	62.2	17.0	64.7	437
Education							
Less than secondary	26.7	33.3	49.3	65.1	28.0	69.9	282
Secondary	19.8	26.2	42.2	67.1	15.9	71.0	437
More than secondary	15.3	19.3	25.2	65.2	3.2	66.9	132

Table 13.9 (continued)

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number of women
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Wealth quintile							
Lowest	24.9	28.1	49.7	69.0	24.8	71.4	152
Second	24.1	23.8	44.8	64.5	17.8	68.1	179
Middle	18.3	24.7	39.1	64.3	17.0	67.9	169
Fourth	16.2	29.0	34.3	61.7	18.0	64.6	173
Highest	23.6	31.8	42.4	71.4	12.9	77.9	177
Total	21.4	27.5	41.9	66.1	17.9	70.0	851

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

Men were also asked about their opinions on the justification of wife beating under certain circumstances. As shown in Table 13.10, more than seven in ten men (73%) agree that wife beating is justified for at least one of the specified reasons. It is interesting to note that this is about the same as the percentage of women who agreed with at least one of the reasons. The results also show similar proportions of men and women justifying reasons for wife beating.

The most likely groups of men to agree with at least one of the specified reasons for wife beating include: 1) younger men, those who are employed but not for cash; 2) men who are not married; 3) men with one and two children; 4) men living in Funafuti; 5) men who have no education or only a primary level education; and 6) men in the lowest wealth quintile households. Men with more than a secondary education (35%) are the least likely to accept wife beating. A higher educational attainment tends to decrease the chances that a man will agree with any of the reasons for wife beating.

Table 13.10: Attitude toward wife beating — Men

Percentage of all men aged 15–49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Tuvalu 2007

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number of men
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Age							
15–19	29.5	25.1	41.7	71.2	23.0	83.1	91
20–24	23.0	35.9	40.2	66.0	22.3	73.3	74
25–29	15.8	29.9	38.8	59.7	11.3	69.9	62
30–34	(26.1)	(33.4)	(30.3)	(39.5)	(18.0)	(69.6)	38
35–39	(19.8)	(13.9)	(35.5)	(62.2)	(11.0)	(62.2)	41
40–44	20.8	28.5	37.3	62.2	16.7	72.7	59
45–49	17.4	24.3	44.6	70.6	14.8	71.6	63
Employment (12 months preceding survey)							
Not employed	24.7	35.8	37.1	55.0	20.1	69.6	62
Employed for cash	20.1	27.9	33.1	58.5	16.5	67.7	229
Employed not for cash	24.4	23.6	50.4	76.0	17.9	83.9	137
Marital status							
Never married	23.5	26.3	38.0	67.3	19.8	78.6	194
Married or living together	19.9	27.7	39.3	59.9	15.2	67.8	224
Divorced/separated/widowed	*	*	*	*	*	*	9
Number of living children							
0	23.1	25.2	37.3	65.7	19.2	75.8	224
1–2	25.5	38.1	45.7	61.6	16.2	76.2	85
3–4	16.7	23.6	36.0	60.2	16.1	66.4	72
5+	(20.0)	(26.6)	(41.8)	(62.5)	(13.8)	(65.3)	46
Residence							
Funafuti	23.4	26.0	34.4	61.5	14.1	71.9	225
Outer Islands	20.8	29.5	44.6	66.0	21.3	74.6	203
Education							
Less than secondary	26.7	30.4	44.6	67.2	20.9	76.9	141
Secondary	23.3	30.2	42.3	67.1	19.8	76.1	223
More than secondary	8.1	12.7	16.2	43.2	1.7	54.1	63

Table 13.10 (continued)

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number of men
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Wealth quintile							
Lowest	21.1	34.0	46.7	68.7	23.3	74.8	75
Second	27.9	28.8	38.3	68.3	17.7	73.0	94
Middle	21.8	28.7	42.1	61.1	17.1	73.5	89
Fourth	14.9	14.7	38.5	62.8	9.9	71.4	74
Highest	23.3	30.6	32.2	57.9	18.9	73.1	96
Total 15-49	22.2	27.7	39.2	63.6	17.5	73.1	428
50+	17.8	20.3	27.8	51.4	7.2	59.5	130
Total men 15+	21.1	26.0	36.6	60.8	15.1	69.9	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.

13.4.4 Attitudes toward refusing sexual intercourse with a husband

This section discusses women's attitudes toward refusing to have sexual intercourse with their husband. Women's control over their ability to decide on when and who to have sex with has important implications for their health and the health of their children.

The 2007 TDHS included questions about whether a woman is justified in refusing to have sexual relations with her husband if she: 1) knows the husband has an STI; 2) knows the husband has intercourse with other women; and 3) is tired or not in the mood. These three issues have been addressed because they are related to women's rights and health.

Table 13.11 shows the percentage of women who believe that a wife is justified in refusing to have sex with her husband under specific circumstances. About 81% of women agree that a wife is justified in refusing to have sex with her husband for all of the specified reasons. Of these, 94% believe that a wife is justified in refusing to have sex if she is tired and 91% believe that a wife is justified in refusing to have sex if she knows her husband has sexual relations with other women. An estimated 88% of women believe that a wife is justified in refusing to have sex if her husband has an STI. Very few women disagree with any of the specified reasons.

Young women, women who are unemployed, single women and women with no children are the least likely to agree that a wife is justified in refusing to have sex with her husband for any reason.

Table 13.11 also shows the percentage of men who believe that a wife is justified in refusing to have sex with her husband under these same specific circumstances. The same proportions of men and women agree on all specific circumstances, except that men are more likely to agree that a wife is justified in refusing to have sex with the husband when she knows that he has an STI.

The least likely group of men to agree with all of the reasons for a wife refusing to have sex with her husband include single men, men with no children, men who live in Funafuti, men with a higher education and men living in the highest wealth quintile households.

Table 13.11: Attitudes toward refusing sexual intercourse with husband — Women

Percentage of all women aged 15–49 who believe that a wife is justified in refusing to have sexual intercourse with her husband in specific circumstances, by background characteristics, Tuvalu 2007

Background characteristic	Wife is justified in refusing intercourse with her husband if she:			Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of women
	Knows husband has an STI	Knows husband has intercourse with other women	Is tired or not in the mood			
Age						
15–19	72.5	90.5	82.3	63.7	6.0	111
20–24	89.7	93.7	89.5	81.5	1.2	145
25–29	90.6	93.4	92.2	82.1	1.3	134
30–34	87.3	94.9	93.2	81.9	2.2	97
35–39	96.5	96.4	95.8	91.7	0.0	94
40–44	90.1	95.7	93.1	84.4	1.0	129
45–49	89.7	92.7	88.6	80.9	3.5	140
Employment (12 months preceding survey)						
Not employed	86.3	93.1	89.6	78.9	2.8	414
Employed for cash	90.2	94.4	91.6	82.7	1.6	405
Employed not for cash	(84.9)	(95.7)	(86.9)	(79.2)	(2.2)	30
Marital status						
Never married	80.8	88.4	85.5	69.2	3.5	193
Married or living together	90.3	96.3	92.3	84.8	1.7	598
Divorced/separated/widowed	89.6	86.7	88.9	78.4	2.9	60
Number of living children						
0	84.7	91.6	86.8	74.7	2.6	289
1–2	91.3	93.8	90.5	82.2	1.7	235
3–4	89.2	96.4	93.5	85.4	2.2	223
5+	88.1	94.5	94.3	84.4	2.4	105
Residence						
Funafuti	88.5	92.7	90.0	79.8	2.4	414
Outer islands	87.8	94.9	90.9	81.7	2.0	437

Table 13.11 (continued)

Background characteristic	Wife is justified in refusing intercourse with her husband if she:			Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of women
	Knows husband has an STI	Knows husband has intercourse with other women	Is tired or not in the mood			
Education						
Less than secondary	88.5	94.5	89.3	81.5	2.6	282
Secondary	86.6	93.5	89.9	78.7	1.9	437
More than secondary	92.3	93.4	95.0	86.1	2.1	132
Wealth quintile						
Lowest	90.4	93.5	89.7	84.2	3.2	152
Second	86.1	93.6	91.5	79.7	2.8	179
Middle	88.9	95.2	93.9	82.9	1.4	169
Fourth	85.8	94.7	86.5	79.1	2.5	173
Highest	89.7	92.0	90.8	78.7	1.2	177
Total	88.1	93.8	90.5	80.8	2.2	851

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

Table 13.12: Attitudes toward refusing sexual intercourse with husband — Men

Percentage of all men aged 15–49 who believe that a wife is justified in refusing to have sexual intercourse with her husband in specific circumstances, by background characteristics, Tuvalu 2007

Background characteristic	Wife is justified in refusing intercourse with her husband if she:			Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of men
	Knows husband has an STI	Knows husband has intercourse with other women	Is tired or not in the mood			
Age						
15–19	96.7	96.1	88.6	84.1	0.0	91
20–24	94.4	94.2	90.2	83.0	0.0	74
25–29	92.5	94.4	85.8	78.3	1.9	62
30–34	(93.9)	(95.3)	(81.7)	(72.5)	(0.0)	38
35–39	(97.2)	(94.5)	(88.5)	(85.7)	(0.0)	41
40–44	96.1	96.8	93.4	89.5	0.0	59
45–49	92.6	95.3	96.3	89.7	1.9	63
Employment (12 months preceding survey)						
Not employed	93.3	96.2	91.3	82.8	0.0	62
Employed for cash	94.9	93.5	87.2	82.3	1.0	229
Employed not for cash	95.4	97.8	92.8	86.5	0.0	137
Marital status						
Never married	93.7	94.8	87.6	79.5	0.0	194
Married or living together	95.6	95.5	91.2	87.0	1.0	224
Divorced/separated/widowed	*	*	*	*	*	9
Number of living children						
0	94.5	94.7	88.8	81.2	0.0	224
1–2	95.9	96.5	89.9	87.1	1.4	85
3–4	95.1	92.8	90.2	84.5	1.6	72
5+	(93.7)	(100.0)	(92.5)	(88.7)	(0.0)	46
Residence						
Funafuti	92.2	93.2	86.5	77.6	1.0	225
Outer islands	97.7	97.5	93.1	90.5	0.0	203
Education						
Less than secondary	95.9	96.6	92.0	87.1	0.0	141
Secondary	96.8	95.7	88.3	83.3	0.0	223
More than secondary	85.1	90.7	89.0	77.8	3.7	63

Table 13.12 (continued)

Background characteristic	Wife is justified in refusing intercourse with her husband if she: Knows husband has an STI	Knows husband has intercourse with other women	Is tired or not in the mood	Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of men
Wealth quintile						
Lowest	98.3	99.2	93.5	91.8	0.0	75
Second	96.9	95.5	89.8	86.7	0.0	94
Middle	95.5	91.9	92.8	83.6	1.3	89
Fourth	95.2	96.8	85.7	80.9	0.0	74
Highest	89.0	93.9	86.5	76.7	1.2	96
Total 15–49	94.8	95.3	89.6	83.7	0.5	428
50+	96.3	97.7	88.3	86.0	0.5	130
Total men 15+	95.2	95.8	89.3	84.3	0.5	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.

The following findings examine men's attitudes toward a husband's rights to certain behaviours when the wife refuses to have sex with him.

Table 13.13 shows the percentage of men who believe that a husband has a right to certain behaviours when his wife refuses to have sex with him. These behaviours include: 1) getting angry and reprimanding her; 2) refusing her financial support; 3) forcing her to have sex; and 4) having sex with another woman. The results show that only 2% of men agree that a man may engage in all four of these actions if his wife refuses him sex, while 39% do not agree with any of these actions.

About 52% of men aged 15–49 believe that a husband has the right to get angry and reprimand his wife if she refuses to have sex with him. Nearly equal proportions of men (less than 16%) believe they have the right to: 1) force their wife to have sex; 2) refuse their wife financial support; and 3) have sex with another women if their wife refuses to have sex..

Single men and men living in Funafuti are the least likely to agree that a husband has a right to certain behaviours when his wife refuses to have sex with him. However, education and wealth quintile show a negative correlation against all of the specified behaviours.

Table 13.13: Men's attitude about a husband's rights when his wife refuses to have sexual intercourse

Percentage of men aged 15–49 who consider that a husband has the right to certain behaviours when a woman refuses to have sex with him when he wants her to, by background characteristics, Tuvalu 2007

Background characteristic	When a woman refuses to have sex with her husband, he has the right to:				Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of men
	Get angry and reprimand her	Refuse her financial support	Use force to have sex	Have sex with another woman			
Age							
15–19	48.9	25.9	14.3	22.1	3.6	36.4	91
20–24	49.2	20.1	30.4	20.3	4.0	37.8	74
25–29	55.5	15.0	14.0	14.7	0.0	39.7	62
30–34	(48.1)	(7.8)	(4.5)	(21.2)	(0.0)	(36.7)	38
35–39	(60.5)	(12.5)	(8.2)	(3.2)	(0.0)	(39.5)	41
40–44	49.9	10.2	8.8	13.2	2.0	43.5	59
45–49	57.1	20.0	11.1	10.4	3.7	39.9	63
Employment (in the 12 months preceding the survey)							
Not employed	27.9	21.0	13.8	17.8	4.8	58.2	62
Employed for cash	45.9	15.4	15.3	12.9	1.7	45.8	229
Employed not for cash	74.1	19.1	13.1	19.9	2.2	18.6	137
Marital status							
Never married	50.1	23.2	21.5	20.4	3.1	36.5	194
Married or living together	54.9	11.5	8.5	12.0	1.3	40.5	224
Divorced/separated/widowed	*	*	*	*	*	*	9
Number of living children							
0	50.0	21.5	18.9	20.0	3.0	37.3	224
1–2	59.1	13.6	8.6	11.1	1.4	38.0	85
3–4	52.3	12.3	7.4	9.5	0.9	44.5	72
5+	(50.9)	(12.7)	(14.0)	(14.4)	(2.6)	(39.7)	46
Residence							
Funafuti	41.7	20.3	14.6	14.1	1.6	47.4	225
Outer islands	64.1	14.2	14.1	17.8	3.1	29.5	203

Table 13.13 (continued)

Background characteristic	When a woman refuses to have sex with her husband, he has the right to:				Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of men
	Get angry and reprimand her	Refuse her financial support	Use force to have sex	Have sex with another woman			
Education							
Less than secondary	58.2	16.6	15.4	15.8	3.4	34.3	141
Secondary	52.1	21.5	15.9	16.8	2.2	38.8	223
More than secondary	39.9	4.6	6.4	12.6	0.0	49.9	63
Wealth quintile							
Lowest	44.3	14.3	13.0	16.4	1.7	44.8	75
Second	61.7	14.9	19.3	18.6	2.1	30.4	94
Middle	58.0	16.0	11.8	11.9	4.0	37.3	89
Fourth	47.5	18.1	13.6	14.3	0.9	41.3	74
Highest	47.9	23.1	13.5	17.7	2.5	42.3	96
Total 15–49	52.3	17.4	14.3	15.8	2.3	38.9	428
50+	56.0	10.6	12.9	12.8	3.7	38.7	130
Total men 15+	53.2	15.8	14.0	15.1	2.6	38.9	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.

13.4.5 Indicators of women's empowerment

Two sets of empowerment indicators — women's participation in making household decisions and women's attitudes toward wife beating — can be summarised into two separate indices. The first index shows the number of decisions (see Table 13.5 for the list of decisions) in which women participate alone or jointly with their husband or partner. This index ranges in value from 0 to 4 and is positively related to women's empowerment, and reflects the degree of decision-making control that women have in areas that affect their lives and environments.

The second index, which ranges in value from 0 to 5, is the total number of reasons (see Table 13.6 for the list of reasons) for which the respondent feels that a husband is justified in beating his wife. A lower score on this indicator is interpreted as reflecting a greater sense of equality and self esteem.

Table 13.14 shows how these three indicators relate to each other. In general, the expectation is that women who participate in making household decisions are also more likely to make decisions for their individual needs.

Table 13.14: Indicators of women's empowerment

Percentage of women aged 15–49 who participate in all decision-making, the percentage who disagree with all the specified reasons for justifying wife beating, and the percentage who agree with all the specified reasons for refusing sexual intercourse with husband, by value on each of the indicators of women's empowerment, Tuvalu 2007

	Currently married women				
Empowerment indicator	Percentage who participate in all decision making	Number of women	Percentage who disagree with all the reasons justifying wife beating	Percentage who agree with all the reasons for refusing sexual intercourse with husband	Number of women
Number of decisions in which women participate[1]					
0	Na	na	68.8	74.0	74
1–2	Na	na	22.4	80.5	109
3–4	Na	na	25.7	87.8	415
Number of reasons for which wife-beating is justified[2]					
0	41.9	182	na	80.3	255
1–2	67.1	243	na	81.9	332
3–4	66.7	134	na	79.1	204
5	(72.2)	39	na	83.0	60
Number of reasons given for refusing to have sexual intercourse with husband[3]					
0	*	10	56.7	na	na
1–2	53.6	81	27.5	na	na
3	61.0	507	29.8	na	na

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.
na = not applicable
[1]Restricted to currently married women. See Table 13.5 for the list of decisions.
[2] See Table 13.9 for the list of reasons.
[3] See Table 13.11 for the list of reasons.

The relationships between these indices are not as expected. Greater involvement in decision-making is not associated with disapproval of wife beating. Surprisingly, women who do not participate in decision-making are more likely to disagree with all of the specified reasons for wife beating (69%) as compared with women who participate in making three to four of the specified decisions (26%). Only 42% of women who totally disagree with wife beating participate in all types of decision-making. Increasing proportions of women who participate in making one to three reasons for wife beating refuse to have sexual intercourse with the husband. More than half the number of women (57%) with no reasons given for refusing to have sexual intercourse with husband disagree with all of the reasons for wife beating.

13.5 CURRENT USE OF CONTRACEPTION BY WOMEN'S EMPOWERMENT STATUS

A woman's ability to control her fertility and use of contraceptive methods depends on her decision and joint decision with the husband or partner. A woman's status and sense of empowerment have strong implications for women's ability to make decisions on issues that affect their lives. Women who have less control of other aspects of their life are less likely to have strong control over their fertility and have less choice in applying contraceptive methods without the husband's knowledge and cooperation.

Table 13.15 shows the relationship of each of the two indicators of women's empowerment with current use of contraceptive methods by currently married women aged 15–49. It is evident from the data that women who participate in more household decisions are more likely to use any method of contraception or any modern method of contraception compared to other women. Regarding the number of reasons for which wife beating is perceived as justified, women with more acceptance of wife beating are more likely to use a method of contraception. Women with increasing number of reasons given for refusal to have sexual intercourse showed a declining proportions of contraceptive methods used.

Table 13.15: Current use of contraception by women's status

Percent distribution of currently married women aged 15–49 by current contraceptive method, according to selected indicators of women's status, Tuvalu 2007

Empowerment indicator	Any method	Any modern method	Modern methods			Any traditional method	Not currently using	Total	Number of women
			Female sterilisation	Temporary modern female methods[1]	Male condom				
Number of decisions in which women participate[2]									
0	31.5	30.6	9.3	21.3	0.0	0.9	68.5	100.0	74
1–2	24.0	17.9	3.9	14.0	0.0	6.1	76.0	100.0	109
3–4	32.1	22.1	9.6	11.8	0.8	9.9	67.9	100.0	415
Number of reasons for which wife-beating is justified[3]									
0	23.2	16.6	7.2	8.8	0.6	6.6	76.8	100.0	182
1–2	34.4	25.9	6.2	19.3	0.4	8.4	65.6	100.0	243
3–4	31.1	22.1	10.5	10.8	0.8	9.0	68.9	100.0	134
5	(38.9)	(28.8)	(22.6)	(6.2)	(0.0)	(10.1)	(61.1)	(100.0)	39
Number of reasons given for refusing to have sexual intercourse with husband[4]									
0	*	*	*	*	*	*	*	*	10
1–2	31.1	27.8	8.6	17.8	1.3	3.4	68.9	100.0	81
3	30.8	22.0	8.7	12.9	0.4	8.8	69.2	100.0	507
Total	30.5	22.4	8.5	13.4	0.5	8.1	69.5	100.0	598

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

[1] Includes the pill, IUD, injectables, implants, female condom, diaphragm, foam/jelly and lactational amenorrhea method.

[2] See Table 13.5 for the list of decisions.

[3] See Table 13.9 for the list of reasons.

[4] See Table 13.11 for the list of reasons.

13.6 IDEAL FAMILY SIZE AND UNMET NEED FOR FAMILY PLANNING

Women's status and empowerment strongly influence their decisions about issues affecting their well-being. Many studies have proven that these indicators (women's status and empowerment) are important factors for controlling and reducing women's fertility through two main pathways: 1) the desire to reduce family size as more women become more empowered; and 2) empowerment increases women's ability to control her ideal family size through the use of family planning methods.

As women become more empowered to negotiate decisions regarding their fertility, they have more control over contraceptive use and thus their chances of becoming pregnant and giving birth. Table 13.16 shows how women's ideal family size and their unmet need for family planning vary by the two indicators of women's empowerment.

Table 13.16: Women's empowerment and ideal number of children and unmet need for family planning

Mean ideal number of children for women aged 15–49, and the percentage of currently married women aged 15–49 with an unmet need for family planning, by indicators of women's empowerment, Tuvalu 2007

Empowerment indicator	Mean ideal number of children[1]	Number of women	Percentage of currently married women with an unmet need for family planning[2]			Number of currently married women
			For spacing	For limiting	Total	
Number of decisions in which women participate[3]						
0	1.5	74	21.3	3.7	25.1	74
1–2	3.2	107	10.6	8.3	18.8	109
3–4	3.7	399	10.9	14.6	25.5	415
Number of reasons for which wife-beating is justified[4]						
0	2.8	248	20.9	8.8	29.7	182
1–2	3.3	320	9.6	11.6	21.3	243
3–4	3.1	196	7.5	17.8	25.2	134
5	(3.4)	56	2.8	10.7	13.5	39
Number of reasons given for refusing to have sexual intercourse with husband[5]						
0	*	19	*	*	*	10
1–2	2.9	142	6.9	10.3	17.2	81
3	3.2	659	12.8	12.2	25.0	507
Total	3.1	820	12.1	12.1	24.2	598

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] Mean excludes respondents who gave non-numeric responses.
[2] See Table 7.3 for the definition of unmet need for family planning.
[3] Restricted to currently married women. See Table 13.5 for the list of decisions.
[4] See Table 13.9 for the list of reasons.
[5] See Table 13.11 for the list of reasons.

Table 13.16 shows that findings on the relationship between empowerment indicators and fertility issues are mixed. The data indicate that women with no decision-making power have the lowest mean ideal number as compared with women with more decision making power. Although women who participate in making three to four of the specified decisions have the same unmet need as women who do not participate in any of the specified decisions. Women who do not agree with any of the justifications for wife beating have the lowest mean ideal number of children (2.8) and also have the largest unmet need for family planning. Furthermore, for women who participate in three of the specified reasons for wife beating have the largest unmet need for family planning.

13.7 WOMEN'S STATUS AND REPRODUCTIVE HEALTH CARE

Table 13.17 examines whether women's use of antenatal, delivery, and postnatal care services from health workers varies by women's level of empowerment as measured by the two indicators of empowerment. In societies where health care is widespread, women's empowerment may not affect their access to reproductive health services; in other societies, however, increased empowerment of women is likely to increase their ability to seek out and use health services to better meet their own reproductive health goals, including the goal of safe motherhood.

Table 13.17 indicates that none of the two indicators of empowerment are strongly associated with antenatal care, although the high coverage of antenatal care in Tuvalu may reduce the importance of women's empowerment in receiving this service. However, the likelihood of a woman receiving assistance from a skilled provider after childbirth is low, particularly among women who do not participate in the decision-making process, and among women who indicate there are no reasons for which wife-beating is justified. There is no clear relationship between antenatal care and the number of reasons given for when a woman is justified in refusing to have sex with her husband.

Table 13.17: Reproductive health care by women's empowerment

Percentage of women aged 15–49 with a live birth in the five years preceding the survey who received antenatal care, delivery assistance and postnatal care from health personnel for the most recent birth, by indicators of women's empowerment, Tuvalu 2007

Empowerment indicator	Received antenatal care from health personnel	Received delivery assistance from health personnel	Received postnatal care from health personnel within the first two days since delivery[1]	Number of women with a child born in the last five years
Number of decisions in which women participate[2]				
0	(100.0)	(100.0)	(12.4)	38
1–2	95.4	98.6	58.6	47
3–4	97.6	98.6	57.8	176
Number of reasons for which wife-beating is justified[3]				
0	95.4	98.6	31.4	93
1–2	100.0	99.4	65.0	119
3–4	96.6	98.3	52.2	65
5	*	*	*	16
Number of reasons given for refusing to have sexual intercourse with husband[4]				
0	*	*	*	6
1–2	(92.2)	(100.00	(44.9)	42
3	98.2	98.7	52.0	244
Total	97.4	99.0	50.7	292

Note: 'Health personnel' includes doctor, nurse, midwife, or auxiliary nurse or auxiliary midwife. 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] Includes deliveries in a health facility and not in a health facility.

[2] Restricted to currently married women. See Table 13.5 for the list of decisions.

[3] See Table 13.9 for the list of reasons.

[4] See Table 13.11 for the list of reasons.

13.8 KEY RESULTS

The following are the main findings of the 2007 TDHS women's questionnaire.

- There is still significant gender disparity in the employment participation rates of men and women in Tuvalu, with more men employed than women. However, more women receive payment in cash while more men receive no payment for any work.
- Women are more likely to make joint decisions with their husband or partner about the use of their earnings. Over two in five women are more likely to decide for themselves how their cash earnings are used if their husband or partner has no earnings or did not work in the 12 months preceding the survey.
- Most household decisions are made jointly by the husband and wife, although between 15% and 22% of women do not participate in certain household decisions.
- The majority of women (70%) and men (73%) agree with at least one justification for a husband beating his wife. Such findings are of concern because they indicate that the subordinate status of women within the marital relationship is generally accepted.
- Community education and advocacy should promote an understanding that violence against women is not justifiable under any circumstances. In order to promote this ideal, laws also need to be changed.
- The majority of women have a relatively high level of sexual autonomy, however a number of women also believe that they cannot refuse sex with their husband under certain circumstances.
- More than 2% of men aged 15–49 believe that a husband has the right to force his wife to have sex if she refuses him. This is of concern because marital rape is never justified, and this is an area where education efforts should be targeted.
- Men with no education are more likely to believe that violence is justified, and more likely to support men's right to beat their wives if they refuse to have sex. Younger men are also more likely to justify partner violence against women than older men, perhaps indicating a conservative revival among younger generations. Both of these findings need to be examined in greater detail because they challenge our expectations. They highlight the importance of including gender equality and women's rights in the educational programmes of boys in particular.
- The three indicators of women's empowerment are found relate to each other. A higher level of empowerment or sense of entitlement or control in one area relates to a higher level of empowerment in another. This is important because it indicates that if we can affect change in one area of women's empowerment, this change can have additional effects in other areas of women's lives.
- Women who do not participate in any household decisions are less likely to use contraception than women who do. In particular, women who do not participate in household decisions are much less likely to use condoms as a contraceptive method and instead use modern female methods that do not depend on their husband's or partner's cooperation. This has significant implications for women's reproductive health and, in particular, the transmission of STIs. Women's empowerment within the home should therefore be promoted in programmes that target reproductive health.
- Older women, women who are employed and women who are more educated are more likely to have higher indicators of empowerment such as participating in household decisions.
- Policies should focus on improving women's livelihoods, increasing women's education and providing educational and advocacy programmes in rural areas where patriarchal ideologies appear to be stronger.

CHAPTER 14 DOMESTIC VIOLENCE

14.1 INTRODUCTION

In recent years there has been increasing concern about violence against women in general and domestic violence in particular, both in developed and developing countries. Not only has domestic violence against women been acknowledged worldwide as a violation of women's basic human rights, but an increasing amount of research highlights the health burdens, intergenerational effects, and demographic consequences of such violence (UN General Assembly 1991; Heise et al. 1994, 1998; Jejeebhoy 1998). Gender-based violence occurs across all socioeconomic and cultural backgrounds, and in many societies in the Pacific, including Tuvalu, women are socialised to accept, tolerate and even rationalise domestic violence and to remain silent about such experiences (Zimmerman 1994). Violence of any kind has a serious impact on a country's economy, and because women bear the brunt of domestic violence, they bear the health and psychological burdens as well. Victims of domestic violence are abused inside of what should be the most secure environment — their own home.

Worldwide, women experience many forms of violence to a greater extent than men. Violence against women is often referred to as gender-based violence. Gender is the term used to denote the social characteristics assigned to men and women. These characteristics interact with other factors such as age, religion, nationality, ethnicity and social background. Gender-based violence is therefore violence targeted at women or girls on the basis of their subordinate status in society (Heise et al. 1995).

The World Health Organization defines violence as 'the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, mal-development or deprivation' (Krug et al. 2002). Violence can be self-directed, such as suicidal behaviour; interpersonal, such as family or intimate partner violence or violence between individuals who are not related; or collective, including violence by states or organised groups of people. Furthermore, the nature of violent acts may be physical, sexual, emotional, or may involve neglect or deprivation.

The 2007 TDHS included a set of questions that focused on specific aspects of violence within this broad realm. The questions addressed women's and men's experience of interpersonal violence, including acts of physical, sexual and emotional violence. Information was collected on both domestic violence (also known as spousal violence or intimate partner violence) and violence by other family members or unrelated individuals. Specifically, this chapter presents the prevalence of women and men who have ever experienced interpersonal violence (physical violence since the age of 15 and lifetime experience of sexual violence), and the prevalence of women and men who have experienced intimate partner violence ever, in the 12 months preceding the survey. In addition, detailed information is presented on intimate partner violence, including physical consequences of violence and when partner violence began.

14.2 MEASUREMENT OF VIOLENCE

Collecting valid, reliable and ethical data on intimate partner violence poses particular challenges because:

- perceptions of what constitutes violence or abuse varies across cultures and individuals;
- a 'culture of silence' surrounds domestic violence that can affect reporting; and
- the topic's sensitivity. The safety of respondents and interviewers when asking about domestic violence in a familial setting, and the protection of women who disclose violence, both raise specific ethical concerns.

Responses to these challenges are described below.

14.2.1 The use of valid measures of violence

The 2007 TDHS measured the use of violence by spouses and other household members. Accordingly, information was obtained from ever-married women on violence by spouses and others, and from never-married women on violence by anyone, including boyfriends.

International research on violence shows that intimate partner violence is one of the most common forms of violence against women. As a result, the 2007 TDHS measured spousal/partner violence in more detail than violence by other perpetrators by using a greatly shortened and modified Conflict Tactics Scale (Straus 1990). Specifically, spousal violence was measured using the following set of questions for women.

(Does/did) your (last) husband/partner ever do any of the following things to you?

a) Slap you?

b) Twist your arm or pull your hair?

c) Push you, shake you, or throw something at you?

d) Punch you with his fist or with something that could hurt you?

e) Kick you, drag you or beat you up?

f) Try to choke you or burn you on purpose?

g) Threaten or attack you with a knife, gun, or any other weapon?

h) Physically force you to have sexual intercourse with him even when you did not want to?

i) Force you to perform any sexual acts you did not want to?

In cases when the answer was 'yes', women were asked about the frequency of the act in the 12 months preceding the survey. A 'yes' answer to one or more of the items from 'a' to 'g' above constituted evidence of physical violence, while a 'yes' answer to items 'h' or ''' constituted evidence of sexual violence. The question about experiencing the act in the 12 months preceding the survey tells us about current experiences of violence verses ever experiencing violence. This is an important point as current experiences of violence is an important indicator for 'severity' of the problem, and a good indicator for effectiveness of interventions (as it will change more rapidly than ever experienced).

This approach of asking about specific acts, in order to measure different forms of violence, has the advantage of not being affected by different understandings of what constitutes a summary term such as violence. By including a wide range of acts, this approach has the additional advantage of giving the respondent multiple opportunities to disclose any experience of violence.

Emotional violence among ever-married women was measured in a similar way, using the following set of questions.

(Does/did) your (last) husband ever:

a) Say or do something to humiliate you in front of others?

b) Threaten to hurt or harm you or someone close to you?

c) Insult you or make you feel bad about yourself?

In addition to these questions, which were only asked of ever-married women, all women were asked about physical violence from people other than the current or most recent spouse/partner with the question: 'From the time you were 15 years old, has anyone [other than your (current/last) husband] hit, slapped, kicked, or done anything else to hurt you physically?' Respondents who answered 'yes' were asked who had done this to them and the frequency of such violence during the 12 months preceding the survey.

All women were also asked: 'At any time in your life, as a child or as an adult, has any one ever forced you in any way to have sexual intercourse or perform any other sexual acts?' Respondents who answered 'yes' were then asked questions about the age at which this first happened and the person who committed the act.

Although this approach to questioning is generally considered to be optimal, the possibility of under-reporting of violence, particularly sexual violence, cannot be entirely ruled out in any survey.

14.2.2 Ethical considerations

Three specific protections were built into the questionnaire, in accordance with the World Health Organization's ethical and safety recommendations for research on domestic violence (WHO 2001):

- Only one eligible person in each household was administered questions on violence. In households with more than one eligible woman, the respondent to participate was randomly selected through a specially designed simple selection procedure (based on the 'Kish Grid') which was built into the Household Questionnaire. Interviewing only one person in each household provides assurance to the selected respondent that other respondents in the household will not talk about the types of questions the selected respondent was asked.
- Informed consent was obtained from the respondent for the survey at the start of the individual interview. In addition, at the start of the violence section, respondents were read an additional statement informing them that the proceeding questions could be sensitive and reassuring them of the confidentiality of their responses.
- Questions about violence were asked only if privacy could be obtained. If privacy could not be obtained, the interviewer was instructed to skip the questions, thank the respondent, and end the interview. If a translator was needed to conduct the interview in order to maintain privacy, respondents were not asked questions about violence.

14.2.3 Special training for implementing the domestic violence module

Complete privacy was also essential for ensuring the security of the respondent and the interviewer. Asking about or reporting violence, especially in households where the perpetrator may be present at the time of the interview, carries the risk of further violence. Accordingly, interviewers were provided specific training for implementing the set of questions on violence to enable field staff to collect violence data in a secure, confidential and ethical manner.

Although most women who are interviewed do not necessarily ask for help, some abused women may ask the interviewer for assistance. To prepare for this possibility, interviewers were trained to instruct respondents that they could seek help from the police, probation and social welfare officer. These officers are responsible for handling social welfare matters, including the welfare of children and families.

14.3 EXPERIENCE OF VIOLENCE BY WOMEN AGED 15–49 AND MEN AGED 15–54

This section discusses women's experience of violence by any individual, and begins by examining experiences of physical violence since age 15 and physical violence during pregnancy, and continues by presenting data on lifetime experience of sexual violence. Background characteristics associated with increased risk of violence are also discussed.

14.3.1 Physical violence since age 15

Table 14.1 and Figure 14.1 show the distribution of women who have experienced physical violence since age 15, ever and in the 12 months preceding the survey, by background characteristics. Out of the total 501 women interviewed, about 37% have ever experienced physical violence any time since the age of 15, while nearly 25% reported having experienced physical violence in the 12 months preceding the survey. About 1% of women have frequently experienced physical violence, while 23% have experienced violence sometime in the 12 months preceding the survey.

The proportion of women who have experienced physical violence is highest among women aged 20–29. Moreover, women aged 25–29 are most likely to report having experienced physical violence often or sometimes in the 12 months preceding the survey (35%). Although there is very little difference between employed and unemployed women with regard to their experience of physical violence, women who are unemployed are slightly more likely to report having experienced physical violence since age 15. Employed women are more likely to experience physical violence (25%) often in the 12 months preceding the survey than women who are unemployed compared to (23%).

Women who are married or in a living together arrangement are slightly less likely to have ever experienced physical violence (37%) than women who are currently divorced, widowed or separated (38%). The pattern for recent violence suggests that women with partners are more likely to experience violence currently (22%) than women who are currently divorced, widowed or separated in the past 12 months (25%). The number of children that women have is also related to their experience of physical violence. Women with no or few children are more likely to experience physical violence since age 15 and in the past 12 months than women with more children.

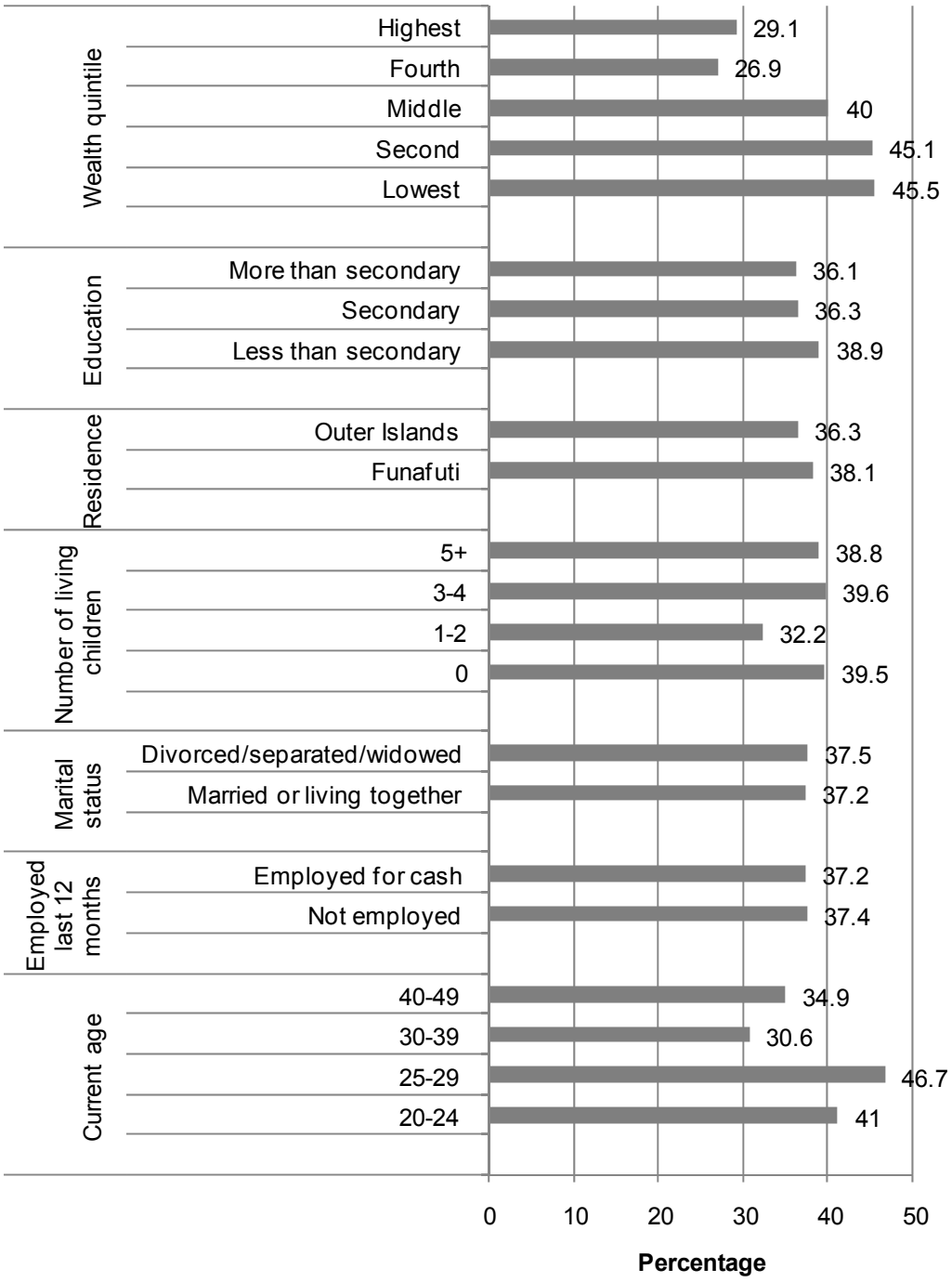
Table 14.1: Experience of physical violence

Percentage of women aged 15–49 who have ever experienced physical violence since age 15 and the percentage who have experienced physical violence in the 12 months preceding the survey, by background characteristics Tuvalu 2007

	Percentage who have experienced physical violence since age 15				
		In the 12 months preceding the survey			
	Ever[1]	Often	Sometimes	Often or sometimes	Number of women
Current age					
15–19	*	*	*	*	8
20–24	41.0	2.2	31.6	33.8	65
25–29	46.7	0.0	34.9	34.9	93
30–39	30.6	1.0	16.4	17.4	144
40–49	34.9	2.1	17.5	19.5	190
Employed in 12 months preceding the survey					
Unemployed	37.4	1.6	21.8	23.3	197
Employed for cash	37.2	1.2	24.1	25.3	303
Marital status					
Married or living together	37.2	1.1	23.5	24.6	473
Divorced/separated/widowed	(37.5)	(5.8)	(16.1)	(21.9)	28
Number of living children					
0	39.5	1.2	29.4	30.6	82
1–2	32.2	0.0	23.0	23.0	151
3–4	39.6	2.0	22.3	24.3	185
5+	38.8	2.5	19.0	21.5	83
Residence					
Funafuti	38.1	0.7	27.1	27.8	256
Outer islands	36.3	2.0	19.0	21.0	245
Education					
Less than secondary	38.9	0.3	18.8	19.1	182
Secondary	36.3	2.2	27.1	29.4	220
More than secondary	36.1	1.4	22.2	23.6	99
Wealth quintile					
Lowest	45.5	1.1	27.8	28.9	96
Second	45.1	2.6	27.3	29.8	99
Middle	40.0	2.2	22.9	25.1	103
Fourth	26.9	0.0	15.2	15.2	93
Highest	29.1	0.9	22.3	23.1	110
Total	37.2	1.4	23.1	24.5	501

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] Includes in the 12-month period preceding the survey.

Figure 14.1: Percentage of women aged 15–49 who have ever experienced physical violence since age 15



Physical violence is higher among women in Funafuti (38%) than among women in the outer islands (36%). Women in Funafuti are also more likely to have experienced physical violence in the 12 months preceding the survey, and are more likely to have experienced it often during that time.

Women with less than a secondary education are slightly more likely to have experienced physical violence than women with a secondary education or more than a secondary education. Although women with a secondary education and those with more than a secondary education are equally likely to have ever experienced physical violence, women with a secondary education are much

more likely to have experienced physical violence (29%) in the 12 months preceding the survey than women with more than a secondary education (24%). Women with more than a secondary education and women with less than a secondary education are also less likely to have experienced physical violence in the 12 months preceding the 2007 TDHS (24% and 19%, respectively). There is no clear pattern by wealth quintile of women ever experiencing physical violence; however, Table 14.1 indicates that women in the highest and fourth highest wealth quintiles are less likely to experience physical violence in the 12 months preceding the survey than women in other wealth quintiles.

Among women who have ever experienced physical violence and among women who have experienced sexual violence, Table 14.2 shows the percentages who had reported specific people who committed the violence. Because respondents could have experienced violence at the hands of several people, the percentages do not add up to 100. Among women who have experienced physical violence since age 15, 90% reported that a current husband or partner committed physical violence against them, while 8% reported that they experienced violence by a sister or brother. Other perpetrators commonly reported by women are other relatives (5%), former husbands/partners and 'others' (4.5% each).

Table 14.2: People committing physical violence

Among women aged 15–49 who have experienced physical violence since age 15, the percentage who reported specific people who committed the violence, according to the respondent's marital status, Tuvalu 2007

	Marital status		
Person	Currently married	Formerly married	Total
Current husband/partner	89.7	na	84.6
Former husband/partner	4.5	*	9.4
Father/ stepfather	4.1	*	4.4
Mother/ stepmother	1.9	*	2.6
Sister/brother	7.9	*	8.9
Other relative	4.7	*	4.4
Police/ soldier	0.5	*	0.5
Other	4.5	*	4.2
Number of women	176	11	187

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.
na = not applicable

14.3.2. Physical violence during pregnancy

Women who have ever been pregnant were asked about their experience of physical violence during pregnancy. The findings presented in Table 14.3 indicate that overall, 8% of Tuvaluan women experience physical violence while pregnant. Results by background characteristics reveal that younger women are more likely to experience violence during pregnancy than older women. For example, 15% of women aged 25–29 had experienced violence during pregnancy compared with 3% of women aged 30–39. In contrast, 16% of women who have ever been pregnant and have no children had experienced violence compared with 5% among women who have five or more children.

There appears to be a greater difference by marital status, although married women or those in living-together arrangement are less likely to experience physical violence during pregnancy (7%) than those who are divorced, separated or widowed (16%). About 9% of women from the outer islands experienced physical violence while pregnant compared with 7% of women in Funafuti. Relatively higher levels of physical violence during pregnancy are also found among women in the middle to the lowest wealth quintiles. Women with less than a secondary education and those with a secondary education are more likely to experience physical violence during pregnancy than women who have more than a secondary education.

Table 14.3: Violence during pregnancy

Among women aged 15–49 who have ever been pregnant, the percentage who have ever experienced physical violence during pregnancy, by background characteristics, Tuvalu 2007

	Percentage who have ever experienced physical violence during pregnancy	Number of women who have ever been pregnant
Current age		
15–19	*	6
20–24	(12.8)	51
25–29	15.0	82
30–39	2.8	133
40–49	6.3	181
Marital status		
Married or living together	7.4	429
Divorced/separated/widowed	(15.7)	24
Number of living children		
0	(15.9)	35
1–2	7.5	151
3–4	7.7	185
5+	5.4	83
Residence		
Funafuti	6.9	232
Outer islands	8.8	221
Education		
Less than secondary	6.3	171
Secondary	10.4	196
More than secondary	5.1	87
Wealth quintile		
Lowest	12.0	86
Second	5.9	91
Middle	12.6	97
Fourth	2.3	81
Highest	5.8	97
Total	7.8	454

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.

14.3.3 Lifetime sexual violence

The 2007 TDHS investigated women's experiences of sexual violence, and included a question on whether the respondent's first sexual intercourse was forced against her will. Table 14.4 shows that women aged 15–24 are more likely to report that their first sexual intercourse was forced against their will than women from other age groups. These women are also more likely to have experienced a forced sexual encounter before first marriage or first cohabitation (17%) than at the time of first marriage or first cohabitation (13%).

Table 14.4: Force at sexual initiation

Percentage of women aged 15–49 who have ever had sexual intercourse who say that their first experience of sexual intercourse was forced against their will, by age at first sexual intercourse and whether the first sexual intercourse was at the time of first marriage or before, Tuvalu 2007

	Percentage whose first sexual intercourse was forced against their will	Number of women who have ever had sex
Age at first sexual intercourse		
<15	*	5
15–19	14.3	176
20–24	14.2	228
25–29	6.6	44
30–49	*	14
Missing	(7.8)	31
First sexual intercourse was:		
At the time of first marriage/first cohabitation	13.0	352
Before first marriage/first cohabitation[1]	16.5	116
Missing	(7.8)	31
Total	13.4	499

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] Includes never married women.

The 2007 TDHS also included two sets of questions on sexual violence. Sexual violence limits women's ability to practice safer sex and to protect themselves from STIs and unwanted pregnancies (WHO 1999). The first set of questions asked ever-married respondents only about sexual violence committed by their current spouse (if they were currently married) and their most recent spouse (if they were currently divorced, separated or widowed). The second set of questions asked all respondents whether they had ever, as a child or as an adult, experienced sexual violence. Sexual violence in this context includes being forced to have sexual intercourse or perform any other sexual acts against one's will. Tables 14.5 and 14.6 present the results on experiencing any sexual violence. Results on sexual violence by a spouse or intimate partner are explored in detail later in section 14.4.4.

Table 14.5: Experience of sexual violence

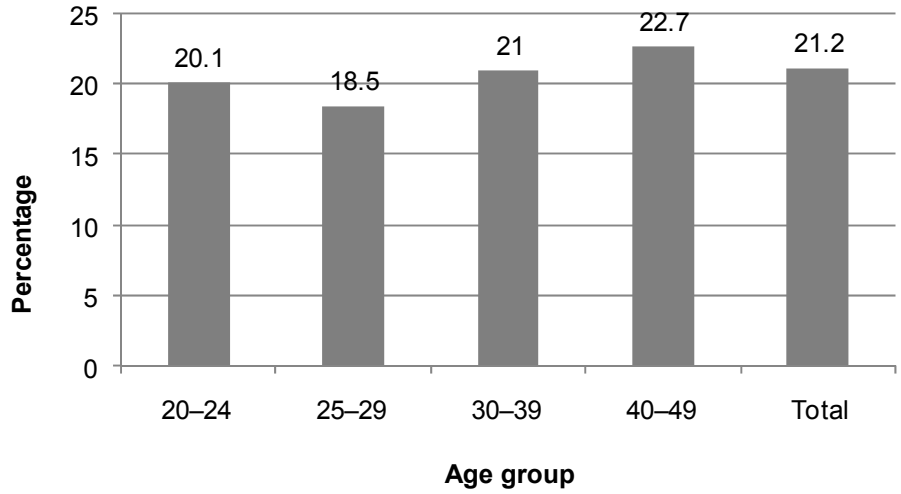
Percentage of women aged 15–49 who have ever experienced sexual violence, by background characteristics, Tuvalu 2007

	Percentage who have ever experienced sexual violence[1]	Number of women
Current age		
15–19	*	8
20–24	20.1	65
25–29	18.5	93
30–39	21.0	144
40–49	22.7	190
Employed in 12 months preceding survey		
Not employed	19.9	197
Employed for cash	22.1	303
Marital status		
Married or living together	20.6	473
Divorced/separated/widowed	(31.2)	28
Residence		
Funafuti	21.2	256
Outer islands	21.2	245
Education		
Less than secondary	21.1	182
Secondary	22.7	220
More than secondary	18.1	99
Wealth quintile		
Lowest	17.8	96
Second	31.1	99
Middle	19.5	103
Fourth	16.8	93
Highest	20.5	110
Total	21.2	501

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] Including those whose sexual initiation was forced against their will.

As shown in Table 14.5, about one in five women (21%) have ever experienced sexual violence. Women in the 40–49 age group are more likely to have experienced sexual violence than women from other age groups (Fig. 14.2). Women who are employed and those who are divorced, separated or widowed are more likely than other women to have experienced sexual violence. The likelihood of experiencing sexual violence decreases with a woman's educational attainment, and is higher among women in the second wealth quintile than among women in the highest wealth quintile, followed by women in the middle wealth quintile. Women who are employed and women from the highest wealth quintile are not protected from sexual violence.

Figure 14.2: Percentage of women aged 15–49 who have ever experienced sexual violence by age group



14.3.4 Physical or sexual violence

Table 14.6 shows the percentages of respondents who have received different combinations of physical and sexual violence, by current age during the time of the survey. Overall, 25% of women aged 15–49 have experienced physical violence only, while 9% have experienced sexual violence only. Over one in ten women (12%) have experienced both physical and sexual violence, and nearly five in ten women (47%) have experienced either physical or sexual violence. The likelihood of having experienced either physical or sexual violence decreases with age, from nearly 100% among women aged 15–19 to 40% among women aged 30–39. The authors of this report emphasise caution when interpreting the results of some of the age groups due to the very small number of cases.

Table 14.6: Experience of different forms of violence

Percentage of women aged 15–49 who have experienced different forms of violence by current age, Tuvalu 2007

	Physical violence only	Sexual violence only[1]	Physical and sexual violence[1]	Physical or sexual violence[1]	Number of women
Age					
15–19	69.5	30.5	0.0	100.0	8
..15–17	100.0	0.0	0.0	100.0	1
..18–19	63.1	36.9	0.0	100.0	7
20–24	32.4	11.5	8.6	52.5	65
25–29	36.4	8.1	10.3	54.9	93
30–39	18.6	9.0	12.0	39.6	144
40–49	20.7	8.5	14.2	43.4	190
Total	25.4	9.3	11.9	46.6	501

[1] Including those whose sexual initiation was forced against their will

14.4 SPOUSAL/INTIMATE PARTNER VIOLENCE

This section is devoted to violence perpetrated by intimate partners who are married to the respondent, or who live with the respondent as if married. Since spousal or intimate partner violence is the most common form of violence against women aged 15–49, the 2007 TDHS collected detailed information on the different types of violence experienced (i.e. physical, sexual and emotional). Currently married women were asked about violence perpetrated by their current husband, and formerly married women were asked about violence perpetrated by their most recent husband.

14.4.1 Degree of marital control exercised by husband

Tuvaluan women were asked six specific acts of control exercised by their husbands or partners. The results are summarised in Table 14.7, which shows the percentage of ever-married women aged 15–49 whose husband or partner ever demonstrated specific types of controlling behaviours, by background characteristics of respondents.

Four in ten women (40%) said that their husbands or partners always insist on knowing where they are at all times. Nearly three in ten women (29%) reported that their husband or partner is jealous or angry if they talk to other men, and just under 16% of women said they are not permitted to meet their female friends. Less than one in five respondents (13%) said that they are frequently accused of being unfaithful while one in ten respondents (10%) said that their husbands did not trust them with money.

Overall, 18% of respondents said that their husband or partner displays three or more of the specific behaviours described in Table 14.7 compared with 48% who said that their husbands or partners do not display any of the specific controlling behaviours listed. The results vary little by age, although younger women aged 20–24 are more likely to experience more of the specified controlling behaviours than women in younger age groups. Employed women are slightly less likely to experience three or more of the specific controlling behaviours (17%) than unemployed women (19%). And women with no living children are more likely to experience three or more of the specific controlling behaviours than women of other parities.

Three in ten divorced, separated or widowed women (31%) are likely to experience any three or more of the controlling behaviours while women who have been married for five to nine years experience 25% of three or more specific controlling behaviours. There is no specific pattern by martial duration, although those women who are currently married and those married for 10 or more years are less likely to experience three or more of the controlling behaviours listed in Table 14.7

Table 14.7: Degree of marital control exercised by husbands

Percentage of ever-married women aged 15–49 whose husband/partner ever demonstrates specific types of controlling behaviours, according to background characteristics, Tuvalu 2007

	Percentage of women whose husband:								
	Is jealous or angry if she talks to other men	Frequently accuses her of being unfaithful	Does not permit her to meet her female friends	Tries to limit her contact with her family	Insists on knowing where she is at all times	Does not trust her with any money	Displays 3 or more of the specific behaviours	Displays none of the specific behaviours	Number of women
Current age									
15–19	*	*	*	*	*	*	*	*	8
20–24	46.6	6.9	30.4	13.8	56.2	14.4	26.1	26.7	65
25–29	24.9	17.4	12.5	4.8	52.4	6.0	16.7	42.8	93
30–39	25.8	11.7	14.5	8.8	30.0	10.1	16.5	55.7	144
40–49	26.9	14.1	11.9	7.3	34.7	10.6	15.5	52.7	190
Employed in 12 months preceding survey									
Not employed	31.3	13.6	15.7	8.5	38.4	8.3	19.3	51.2	197
Employed for cash	28.0	13.0	16.1	8.0	41.6	11.8	17.0	45.0	303
Number of living children									
0	38.4	16.1	28.2	9.9	56.2	9.6	26.3	31.7	82
1–2	25.5	8.8	11.5	7.3	39.2	13.1	14.2	49.0	151
3–4	27.2	16.4	14.9	7.9	33.6	10.3	17.7	51.6	185
5+	31.4	11.2	14.0	8.9	41.3	6.7	16.4	51.5	83
Marital status and duration									
Currently married woman	28.5	12.8	15.3	7.6	39.9	9.8	17.0	47.6	473
..Married only once	29.3	10.8	15.2	7.3	39.9	9.0	17.4	48.9	410
....0–4 years	40.2	8.4	22.3	8.6	50.7	15.1	21.5	31.0	94
....5–9 years	30.3	20.9	17.6	9.4	45.0	9.0	24.8	44.2	88
....10+ years	24.5	7.9	11.2	6.0	33.5	6.4	12.8	58.2	228
..Married more than once	23.3	25.5	16.0	9.5	39.8	15.5	14.8	39.0	63
Divorced/separated/widowed	(40.6)	(20.4)	(26.5)	(18.3)	(46.1)	(20.0)	(31.2)	(45.9)	28
Residence									
Funafuti	24.5	12.5	15.4	6.6	41.4	12.5	16.1	44.3	256
Outer islands	34.1	14.0	16.4	9.9	39.1	8.3	19.6	50.9	245

Table 14.7 (continued)

	Percentage of women whose husband:								
	Is jealous or angry if she talks to other men	Frequently accuses her of being unfaithful	Does not permit her to meet her female friends	Tries to limit her contact with her family	Insists on knowing where she is at all times	Does not trust her with any money	Displays 3 or more of the specific behaviours	Displays none of the specific behaviours	Number of women
Education									
Less than secondary	27.6	14.0	11.6	8.8	40.1	6.9	14.7	49.5	182
Secondary	31.8	12.4	22.2	10.3	39.9	11.1	20.6	46.8	220
More than secondary	26.7	13.4	9.9	2.5	41.4	15.5	17.4	45.5	99
Wealth quintile									
Lowest	33.3	17.4	18.7	14.7	42.0	9.8	20.4	48.3	96
Second	41.8	15.3	18.2	12.5	43.6	10.5	23.5	43.7	99
Middle	22.5	8.4	20.0	8.2	36.7	10.0	17.1	51.8	103
Fourth	22.3	11.9	6.6	1.6	37.0	8.6	9.4	51.7	93
Highest	26.5	13.2	15.4	4.3	41.9	12.8	18.3	42.7	110
Total	29.2	13.2	15.9	8.2	40.3	10.4	17.8	47.5	501

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.

Women in the outer islands are more likely to experience three or more controlling behaviours from their husband or partner (20%) than women in Funafuti (16%). However, more women in Funafuti are not trusted with money by their husbands (13%) than women in the outer islands (8%). The proportion of women who reported three or more controlling behaviours by their husband or partner is 21% for women with a secondary education and 17% for those with more than a secondary education, and 15% for those with less than a secondary education. It appears that women in the lower wealth quintiles are more likely to experience controlling behaviours by a husband or partner (20%) than women in wealthier households (18%).

14.4.2 Physical, sexual or emotional violence

Respondents were asked about seven specific acts of physical violence, three questions about sexual violence and three about emotional violence. The acts of physical and sexual violence are listed in Table 14.8. The results show that 33% of women have experienced physical violence at the hands of their husband or partner, 10% have experienced sexual violence, and 28% have experienced emotional violence. Overall, more than one-third of ever-married women (41%) have experienced any kind of violence (physical, sexual or emotional) by a husband or other intimate partner.

Among the physical acts of violence, slapping was the most commonly reported act, experienced by 27% of women, while 17% of women have been pushed, shaken, or had something thrown at them by their husband or partner. About 5% of women were forced to have sex by their husband or partner when they did not want to, and 18% were insulted or made to feel bad about themselves.

Table 14.8: Forms of spousal violence

Percentage of ever-married women aged 15–49 who have experienced various forms of violence ever or in the 12 months preceding the survey, committed by their husband/partner, Tuvalu 2007

		In 12 months preceding survey[1]		
	Ever	Often	Sometimes	Often or sometimes
Physical violence				
Any	33.3	1.4	22.4	23.8
..Pushed her, shook her, or threw something at her	16.8	1.0	11.6	12.6
..Slapped her	27.1	1.1	17.5	18.6
..Twisted her arm or pulled her hair	10.1	0.9	6.9	7.8
..Punched her with his fist or with something that could hurt her	16.0	0.8	10.3	11.1
..Kicked her, dragged her, or beat her up	11.0	0.9	6.4	7.3
..Tried to choke her or burn her on purpose	1.9	0.0	0.9	0.9
..Threatened her or attacked her with a knife, gun, or any other weapon	5.0	0.0	4.1	4.1
Sexual violence				
Any	10.0	0.2	4.9	5.1
..Physically forced her to have sexual intercourse with him even when she did not want to	4.7	0.2	3.8	4.0
..Forced her to perform any sexual acts she did not want to	5.0	0.2	4.1	4.3
..Sexual initiation was with current or most recent husband and was forced	4.7	-	-	-
Emotional violence				
Any	28.1	2.9	20.3	23.1
..Said or did something to humiliate her in front of others	15.6	1.3	11.3	12.7
..Threatened to hurt or harm her or someone close to her	15.1	1.0	10.5	11.5
..Insulted her or made her feel bad about herself	17.9	1.5	14.6	16.2
Any form of physical and/or sexual violence	36.8	1.4	23.7	25.0
Any form of physical and sexual violence	6.5	0.9	4.5	5.4
Any form of emotional, physical and/or sexual violence	41.1	3.3	28.3	31.6
Any form of emotional, physical and sexual violence	4.9	1.7	3.2	4.9
Number of ever married women	501	486	486	486

[1] Excludes widows.

Table 14.9 shows the experience of ever-married women with different types of violence by background characteristics. Among ever-married women, an increase in age reduces their chances of experiencing emotional, physical and sexual violence at the hands of their husband or other intimate partner (e.g. 49% of women aged 15–29 to 35% of women aged 40–49). Women who are employed are less likely to have experienced emotional, physical and sexual violence at the hands of their husband or other intimate partner than unemployed women, while those who are unemployed are more likely to experience each type of violence. As parity increases, women are less likely to experience emotional, physical or sexual violence at the hands of their husband or other intimate partner. For example, one-third (35%) of women with one to two living children experienced emotional, physical or sexual violence at the hands of their husband or other intimate partner compared with almost half of women with zero parity.

There is a strong relationship between marital status and experience of violence. Women who have been married more than once are more likely to have experienced each type of violence. This finding suggests that experience of violence may increase the likelihood that marital relationships will end. Currently married women in their first marriage are less likely than currently married women who have married more than once to experience physical and sexual violence by their husbands (40% compared with 46%). Among women who have been married only once, there is no clear pattern with regard to the likelihood of them having experienced each type of violence; however, women in their first four years of marriage are more likely to experience all kinds of abuse than women who have been married for longer.

Table 14.9: Spousal violence by background characteristics

Percentage of ever-married women aged 15–49 by whether they have ever experienced emotional, physical or sexual violence committed by their husband/partner, according to background characteristics, Tuvalu 2007

	Emotional violence	Physical violence	Sexual violence	Physical or sexual violence	Emotional, physical or sexual violence	Number of women
Current age						
15–19	*	*	*	*	*	8
20–24	27.9	39.5	7.5	47.0	48.5	65
25–29	34.5	43.1	5.5	43.1	49.8	93
30–39	26.7	29.2	13.1	33.6	38.7	144
40–49	24.1	28.3	11.2	31.7	34.8	190
Employed in 12 months preceding survey						
Not employed	28.8	32.7	10.5	36.9	42.0	197
Employed for cash	27.7	33.8	9.7	36.9	40.7	303
Number of living children						
0	36.0	39.5	7.6	44.0	49.6	82
1–2	21.4	28.1	7.0	31.9	34.5	151
3–4	30.1	32.8	11.8	35.9	41.2	185
5+	27.6	37.6	13.7	40.5	44.4	83
Marital status and duration						
Currently married woman	27.7	33.3	9.4	36.9	41.1	473
..Married only once	26.3	31.5	9.4	35.6	40.3	410
....0–4 years	28.7	37.0	6.3	42.2	47.1	94
....5–9 years	34.0	34.0	6.9	34.0	43.3	88
....10+ years	22.4	28.2	11.7	33.5	36.3	228
..Married more than once	37.0	44.9	9.3	44.9	46.4	63
Divorced/separated/widowed	(33.6)	(33.8)	(20.3)	(35.7)	(40.9)	28
Residence						
Funafuti	28.2	33.7	9.2	35.9	41.0	256
Outer islands	27.9	32.9	10.9	37.8	41.2	245

Table 14.9 (continued)

	Emotional violence	Physical violence	Sexual violence	Physical or sexual violence	Emotional, physical or sexual violence	Number of women
Education						
Less than secondary	28.7	32.0	12.7	37.5	41.8	182
Secondary	29.5	33.5	10.4	37.0	41.8	220
More than secondary	23.6	35.2	3.9	35.2	38.0	99
Wealth quintile						
Lowest	36.1	42.2	11.0	47.0	50.8	96
Second	32.5	42.6	19.5	46.7	52.8	99
Middle	27.9	30.0	8.6	35.0	36.4	103
Fourth	22.0	25.9	3.0	25.9	30.9	93
Highest	22.3	26.5	7.7	30.0	35.1	110
Respondent's father beat her mother						
Yes	41.5	51.9	14.1	56.1	60.6	53
No	26.5	28.8	9.0	32.2	36.7	395
Don't Know	26.2	48.4	13.2	52.1	54.3	52
Total	28.1	33.3	10.0	36.8	41.1	501

Note: Women not currently married were asked questions about the behaviour of their most recent husband or partner using the past tense. 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.

The results show that women experience violence regardless of their place of residence or educational background.

Table 14.9 shows that as household wealth increases, the level of violence against women decreases. For instance, women in the highest wealth quintile are least likely to experience emotional, physical or sexual violence at the hands of their husband or other intimate partner compared with women in lower wealth quintiles.

Respondents who had witnessed or experienced their father beating their mother are more likely to experience emotional, physical or sexual violence at the hands of their own husband or other intimate partner (61%) than respondents who did not (37%).

14.4.3 Frequency of spousal abuse

Table 14.10 shows the percent distribution of ever-married women who reported emotional violence and who reported physical or sexual violence by current or most recent spouse in the 12 months preceding the survey, and the frequency with which violence was experienced, according to selected background characteristics. About 80% of women who have ever experienced emotional violence by their current or most recent husband experienced such violence in the 12 months preceding the survey, and 10% experienced emotional violence often. Similarly, 71% of women who have ever experienced physical or sexual violence by their current or most recent husband have experienced such violence in the 12 months preceding the survey, and 4% have experienced such violence often.

Unemployed women are more likely to have experienced spousal emotional, or physical or sexual violence 'often' in the 12 months preceding the survey than women who are employed for cash, who are likely to experience such violence 'sometimes'.

The likelihood of experiencing spousal emotional, or physical or sexual violence 'often' in the 12 months preceding the survey increases with increasing parity (i.e. increasing number of living children).

Among women who have ever experienced spousal emotional, physical or sexual violence, those who have been married for up to nine years are more likely to have experienced such violence in the 12 months preceding the survey. As can be expected, the frequency of violence in the 12 months preceding the survey among women who reported ever experiencing the violence is

higher for currently married women than for women who are separated or divorced. However, currently married women who have been married more than once are less likely than currently married women in their first marriage to have experienced such violence, and have experienced it 'sometimes'.

Differences by residence shows that women who have ever experienced spousal emotional, physical or sexual violence are more likely to have experienced such violence in the 12 months preceding the survey, and to have experienced it more often if they live in the outer islands than in Funafuti.

Women who with a secondary level education are more likely than women with less than a secondary education to have experienced spousal violence in the 12 months preceding the survey and to experience it often.

Table 14.10: Frequency of spousal violence among those who report violence

Percent distribution of ever-married women aged 15–49 (excluding widows) who have ever suffered emotional violence by their husband or partner by frequency of violence in the 12 months preceding the survey, and the percent distribution of those who have ever suffered physical or sexual violence committed by their husband or partner by frequency of violence in the 12 months preceding the survey, according to background characteristics, Tuvalu Islands 2007

Characteristics	Frequency of emotional violence in the 12 months preceding survey				Number of women	Frequency of physical or sexual violence in the 12 months preceding survey				Number of women
	Often	Sometimes	Not at all	Total		Often	Sometimes	Not at all	Total	
Age										
Current age										
15–19	*	*	*	*	6	*	*	*	*	5
20–24	*	*	*	*	18	(5.0)	(79.2)	(15.9)	(100.0)	29
25–29	(9.4)	(80.9)	(9.7)	(100.0)	32	(0.0)	(73.8)	(26.2)	(100.0)	40
30–39	(5.1)	(79.3)	(15.7)	(100.0)	38	(3.2)	(58.9)	(37.9)	(100.0)	44
40–49	(10.4)	(59.4)	(30.2)	(100.0)	45	7.5	58.2	34.3	100.0	52
Employed last 12 months										
Not employed	11.9	65.4	22.6	100.0	56	4.9	63.6	31.5	100.0	62
Employed	8.7	73.5	17.7	100.0	83	3.5	68.8	27.8	100.0	108
Number of living children										
0	(10.3)	(77.0)	(12.7)	(100.0)	30	(2.7)	(77.2)	(20.1)	(100.0)	36
1–2	(3.0)	(83.2)	(13.8)	(100.0)	31	(0.0)	(74.5)	(25.5)	(100.0)	41
3–4	13.4	61.3	25.2	100.0	55	6.1	64.0	29.9	100.0	62
5+	*	*	*	*	23	(6.6)	(50.7)	(42.7)	(100.0)	31
Marital status and duration										
Currently married woman	8.7	70.9	20.5	100.0	131	3.2	67.7	29.1	100.0	163
..Married only once	9.2	68.3	22.5	100.0	108	2.6	65.8	31.6	100.0	135
....0–4 years	(12.4)	(68.5)	(19.1)	(100.0)	27	(1.3)	(80.2)	(18.6)	(100.0)	39
....5–9 years	(10.1)	(75.2)	(14.7)	(100.0)	30	(3.1)	(79.5)	(17.3)	(100.0)	30
....10+ years	6.9	64.2	28.9	100.0	51	3.1	51.2	45.6	100.0	66
..Married more than once	*	*	*	*	23	*	*	*	*	28
Divorced/separated	*	*	*	*	8	*	*	*	*	7
Residence										
Funafuti	9.1	79.2	11.7	100.0	72	2.1	77.1	20.8	100.0	90
Outer islands	11.0	60.5	28.4	100.0	66	6.1	55.5	38.4	100.0	80

Table 14.10 (continued)

Characteristics	Frequency of emotional violence in the 12 months preceding survey				Number of women	Frequency of physical or sexual violence in the 12 months preceding survey				Number of women
	Often	Sometimes	Not at all	Total		Often	Sometimes	Not at all	Total	
Education										
Less than secondary	5.7	64.5	29.8	100.0	51	0.9	54.4	44.7	100.0	56
Secondary	10.2	77.7	12.2	100.0	65	6.1	78.4	15.5	100.0	80
More than secondary	*	*	*	*	23	(4.1)	(60.4)	(35.5)	(100.0)	35
Wealth quintile										
Lowest	(7.4)	(69.4)	(23.2)	(100.0)	33	(2.7)	(61.9)	(35.5)	(100.0)	38
Second	(10.4)	(64.2)	(25.4)	(100.0)	32	(6.1)	(64.0)	(29.9)	(100.0)	42
Middle		*	*	*	29	*	*	*	*	33
Fourth		*	*	*	21	*	*	*	*	24
Highest		*	*	*	24	*	*	*	*	33
Total		70.3	19.7	100.0	139	4.0	66.9	29.1	100.0	171

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.

14.4.4 Spousal violence by husband's characteristics

Table 14.11 shows the percentage of ever-married women aged 15–49 who have-ever suffered emotional, physical or sexual violence committed by their husband or partner, according to his characteristics, marital characteristics, and women's empowerment indicators. Among women who experienced such violence, those whose husband or partner have no education or only a primary education are more likely to experience emotional, physical or sexual violence than those whose husband or partner have a secondary or higher education.

A husband's alcohol consumption and, particularly, how often he gets drunk are associated with spousal violence. Interestingly, women who report that their husband never drinks are as likely to experience each type of spousal violence as women who report that their husband drinks. Spouses who report that their husband gets drunk often are more likely to experience each type of violence than women who report that their husband gets drunk sometimes. For example, 72% of women who report that their husband gets drunk very often have experienced emotional, physical or sexual violence, compared with 46% of those who say that their husband gets drunk sometimes, 38% whose say that their husband drinks but never gets drunk, and 27% who say that their husband does not drink.

Table 14.11 also shows that spousal age differences are also associated with violence. For example, women who are older or who are 10 years younger than their husband or partner are more likely to experience emotional, physical or sexual violence than women who are the same age as their husband or who are one to nine years younger than their husband or partner. Women whose husband or partner is better educated are less likely to experience all three types of violence (i.e. physical, sexual or emotional) than women who are better educated than their husband or spouse.

Marital control behaviours displayed by a husband or partner (as listed in Table 14.7) appear to be strongly associated with spousal violence. Table 14.11 shows that as the number of marital control behaviours displayed by a husband or partner increases, the proportion of women who experience emotional, physical or sexual violence also increases.

Table 14.11: Spousal violence by husband's characteristics and empowerment indicators

Percentage of ever-married women aged 15–49 who have ever suffered emotional, physical or sexual violence committed by their husband or partner, according to husband's characteristics, marital characteristics, and women's empowerment indicators, Tuvalu 2007

Characteristic	Emotional violence	Physical violence	Sexual violence	Physical or sexual violence	Emotional, physical or sexual violence	Number of women
Husband's/partner's education						
No education/Primary	30.2	32.3	13.4	37.8	41.0	179
Secondary+	25.8	33.1	7.6	35.5	40.7	282
DK/missing	(36.0)	(40.9)	(12.6)	(43.8)	(46.5)	38
Husband's/partner's alcohol consumption						
Does not drink	15.0	17.3	6.9	23.0	27.0	189
Drinks/never gets drunk	(19.7)	(38.3)	(3.9)	(38.3)	(38.3)	29
Gets drunk sometimes	31.5	37.3	11.7	40.3	45.9	231
Gets drunk very often	64.7	70.4	17.3	70.4	72.2	52
Spousal age difference[1]						
Wife older	35.1	41.5	12.9	43.1	49.5	107
Wife is same age	*	*	*	*	*	27
Wife is 1–4 years younger	25.5	32.6	7.1	36.0	39.9	145
Wife is 5–9 years younger	18.9	27.6	8.2	31.7	33.1	106
Wife is 10+ years younger	36.3	38.0	10.8	42.5	49.6	85

Table 14.11 (continued)

Characteristic	Emotional violence	Physical violence	Sexual violence	Physical or sexual violence	Emotional, physical or sexual violence	Number of women
Spousal education difference						
Husband better educated	23.8	26.7	7.7	31.2	36.0	137
Wife better educated	32.2	39.4	8.9	42.2	46.3	173
Both equally educated	24.7	29.5	11.5	33.6	37.6	134
Neither educated	*	*	*	*	*	1
Don't Know/missing	33.9	39.8	15.4	41.7	46.0	57
Number of marital control behaviors displayed by husband/partner						
0	8.3	15.4	2.3	16.9	17.7	238
1–2	32.6	39.2	10.2	43.8	51.1	174
3–4	68.9	62.6	21.8	71.2	80.2	70
5–6	*	*	*	*	*	19
Number of decisions in which women participate						
0	7.4	7.4	2.1	7.4	7.4	54
1–2	40.4	38.7	10.5	39.5	48.7	74
3–4	28.2	36.1	10.3	40.9	44.7	345
Number of reasons given for refusing to have sexual intercourse with husband						
0	*	*	*	*	*	8
1–2	23.9	21.7	8.2	25.6	34.0	70
3	29.0	35.4	10.3	38.8	42.5	424
Number of reasons for which wife-beating is justified						
0	27.9	36.8	8.4	38.6	40.7	143
1–2	31.6	32.3	10.5	38.7	45.7	200
3–4	23.8	31.0	9.7	32.8	36.0	123
5	(23.5)	(32.7)	(14.8)	(32.7)	(34.1)	35
Total	28.1	33.3	10.0	36.8	41.1	501

Note: Women not currently married were asked questions about the behaviour of their most recent husband or partner using the past tense. 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 married women.

Women's participation in household or family decision-making probably does not have a strong association with their emotional, physical or sexual violence experienced at the hands of their husband or partner. Table 14.11 shows some variation within each violence category, although overall, there is little variation in the three categories of violence (emotional, physical or sexual) as the number of decisions that women participate in increases.

There is some relationship between the reasons that wife beating is justified and the emotional, physical or sexual violence women experience at the hands of their husband or partner. As Table 14.11 shows, in general, as the number of reasons for which wife beating is justified decreases, the proportion of women who experience violence at the hands of their husband or partner decreases.

Table 14.12: Onset of marital violence

Percent distribution of ever-married women by number of years between marriage and first experience of physical or sexual violence by their husband/partner, if ever, according to marital status and duration, Tuvalu 2007

	Years between marriage[1] and first experience of violence									
	Experienced no violence	Before marriage[1]	<1 year	1–2 years	3–5 years	6–9 years	10+ years	Don't know/ missing	Total	Number of women
Marital status and duration										
Currently married	63.1	1.3	13.0	11.8	7.0	2.3	1.4	0.0	100.0	473
..Married only once	64.4	1.5	13.0	10.5	6.3	2.7	1.6	0.0	100.0	410
....< 3 years	59.2	1.7	28.1	10.9	na	na	na	0.0	100.0	58
....3–5 years	58.8	6.6	14.6	18.4	na	na	na	0.0	100.0	64
....6–9 years	67.3	0.0	6.1	10.7	9.4	na	na	0.0	100.0	61
....10+ years	66.5	0.5	10.6	8.2	8.4	3.1	na	0.0	100.0	228
Married more than once	55.1	0.0	13.1	20.3	11.5	0.0	0.0	0.0	100.0	63
Divorced/separated/widowed	(64.3)	(1.9)	(5.8)	(10.2)	(9.0)	(1.7)	(1.9)	(5.2)	(100.0)	28
Total	63.2	1.4	12.6	11.7	7.1	2.3	1.4	0.3	100.0	501

Note: Figures in parentheses are based on 25–49 cases.
na = not applicable
[1] For couples who are not married but are living together as if married, the time of marriage refers to the time when the respondent first started living together with her partner.

Table 14.12 shows the percent distribution of ever-married women by the number of years between marriage and first experience of physical or sexual violence by their husband or partner (if ever), according to marital status and duration. Table 14.12 also shows that overall, 35% of ever-married women experience physical or sexual violence by their husband or partner, of which 13% experience such violence in the first year of marriage, while 12% experience it over one to two years after their marriage. This violence decreases after three to ten years of marriage. About 1% of ever-married women experience physical or sexual violence before marriage.

14.4.5 Physical consequences of spousal violence

In the 2007 TDHS, women who had ever experienced spousal physical or sexual violence were asked about the physical consequences of the violence. Specifically, they were asked if, as a consequence of what their spouses did to them, they ever had any of three different sets of injuries: 1) cuts, bruises or aches; 2) burns, eye injuries, sprains or dislocations; and 3) deep wounds, broken bones, broken teeth or any other serious injury.

Table 14.13 shows the percentage of ever-married women who reported any spousal physical or sexual violence by different types of physical consequences according to the type of violence ever experienced.

About 75% of women have experienced sexual violence by their current or most recent husband or partner, 47% have experienced physical violence, and 45% have experienced both physical or sexual violence. For each type of violence, women were most likely to report having experienced cuts, bruises or aches, followed by eye injuries, sprains, dislocations or burns. Women were least likely to report having suffered the most severe injuries; nevertheless, more than one in ten women (ranging between 1% and 12%) who have ever experienced physical or sexual violence by their husband or partner reported suffering deep wounds, broken bones, broken teeth or other serious injuries.

Table 14.13: Injuries to women due to spousal violence

Percentage of ever-married women aged 15–49 who have experienced specific types of spousal violence by types of injuries resulting from what their husband or partner did to them, according to the type of violence and whether they have experienced the violence ever and in the 12 months preceding the survey, Tuvalu 2007

	Percentage of women who have had:				
	Cuts, bruises, or aches	Eye injuries, sprains, dislocations, or burns	Deep wounds, broken bones, broken teeth, or any other serious injury	Any of these injuries	Number of ever married women
Experienced physical violence					
Ever[1]	43.7	18.2	3.2	47.3	167
In 12 months preceding survey[2]	47.3	21.3	4.1	51.1	116
Experienced sexual violence					
Ever[1]	(70.3)	(42.7)	(12.0)	(75.0)	30
In 12 months preceding survey[2]	*	*	*	*	25
Experienced physical or sexual violence					
Ever[1]	42.1	17.5	3.1	45.5	173
In 12 months preceding survey [2]	45.0	20.2	3.9	48.6	122

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] Includes in the 12–month period prior to the survey.
[2] Excludes widows.

14.4.6 Self-report of violence initiated by the respondent

The 2007 TDHS also asked women about violence they themselves initiated against their spouse or other intimate partner. Specifically, women were asked, 'Have you ever hit, slapped, kicked, or done anything else to physically hurt your (last) husband or partner at times when he was not already beating or physically hurting you?' Women who answered yes to this question were asked about the frequency of such violence in the 12 months preceding the survey.

Table 14.14 shows the percentage of ever-married women who have ever initiated violence against their current or most recent husband, and the percentage of all ever-married women (excluding widows) who say that they have initiated spousal violence in the 12 months preceding the survey. Overall, 10% of ever-married women report that they have ever initiated physical violence against their current or most recent husband, while 6% say they have committed such violence in the 12 months preceding the survey.

Table 14.14: Violence by women against their spouse

Percentage of ever-married women aged 15–49 who have committed physical violence against their husband or partner when he was not already beating or physically hurting them ever in the 12 months preceding the survey, according to women's own experience of spousal violence and their own and husband's/partner's characteristics, Tuvalu 2007

	Percentage who have committed physical violence against their current or most recent husband/partner			
Characteristics	Ever	Number of women	In 12 months preceding survey[1]	Number of women[1]
Woman's experience of spousal physical violence				
Ever	20.2	166	12.6	164
..In 12 months preceding survey	22.4	116	17.5	115
..Not in 12 months preceding survey/ widow/ missing	14.8	50	1.1	49
Never	4.5	335	3.2	322
Current age				
15–19	*	8	*	8
20–24	15.5	65	9.1	65
25–29	8.5	93	6.4	93
30–39	9.3	144	6.5	140
40–49	8.4	190	4.9	179
Employed in 12 months preceding survey				
Unemployed	9.7	197	6.9	191
Employed for cash	9.7	303	6.0	294
Number of living children				
0	16.6	82	11.6	81
1–2	7.0	151	4.5	144
3–4	8.6	185	5.3	178
5+	10.1	83	6.5	83
Residence				
Funafuti	10.6	256	7.8	252
Outer islands	8.7	245	4.7	235
Marital status and duration				
Currently married woman	9.9	473	6.5	473
..Married only once	10.2	410	7.1	410
....0–4 years	12.2	94	8.8	94
....5–9 years	13.3	88	11.3	88
....10+ years	8.2	228	4.7	228
..Married more than once	7.5	63	3.0	63
Divorced/separated/widowed	*	*	*	14

Table 14.14 (continued)

Characteristics	Percentage who have committed physical violence against their current or most recent husband/partner: Ever	Number of women	In 12 months preceding survey[1]	Number of women[1]
Education				
Less than secondary	6.2	182	4.8	172
Secondary	9.6	220	6.3	218
More than secondary	16.3	99	9.2	97
Husband's/partner's education				
No education/Primary	9.0	179	4.6	170
Secondary+	11.3	282	8.0	281
Don't Know/missing	(1.4)	(38)	(1.5)	35
Husband's/partner's alcohol consumption				
Does not drink	5.1	189	4.3	182
Drinks/never gets drunk	6.4	29	0.0	29
Gets drunk sometimes	10.4	231	7.2	226
Gets drunk very often	(24.5)	(52)	(13.6)	49
Spousal age difference[2]				
Wife older	11.4	107	8.5	107
Wife is same age	*	*	*	27
Wife is 1–4 years younger	9.3	145	5.3	145
Wife is 5–9 years younger	12.1	106	7.8	106
Wife is 10+ years younger	7.4	85	4.7	85
Spousal education difference				
Husband better educated	9.0	137	4.9	133
Wife better educated	15.3	173	9.6	169
Both equally educated	4.8	134	3.6	132
Neither educated	*	*	*	1
Don't Know/missing	5.9	57	6.4	52
Wealth quintile				
Lowest	8.4	96	6.7	87
Second	11.8	99	9.2	98
Middle	9.7	103	4.6	102
Fourth	4.6	93	3.1	91
Highest	13.2	110	7.8	108
Total	9.7	501	6.3	486

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 widows.
[2] Currently married widows.

In comparing the statistics in Tables 14.14, it is important to note that: 1) because of the survey's commitment to protect respondents, interviewers did not collect violence data from couples. Only one person per household was administered the questions regarding violence, so it is not possible to compare an individual woman's report with that of her husband's experience; 2) the less thorough manner in which respondents were asked about the spousal physical violence they initiated compared with the violence they received (one question versus seven) is expected to result in a lower figure; 3) under-reporting by respondents of violence they initiated could also be an issue in which respondents not reporting the correct information.

Differences among women who initiated physical violence against their current or most recent husband are generally small. Women who reported ever experiencing physical violence at the hands of their husband are more likely (20%) to report having initiated violence against their husband than women who never experienced physical violence by their husband (5%). The women most likely to report initiating physical violence against their husband vary and there is no clear trend.

14.5 SEEKING HELP

All respondents who have ever experienced physical or sexual violence by any person were asked a series of questions about whether and from whom they sought help to try to end the violence. Table 14.15 shows that 51% of women who experienced violence sought help, 18% never told anyone, and 20% who told someone. Women who experienced physical violence only, or both physical and sexual violence, are most likely to seek help than those who experienced sexual violence only. In other words, those women who experienced sexual violence only are least likely to seek help or tell someone. The number of respondents who seek help generally increases with age and with number of living children. Unemployed women are least likely to tell anyone if they experience violence.

Women who are divorced, separated or widowed and have ever experienced physical or sexual violence, are less likely than currently married women to seek help. Currently married women who have been married more than once are less likely (95) than currently married women in their first marriage (20%) to seek help.

About 58% of women in Funafuti seek help, compared with 44% of women in the outer islands. However, more women in the outer islands never told anyone about the violence they experience (22%) as compared to only 15% in Funafuti. Women with less than a secondary education are more likely not to seek help when they experience violence compared with women with higher levels of education. Unemployed women are more likely to seek help compared to employed women. There is no clear pattern between a woman's wealth status and the likelihood of her seeking help if she experiences violence; however, women in the highest, middle and second wealth quintiles are more likely than women in other wealth quintiles to not tell anyone when they experience violence.

Table 14.15: Help seeking to stop violence

Percent distribution of women aged 15–49 who have ever experienced physical or sexual violence by whether they have told anyone about the violence and whether they have ever sought help from any source to and the violence according to type of violence and background characteristics, Tuvalu 2007

Type of violence/characteristic	Never told anyone	Percentage who told someone	Have sought help from any source	Missing/DK	Total	Number of women
Type of violence						
Physical only	20.0	23.2	54.2	2.6	100.0	127
Sexual only	(9.0)	(7.2)	(35.2)	(48.6)	(100.0)	47
Both physical and sexual	21.6	22.8	55.7	0.0	100.0	59
Current age						
15–19	*	*	*	*	*	8
20–24	(21.4)	(16.4)	(54.0)	(8.2	100.0	34
25–29	(15.5)	(21.8)	(52.8)	(10.0)	(100.0)	51
30–39	26.9	26.5	36.4	(10.3)	(100.0)	57
40–49	13.2	14.7	57.1	15.0	100.0	82
Employed in 12 months preceding survey						
Not employed	22.4	18.2	46.1	13.3	100.0	89
Employed for cash	15.6	20.9	53.6	9.9	100.0	145
Number of living children						
0	(15.2)	(22.9)	(58.5)	(3.4)	(100.0)	43
1–2	8.4	17.7	53.6	20.3	100.0	69
3–4	28.0	15.2	47.9	9.0	100.0	85
5+	(17.5)	(31.5)	(42.8)	(8.2)	(100.0)	36

Table 14.15 (continued)

Type of violence/characteristic	Never told anyone	Percentage who told someone	Have sought help from any source	Missing/DK	Total	Number of women
Marital status and duration						
Currently married woman	17.8	20.4	50.5	11.4	100.0	220
..Married only once	19.6	22.7	46.8	10.9	100.0	182
....0–4 years	(15.3)	(19.7)	(53.7)	(11.3)	(100.0)	51
....5–9 years	(28.6)	(22.1)	(38.6)	(10.7)	(100.0)	37
....10+ years	18.5	24.7	46.1	10.7	100.0	94
..Married more than once	(8.9)	(8.9)	(68.7)	(13.6)	(100.0)	37
Divorced/separated/widowed	*	*	*	*	*	14
Residence						
Funafuti	14.6	20.3	57.7	7.3	100.0	116
Outer islands	21.7	19.4	43.9	15.0	100.0	118
Education						
Less than secondary	22.4	16.2	46.8	14.5	100.0	85
Secondary	15.5	21.1	53.2	10.2	100.0	103
More than secondary	(16.5)	(23.9)	(52.5)	(7.1)	(100.0)	46
Wealth quintile						
Lowest	19.7	21.1	44.8	14.4	100.0	52
Second	20.2	18.6	50.9	10.3	100.0	54
Middle	(29.3)	(11.8)	(53.2)	(5.7)	(100.0)	50
Fourth	(6.0)	(26.7)	(45.9)	(21.4)	(100.0)	35
Highest	(10.9)	(23.9)	(58.7)	(6.5)	(100.0)	43
Total	18.2	19.9	50.7	11.2	100.0	233

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 14.18 shows who women seek help from when they experience, by type of violence. Among all women who seek help, 65% seek help from their own family, 16% seek help from a friend or neighbour, and 15% seek help from their in-laws.

Table 14.16: Sources from where help was sought

Percentage of women aged 15–49 who have ever experienced physical or sexual violence and sought help according to source from which help was sought, by type of violence experienced, Tuvalu 2007

	Type of violence		
	Any physical	Any sexual	Total
Percentage who sought help from:			
Own family	65.0	(50.0)	61.1
In-laws	14.9	(8.5)	13.7
Friend/ neighbour	16.2	(23.4)	20.3
Religious leader	3.1	(3.3)	2.6
Police	5.9	(4.80	5.0
Other	11.7	(19.3)	11.8
Number of women	102	50	118

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

14.6 KEY RESULTS

This section highlights the main findings discussed in the chapter regarding current and lifetime physical and sexual violence experienced by Tuvaluan women aged 15–49 and among pregnant women. The results show that about 37% of women have experienced physical violence since age 15, and 25% have experienced violence in the 12 months preceding the survey. Women in Funafuti, women with little education and women in the lowest and second wealth quintile households are the most likely to have ever experienced violence.

- Among women aged 15–49 who have ever been pregnant, nearly one in ten (8%) reported having ever experienced physical violence during pregnancy. Violence during pregnancy is more common among women in the outer islands, women with only a primary and secondary education, and women living in lower and third wealth quintile households.
- A little more than one in five women (21%) aged 15–49 who have ever had sexual intercourse have ever experienced sexual violence; women who are employed for cash, women with less than a secondary education, and women in the second wealth quintile are more likely to have experienced sexual violence.
- More than half the number of women (56%) who have ever experienced both physical and sexual violence sought help from any source. About 23% told someone about the violence they experienced while nearly the same proportion of women (22%) never told anyone about either the physical and sexual violence they experienced.
- Among all women who sought help, over six in ten were likely to have sought help from their own family, 16% sought help from a friend or neighbour, and 15% sought help from their in-laws.

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