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This appendix provides an initial assessment of the quality of the TDHS-2003 data. For this purpose, a number of topics including the misreporting of ages and respondent's recall problems are investigated.

Table D.1 presents the distribution of the *de facto* household population by single years of age. Heaping is observed in the reporting of ages ending with 0 and 5, especially in the older ages for both males and females. The table does not show any evidence that interviewers 'aged' children out of the eligible range for the collection of height and weight and health data; the proportion of children reported to be five years of age at the time of the survey is almost equal to the proportions age four and six. There also appears to have been little shifting of older women past age 49, the upper limit of eligibility of individual interview.

Table D.2 examines the possibility that some eligible women were not properly identified in the TDHS-2003. During the household interview, 11,815 women age 15-49 were recorded, among whom 8,255 have been married and were, therefore, eligible for individual interview. Of these women, 7,869 were successfully interviewed, yielding a response rate of 95 percent. Response rates vary slightly by age group. In particular, response rates were somewhat lower for the oldest and youngest age groups indicating that interviewers may have been somewhat less diligent in pursuing interviews with women at the two extremes of the eligible age range.

Another indicator of the quality of survey data is the extent to which information is missing on key variable. Information on the completeness of reporting in connection with a set of important variables is provided in Table D.3. Among births in the 15 years preceding the survey, 4 percent are missing information on year of birth. Information on age at death is missing for just 1 percent of these births. Information regarding their age or date at first union was not obtained for less than one percent of ever-married women. Height or weight measurements are missing for approximately 8 percent of the children under age 5. Compared with data from TDHS-1998, these figures show that the extent of missing information in the survey remains very limited.

Table D.4 is presented to investigate whether there is any bias in the data with regard to the reporting of births. The results suggest that there was no deliberate attempt by interviewers to reduce their work loads by shortening the interview by aging children out of the reference period. This is shown by the ratio of births in 1998 (which was the lower calendar year boundary for identifying births for which health and other data was collected) to the average of the two adjoining years (105), while that for births in 1997 it is 97. A similar pattern was found in the calendar year ratios for dead children. Sex ratios vary year without any indication of bias. Mothers seem to have better recall of dead male children than dead female children, as indicated by the much higher sex ratios for dead children.

Table D.5 shows that there is a heaping in the reporting of age at death at seven days or one week. A surplus of deaths is also reported at eight days among births in the 5-9 years preceding the survey. Additionally, a surplus in the all five-year periods is found at age at death of 15 and 20 days. The proportion of early neonatal deaths among all neonatal deaths is higher in the most recent years (73 percent) compared to 5-9 years (62 percent) preceding the survey, consistent with declining infant mortality rates. The same conclusion can be drawn from higher proportion of neonatal deaths among all deaths in Table D.6. It is interesting to note that there is no significant heaping in age at death of 12 months.

Table D.1 Age distribution of <i>de facto</i> household population									
Single-year age distribution of the <i>de facto</i> household population by sex (weighted), Turkey 2003									
Age	Males		Females		Age	Males		Females	
	Number	Percent	Number	Percent		Number	Percent	Number	Percent
0	370	1.7	399	1.9	37	298	1.4	249	1.2
1	348	1.6	354	1.7	38	327	1.5	324	1.6
2	404	1.8	447	2.1	39	334	1.5	271	1.3
3	414	1.9	479	2.3	40	306	1.4	335	1.6
4	404	1.8	403	1.9	41	262	1.2	203	1.0
5	408	1.9	409	2.0	42	274	1.2	260	1.2
6	408	1.9	421	2.0	43	316	1.4	284	1.4
7	432	2.0	438	2.1	44	250	1.1	256	1.2
8	439	2.0	447	2.1	45	287	1.3	280	1.3
9	412	1.9	400	1.9	46	215	1.0	195	0.9
10	433	2.0	412	2.0	47	225	1.0	253	1.2
11	439	2.0	427	2.1	48	242	1.1	235	1.1
12	376	1.7	416	2.0	49	166	0.8	205	1.0
13	453	2.1	450	2.2	50	198	0.9	235	1.1
14	424	1.9	414	2.0	51	193	0.9	152	0.7
15	387	1.8	386	1.9	52	240	1.1	189	0.9
16	445	2.0	450	2.2	53	243	1.1	191	0.9
17	468	2.1	456	2.2	54	196	0.9	165	0.8
18	435	2.0	414	2.0	55	220	1.0	212	1.0
19	369	1.7	372	1.8	56	125	0.6	145	0.7
20	442	2.0	246	1.2	57	139	0.6	125	0.6
21	364	1.7	303	1.5	58	169	0.8	161	0.8
22	484	2.2	381	1.8	59	91	0.4	142	0.7
23	435	2.0	397	1.9	60	185	0.8	132	0.6
24	411	1.9	369	1.8	61	83	0.4	110	0.5
25	409	1.9	362	1.7	62	107	0.5	97	0.5
26	412	1.9	327	1.6	63	133	0.6	120	0.6
27	343	1.6	304	1.5	64	128	0.6	97	0.5
28	374	1.7	324	1.6	65	220	1.0	173	0.8
29	337	1.5	319	1.5	66	97	0.4	81	0.4
30	414	1.9	375	1.8	67	120	0.5	81	0.4
31	305	1.4	286	1.4	68	91	0.4	75	0.4
32	311	1.4	329	1.6	69	77	0.4	67	0.3
33	334	1.5	299	1.4	70+	971	4.4	892	4.3
34	283	1.3	284	1.4	DK/missing	4	0.0	18	0.1
35	325	1.5	307	1.5					
36	224	1.0	227	1.1					
					Total	22,010	100.0	20,842	100.0

DK = Don't know
Note: The *de facto* population includes all residents and nonresidents who slept in the household the night before the interview.

Table D.2 Age distribution of eligible and interviewed women

De facto household population of women age 10-54, interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by five-year age groups, Turkey 2003

Age group	Household population of women age 10-54	Ever-married women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
			Number	Percent	
10-14	2,126	1	NA	NA	NA
15-19	2,103	252	234	3.0	92.9
20-24	2,137	1,058	1,030	13.1	96.5
25-29	1,876	1,503	1,438	18.3	95.7
30-34	1,647	1,509	1,448	18.4	95.9
35-39	1,508	1,449	1,385	17.6	95.6
40-44	1,408	1,355	1,297	16.5	94.9
45-49	1,135	1,117	1,037	13.2	92.8
50-54	1,070	1,055	NA	NA	NA
15-49	11,815	8,255	7,869	100	95.2

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the household schedule.
NA = Not applicable

Table D.3 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Turkey 2003

Subject	Reference group	Percentage with missing information	Number of cases
Birth date	Births in the 15 years preceding the survey		
Month only		3.7	12,646
Month and year		1.2	12,646
Age at death	Deceased children born in the 15 years preceding the survey	0.4	673
Age/date at first union¹	Ever-married women age 15-49	0.1	8,075
Respondent's education	All women age 15-49	0.0	8,075
Anthropometry	Living children age 0-59 months (from the household questionnaire)		
Height		7.3	3,998
Weight		5.5	3,998
Height or weight		7.6	3,998

¹ Both year and age missing

Table D.4 Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living (L), dead (D), and total (T) children (weighted), Turkey 2003

Calendar year	Number of births			Percentage with complete birth date ¹			Sex ratio at birth ²			Calendar year ratio ³		
	L	D	T	L	D	T	L	D	T	L	D	T
2004	852	26	878	99.9	97.7	99.9	114.2	98.2	113.7	NA	NA	NA
2003	840	37	878	100.0	100.0	100.0	111.5	117.8	111.8	NA	NA	NA
2002	817	27	844	99.9	96.2	99.8	93.8	182.2	95.8	100.5	82.5	99.8
2001	785	29	814	100.0	100.0	100.0	111.2	76.4	109.7	91.6	78.5	91.0
2000	898	46	943	96.1	70.9	94.3	95.2	174.9	98.0	111.8	109.4	111.7
1999	821	55	876	94.4	79.4	93.4	96.7	76.8	95.3	94.5	106.5	95.2
1998	840	58	897	93.4	75.5	92.3	104.9	90.2	103.9	104.7	108.8	105.0
1997	782	51	833	92.6	81.7	92.0	102.2	150.0	104.6	96.8	95.8	96.7
1996	778	48	826	92.9	74.1	91.8	98.1	110.3	98.8	98.5	91.5	98.1
1995	796	55	851	93.0	64.2	91.1	94.8	121	96.3	105.5	96.0	104.8
2000-2004	4,193	165	4,357	99.1	90.9	98.8	104.7	126.7	105.4	NA	NA	NA
1995-1999	4,016	267	4,283	93.3	74.9	92.1	99.3	105.9	99.7	NA	NA	NA
1990-1994	3,684	326	4,011	92.5	72.2	90.8	106	118.3	106.9	NA	NA	NA
1985-1989	3,180	347	3,527	91.5	77.3	90.1	109.1	107.8	109	NA	NA	NA
<1985	2,824	545	3,369	91.2	74.6	88.5	100.5	107.1	101.5	NA	NA	NA
All	17,897	1,651	19,547	93.9	76.4	92.4	103.8	111.0	104.4	NA	NA	NA

NA = Not applicable

¹ Both year and month of birth given

² $(B_m/B_f) \times 100$, where B_m and B_f are the numbers of male and female births, respectively

³ $[2B_x / (B_{x-1} + B_{x+1})] \times 100$, where B_x is the number of births in calendar year x

Table D.5 Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year periods of birth preceding the survey (weighted), Turkey 2003

Age at death (days)	Number of years preceding survey				Total 0-19
	0-4	5-9	10-14	15-19	
<1	23	28	44	27	122
1	12	13	22	24	72
2	4	4	12	4	24
3	8	9	16	14	47
4	4	4	5	1	14
5	1	3	2	2	7
6	0	2	1	1	4
7	5	11	11	12	39
8	0	14	0	2	6
9	0	1	0	3	4
10	2	1	2	1	6
11	0	1	0	1	2
12	2	3	1	0	6
13	0	2	0	0	2
14	0	0	1	1	2
15	3	3	7	5	18
16	1	0	0	0	1
17	1	2	3	2	8
18	0	1	1	0	2
19	2	1	0	1	3
20	2	2	3	10	16
21	1	1	0	0	2
22	0	1	0	0	1
23	0	2	0	1	3
24	0	0	0	0	2
25	2	0	0	1	0
26	0	0	0	1	1
27	0	0	0	1	1
28	0	2	2	0	4
29	0	1	4	0	5
30	0	0	1	1	2
Percent early neonatal ¹	73	62	74	63	68

¹ ≤ 6 days / ≤ 30 days

Table D.6 Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported to occur at age under one month, for five-year periods of birth preceding the survey (weighted), Turkey 2003

Age at death (months)	Number of years preceding survey				Total 0-19
	0-4	5-9	10-14	15-19	
<1*	71	103	137	116	426
1	11	20	11	28	71
2	4	9	16	16	45
3	9	14	16	18	57
4	3	10	11	12	36
5	4	6	10	10	30
6	5	8	9	20	42
7	3	7	11	11	32
8	2	6	6	11	25
9	0	5	5	5	16
10	1	4	1	4	10
11	0	3	1	5	9
12	3	5	13	7	28
13	1	1	1	2	5
14	3	0	2	1	6
15	1	1	2	2	6
16	1	0	0	0	1
17	0	0	0	0	0
18	3	2	4	1	10
19	2	1	0	0	3
20	0	0	0	0	0
21	0	0	0	0	0
22	0	0	1	0	1
23	0	0	0	0	0
Percent early neonatal ¹	63	53	58	45	54

²Includes deaths under one month reported in days

¹Under one month / under one year