ARAŞTIRMA MAKALESİ / RESEARCH ARTICLE

INTERVIEW RESULT CODES IN DHS SURVEYS IN TURKEY: AN ASSESSMENT BETWEEN 1993 AND 2013

TÜRKİYE NÜFUS VE SAĞLIK ARAŞTIRMALARINDA GÖRÜŞME SONUÇ KODLARI: 1993 VE 2013 YILLARI ARASINDA BİR DEĞERLENDİRME

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ABSTRACT

Turkey Demographic and Health Surveys (TDHSs) are nationally representative face-to-face household surveys which are conducted in Turkey with five year intervals since 1993. In this study, DHS response rates have been evaluated in the bases of five demographic regions and type of settlement in Turkey between 1993 and 2013. All other interview result codes have also been examined in detail. The findings put forward that response rates in TDHS surveys are generally high (above 80% between 1993 and 2013), and suggested a decreasing trend over time. Urbanized areas and regions stood out with lower response rates, and refusals were seen to increase constantly. This is the first study in Turkey in terms of examination of result codes in temporal and special detail in TDHS, and lastly presenting recommendations for future household surveys.

KEYWORDS: Nonresponse, response rate, refusal, Turkey, DHS

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ÖZET

Türkiye Nüfus ve Sağlık Araştırmaları (TNSA) Türkiye'de 1993 yılından bu yana 5'er yıl arayla yapılan, ulusal temsiliyeti olan, yüz yüze görüşmeler aracılığıyla gerçekleştirilen hanehalkı araştırmalarıdır. Bu çalışmada, Demographic and Health Surveys (DHS) standardındaki cevalpama oranları 1993 ve 2013 yılları arasında Türkiye'nin beş demografik bölgesi ve yerleşim yerleri temelinde değelerlendirilmiştir. Ayrıca tüm diğer görüşme sonuç kodları da ayrıntılı şekilde incelenmiştir. Bulgular TNSA araştırmalarında cevaplama oranlarının genel olarak yüksek olduğunu (tüm araştırmalar için %80'in üzerinde) ve zaman içinde azalma eiliminde olduğunu göstermektedir. Kentlerde ve kentleşmenin daha yoğun olduğu bölgelerde düşük cevaplama oranları ve artan red oranları dikkat çekmektedir. Bu çalışma TNSA sonuç kodlarının zaman ve mekan boyutunda incelendiği ve gelecek hanehalkı araştırmaları için önerilerin sunulduğu ilk çalışma olma niteliğini taşımaktadır.

ANAHTAR KELİMELER: Cevapsızlık, cevaplama oranı, red, Türkiye, TNSA

INTRODUCTION

Response rates (RR) in social surveys conducted in developed countries have been decreasing over time, especially after 1990s; while they are still at high levels in developing countries (Atrostic, Bates, & Silberstein, 2001; Brehm, 1994; De Heer, 1999; Smith, 1995; Steeh, 1981; Tolonen et al., 2006). Growing number of single-parent households, high crime rates, level of urbanization, decreasing marriage rates, increasing levels of education and high employment rates are said to be the common factors behind survey nonresponse (Goyder, Warriner, & Miller, 2002; Groves & Couper, 1992, 1993; Rogelberg & Stanton, 2007; Russell Sage Foundation, 2013).

Nationwide demographic surveys have been conducted in Turkey since 1968 in a quinquennial manner by the Hacettepe University Institute of Population Studies. Starting from this point and on, information on survey outcomes has been part of survey reports. These surveys have been conducted as part of the Demographic and Health Surveys (DHS) Program since 1993. The survey reports prior to the first TDHS in 1993 do not provide comparable tabulations for a standardized evaluation of nonresponse rates in the past, whereas afterwards all survey outcomes have been presented in accordance with DHS standards.

Although various methodological aspects varied before TDHS-1993, there has still been a notion of documenting response rates as part of data quality assessment in demographic surveys since the very beginning. In the 1968 Survey on Family Structure and Population Problems in Turkey, a household participation rate was calculated as 89.7% (Çavdar, 1971). This was the

earliest study to document urban-rural and regional differences in response rate in Turkey. Compared to a level of 96.8% in rural areas, a response rate of 78.7% was obtained in the three metropolitan cities of the time (İstanbul, Ankara and İzmir). In terms of the five main demographic regions of Turkey, the Northern and Eastern ones had the highest participation rates among all. In the 1973 Survey on Population Structure and Population Problems in Turkey, the overall household response rate (household response rate) was 95.8% at the national level; while the responses rate were 95.3% in urban areas and 97.5% in rural areas (Hacettepe University Institute of Population Studies, 1978).

The 1978 Turkish Fertility Survey was conducted as part of the World Fertility Surveys, where the household response rate was 85.4% and the completion rate was 80.6%. The highest household response rate was obtained in the East (88.2%) and the lowest in the North (78.9%) regions. The 1983 Turkish Population and Health Survey does not allow an assessment of response rates, because it included substitution in its sampling design (Hacettepe University Institute of Population Studies, 1987). In the 1988 Turkish Population and Health Survey, the household response rate was 92.6% (Hacettepe University Institute of Population Studies, 1989). Although it is safe to say household response rate for demographic household surveys in Turkey has stayed above 85% since 1968, it is hard to make any implications and comparisons prior to 1993 due to differences in sampling design and non-standardized interview result codes.

Moreover, a thorough examination of survey outcomes across time and space is lacking in Turkey. Among early and rare evaluations of survey outcomes in Turkey are work by Srikantan (1977) for the 1968 survey, and Chakraverti and Çırak (1974) for the 1973 survey. The only study that has focused on TDHS nonresponse is one by Türkyılmaz and Ayhan (2012), where the determinants of individual level NR was assessed using household level data from TDHS-2003. It follows an examination of response rates in TDHSs is necessary despite the high response rates observed so far to reveal past trends and shed light on future surveys.

Response rates are among core indicators of TDHSs not only to follow the field activity, but also affecting sampling errors, data quality through potential nonresponse bias, and population representation. In this study, five DHS surveys conducted in Turkey between 1993 and 2013 have been examined in detail to shed light on future surveys; under three main headings. The first section looks at household response rate trends in Turkey through both approaches. In the second section, response rates are evaluated at the regional and urban-rural breakdown. In the last section, all result codes other than completions are examined in detail.

To the best of authors' knowledge, this is the first methodological paper

in Turkey in terms of examination of result codes of interviews in detail for the Turkey Demographic and Health Surveys.

LITERATURE

Achieving high response rates, has always been among the main aims of surveys with the concern of population representation (Cook, Heath, & Thompson, 2000; Dillman, 1978, 2011; Fowler Jr, 2013; Tolonen et al., 2006). Despite all efforts to reduce nonresponse, nonresponse trends tend to increase over time inevitably across the world (Atrostic et al., 2001; De Heer, 1999; National Research Council, 2013; Smith, 1995; Steeh, 1981; Tolonen et al., 2006). In the 1990s, this trend and increasing levels of refusals have become major concerns for commercial, academic, government, business and media surveys (Brehm, 1994). As examples of cross-sectional surveys with face-to-face interviews, Brick and Williams (2013) have examined the nonresponse trends of National Health Interview Surveys and General Social Surveys between 1997 and 2007, and demonstrated a clear pattern of increasing nonresponse trend.

There is also evidence in the literature that urbanization levels affect survey response behavior. In national health surveys conducted in countries such as Belgium, Denmark, Norway, Estonia and Finland, sampled persons in rural areas were found to be more prone to survey participation rather than those in urban areas (Demarest et al., 2012; Ekholm, Gundgaard, Rasmussen, & Hansen, 2010; Laiho & Nieminen, 2004; Torvik, Rognmo, & Tambs, 2012; Uusküla, Kals, & McNutt, 2010).

Nonresponse is stemmed from two basic components: non-contact of selected sample units and refusal to participate wholly or partially (Baruch, 1999; Cornish, 2002). Coping with refusals are known to be more challenging than non-contacts, which often includes units being temporarily absent. In Turkey, Ayhan's work (1981) has suggested that non-contact was a greater reason for nonresponse than refusals in the 1978 Turkey Fertility Survey estimates. He found that not being at home at the time of the survey was the cause of 56% of all nonresponse.

There are also cases which do not qualify as nonresponse, but also do not result in interviews; such as identifying vacant dwellings, or non-dwelling units for household surveys. Thus in practice, survey outcomes are many, and the investigation of interview outcomes should not be limited to response rates, but should take all outcomes into consideration.

DATA AND METHODS

TDHS surveys

This study will employ data from the Turkey Demographic and Health Surveys conducted between 1993 and 2013 (1993 Turkey Demographic and Health Survey Data, 1994; 1998 Turkey Demographic and Health Survey Data, 1999; 2003 Turkey Demographic and Health Survey Data, 2004; 2008 Turkey Demographic and Health Survey Data, 2009; 2013 Turkey Demographic and Health Survey Data, 2014). Both the data downloaded from the DHS (for years 1993, 1998 and 2003) and the data obtained from the Hacettepe University Institute of Population Studies included all visited households, so that result codes and response rates could be obtained from scratch. As mentioned earlier, the quinquennial demographic surveys in Turkey have been carried out as part of the Demographic and Health Surveys since 1993, with standard field procedures. On the other hand, one aspect of the TDHS-2013 survey is crucial to this study, which is a follow-up fieldwork carried out to increase response rates right after the main fieldwork was complete.

Conducted by Hacettepe University Institute of Population Studies, these nationally representative sample surveys aim to provide high quality data on fertility, child and infant mortality, family planning, maternal and child health. The survey domains include place of residence (as urban or rural), five demographic regions, NUTS 1 regions, depending on survey, and the response rates in survey reports are produced for these domains.

The TDHS surveys are complex sample surveys with weighted, multi-stage, stratified cluster sample designs, the details of which are given in Table 1.

Table 1: Sample Properties and Cluster Level Nonresponse in TDHS Surveys

	TDHS-1993	TDHS-1998	TDHS-2003	TDHS-2008	TDHS-2013
Number of strata	28	28	40	36	36
Number of clusters	500	480	700	634	642
Number of clusters that could not be visited*	22	4	12	1	1
Target number of households	10,000	10,000	13,160	13,510	14,496
Number of completed household interviews	8,619	8,059	10,836	10,525	11,794

*The high cluster level nonresponse of TDHS-1993 is related to the ethnic conflicts in the East region at the time; the cluster level nonresponse in TDHS-2003 is related to weather and transportation problems (Hacettepe University Institute of Population Studies, 2004; HUIPS, 2014).

The DHS gross household response rate, sometimes referred to as completion rate (as in TDHS), is based on all target households, and the net household response rate is based on valid cases (1). Valid interviews are those ending with the codes completed (01), no household member present (02), postponed (04), refused (05) and dwelling not found (08), as given in Table 2. Thus households being absent during survey period (03), vacant or non-household dwellings (06), destroyed dwellings (07) and other (96) categories are not considered eligible for interviews. In addition to the codes supplied by DHS, TDHS surveys have a separate category for partially completed interviews (this disposition code is only offered for individual interviews by DHS). These are also regarded as valid cases where contact was possible but interview could not be finalized, so TDHS includes this code in the denominator of the household response rate (2).

$$DHS\ Net\ Response\ Rate\ R_{DHS\,HH} = \frac{1_{HH}}{1_{HH} + 2_{HH} + 4_{HH} + 5_{HH} + 8_{HH}} \quad (1)$$

$$TDHS\ Net\ Response\ Rate\ R_{TDHS\,HH} = \frac{1_{HH}}{1_{HH} + 2_{HH} + 4_{HH} + 5_{HH} + 8_{HH} + P_{HH}} \quad (2)$$

FINDINGS: TURKEY DEMOGRAPHIC AND HEALTH SURVEYS 1993-2013

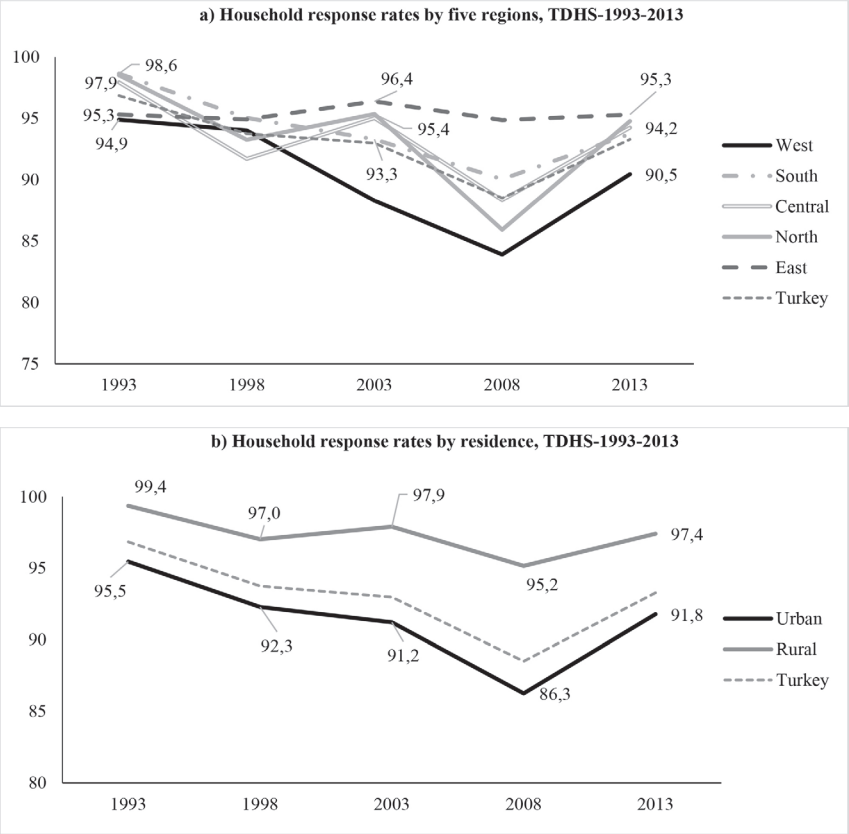
Findings show that overall, household response rates are high in Turkey, they are not below 80% for any survey (Figure 1). The response rates suggest a decreasing trend over time, with a decrease from 96.8 in 1993 to 88.5 in 2008; with the exception of a recovery in TDHS-2013, an observation to be discussed in the last section.

Figure 1: Household Response Rate, TDHS 1993-2013

Regional and Residential Differences in DHS Household Response Rates

The regional differences in household response rate remained small in TDHS-1993 and TDHS-1998 (Figure 2a). However, starting from TDHS-2003, South, Central and North regions stayed around the national average, and the West and East regions stood out. From this date and on, the West region has been portraying the lowest level of response rate. The East region, on the other hand, has become the region with the highest response rate, while it was the second to last in TDHS-1993. In addition to this, the East region is the only one not showing a declining trend. Figure 2b shows that urban places have always had lower response rates than rural places. With the exception of TDHS-2013, response rates are decreasing in both, though at a faster pace in urban areas. The lowest response rate in rural areas was observed in TDHS-2008, and even this rate was higher than 95%.

Figure 2: DHS Response Rates by Place of Residence TDHS 1993-2013, (A) Household by Region, (B) Household by Residence



The Distribution of Household Interview Result Codes: 1993-2013

First findings to be discussed in this section are ineligible result codes, as defined by DHS, at the national and residential area levels (Table 2). The highest proportion of ineligible result code has shifted from household absent to dwelling vacant/address not a dwelling over time. The household absent result code has shown a steady decrease over time and has halved to 4.17 in 2013 from its level of 10.20 in 1993. The decrease is more striking in the urban areas than rural areas, and their levels are very similar as of 2013. The proportion of the dwelling vacant/address not a dwelling result code has not changed much until the last survey; and rose from 5.87 in 2008 to 8.43 in 2013. The level of this outcome is notably higher in rural areas than urban areas (7.58 and 10.66, respectively). Proportion of dwelling destroyed is very low in all surveys and there seems to be a slight decline over time. Similarly, the other result code has very low levels.

Table 2: The Change in the Proportion of Ineligible Household Interview Result Codes by Survey Years, 1993-2013

	Household absent HA (03)	Dwelling vacant/ address not a dwelling DV (06)	Dwelling destroyed DD (07)	Other O (96)*	Number of household
Turkey					
1993	10.20	5.56	0.34	0.19	10,631
1998	7.16	6.33	0.13	0.16	9,970
2003	5.63	4.84	0.02	0.30	13,049
2008	5.62	5.87	0.07	0.67	13,521
2013	4.17	8.43	0.05	0.19	14,490
Urban					
1993	11.82	6.31	0.38	0.07	7,065
1998	7.83	6.87	0.13	0.21	6,989
2003	5.04	5.42	0.02	0.29	9,754
2008	5.11	5.61	0.04	0.64	10,017
2013	4.13	7.58	0.04	0.21	10,484
Rural					
1993	6.98	4.07	0.25	0.42	3,566
1998	5.60	5.07	0.13	0.03	2,981
2003	7.37	3.10	0.03	0.33	3,295
2008	7.08	6.62	0.17	0.77	3,504
2013	4.27	10.66	0.07	0.12	4,006

* The codes partially completed have been added to the "other" column despite defining this category as eligible in Table 2. The reason here was not having access to this code in TDHS-1993 and TDHS-1998 from either data or survey report.

Table 3 shows the breakdown of eligible result codes, where the major outcomes seem to be no competent respondent at home and refusals. The levels of no competent respondent at home seemed to be increasing over time, until TDHS-2013, when it decreased to a level lower than TDHS-2008. Moreover, the levels in 1998 and 2008 are higher than their precedent and successor. There are no major differences between urban and rural areas in terms of eligible result codes not ending with interviews, however the levels are always higher in the urban whenever they are different. No competent respondent at home is always lowest in the East. There is no apparent pattern for the remaining regions. For instance, in 1998 the highest level of no competent respondent at home was observed for the Central region (4.94) and in 2008 the highest level was observed in the West region (8.13).

Table 3: The Change in Eligible Household Interview Result Codes by Survey Years, 1993-2013

	Completed (C) (01)	No competent respondent at home (HP) (02)	Postponed (04)	Refused (R) (05)	Dwelling not found DNF (08)	Number of eligible households*
Turkey						
1993	96.84	0.38	0.03	2.24	0.51	8,900
1998	93.75	3.27	0.29	1.81	0.87	8,596
2003	93.08	2.75	0.05	3.77	0.34	11,641
2008	88.50	5.41	0.28	4.81	0.78	11,892
2013	93.38	1.25	0.02	5.12	0.23	12,630
Urban						
1993	95.46	0.38	0.05	3.41	0.70	5,752
1998	92.29	3.89	0.34	2.34	1.15	5,938
2003	91.42	3.24	0.07	4.88	0.39	8,703
2008	86.26	6.32	0.37	5.98	0.85	8,894
2013	91.90	1.28	0.02	6.57	0.24	9,230
Rural						
1993	99.36	0.38	0.00	0.10	0.16	3,148
1998	97.03	1.88	0.19	0.64	0.26	2,658
2003	98.03	1.29	0.00	0.48	0.20	2,938
2008	95.16	2.70	0.00	1.33	0.57	2,998
2013	97.41	1.18	0.00	1.21	0.21	3,400
West						
1993	94.89	0.25	0.07	4.44	0.35	2,817
1998	94.01	3.53	0.56	1.59	0.32	2,522
2003	88.57	3.78	0.08	7.07	0.50	3,805
2008	83.90	8.11	0.72	6.50	0.52	3,491

2013	90.54	0.91	0.00	8.39	0.16	3,836
South						
1993	98.63	0.40	0.00	0.57	0.40	1,755
1998	95.03	2.83	0.19	1.70	0.25	1,591
2003	93.35	3.36	0.00	2.63	0.67	1,638
2008	90.04	3.24	0.00	6.17	0.18	1,637
2013	93.91	2.16	0.06	3.87	0.00	1,756
Central						
1993	97.92	0.46	0.00	1.52	0.10	1,973
1998	91.70	4.94	0.33	2.82	0.22	1,843
2003	95.10	2.45	0.14	2.26	0.05	2,123
2008	88.34	5.53	0.21	4.85	0.85	2,349
2013	94.33	1.48	0.04	3.92	0.23	2,629
North						
1993	98.50	0.66	0.00	0.58	0.25	1,204
1998	93.25	3.37	0.08	1.52	1.77	1,186
2003	95.42	2.18	0.00	2.10	0.30	1,333
2008	85.92	7.10	0.19	4.88	1.59	1,577
2013	94.77	1.23	0.00	3.63	0.37	1,874
East						
1993	95.31	0.26	0.09	2.35	2.00	1,151
1998	94.91	1.10	0.07	1.31	2.61	1,454
2003	96.50	1.46	0.00	1.86	0.18	2,742
2008	94.86	2.29	0.00	1.87	0.95	2,838
2013	95.31	0.91	0.00	3.39	0.39	2,535

* For TDHS-2003, TDHS-2008 and TDHS-2013, this denominator includes partially completed questionnaires. It was was not possible to differentiate this result code from "other" in TDHS-1993 and TDHS-1998, so they were excluded. The effect of this is anticipated to be negligible given the low level of partially completed questionnaires.

Household refusal rate is on the increase in Turkey, rising from 2.24 percent in 1993 to 5.12 percent in 2013. The proportion of refusal is always higher in urban areas than rural areas regardless of the survey year. Although refusals are increasing in all domains presented here, the gap between urban and rural areas is also increasing, implying a more rapid change in urban areas. The highest effect to the national refusal rate comes from the West region. The levels are always highest in this region and there is an apparent increasing trend. In contrast, the East region usually has lower levels of refusals, though by 2013 it seems to be converging to the regions other than the West.

The levels of dwelling not found are low in general, but are relatively higher in 1998 and 2008. There is no clear pattern in terms of regions, however, it is relatively high for the East region in the earlier surveys of 1993

and 1998. Similar to other result codes not ending with completed interviews, the levels of postponed interviews are slightly higher in 1998 and 2008, while still remaining below 0.5 percent. The urban-rural breakdown shows that postponement is an urban phenomenon. The regional breakdown suggest that the levels are higher in the West and Central regions.

DISCUSSION

Findings showed that response rates in TDHS surveys are generally high, and suggested a decreasing trend, except for a recovery which is likely to have originated from the follow-up field operation conducted to increase response rate in TDHS-2013.

Survey outcomes showed some changes over time by region and urban-rural status. The typical expectation is to observe higher response rates in rural areas; and in the East, where the level of urbanization is lowest. Being the most urbanized and industrialized region, the West is different demographically, with smaller household sizes, a higher proportion of single person households and higher proportions of working women (Hacettepe University Institute of Population Studies, 2014; Koç, Adalı, Polat, & Türk, 2015), thus one would expect the lowest response rates in the West. This study showed these expectations to be true to some extent, but not always. In 1993 for instance, the East region did not have the highest response rate. There was conflict in this area in this decade (Yavuz, 2006), thus people in this region, predominantly Kurdish, might have had security concerns over participating in a survey conducted by a state university. The West region has only been standing out since 2003. Unlike regions, urban-rural differences have always been regular, and response rates in rural areas have never fallen under 95%. It could be argued that people have higher concerns of security in urban areas, less trust and greater fear of strangers (Stoop, Billiet, Koch, & Fitzgerald, 2010).

Among survey outcomes other than completions, household absent, meaning household is not home during the interview period, was the most frequently encountered one in the earlier surveys. This is a phenomenon that is hard to explain; though its level has halved from 1993 to 2013. In general, information that the household would be away for the survey period is most likely to have come from a proxy respondent (a neighbor), and to what extent this information is correct remains unknown. The field training underlines that these households be re-visited even if such an information was provided, but a household could still just be not present at visit (a no competent respondent at home outcome), and it is impossible to know for sure even under multiple visits. There might always be cases where no neighbors were available, and the household looked occupied yet no answer was received to the door. These could be interpreted as household not present or household

absent by the teams. Perhaps being even deceived by signs (shoes at the door, curtains on the windows, etc.), these codes could be given, where the reality could be a vacant dwelling. It is worth underlining that even in the presence of detailed codes, there will always be uncertainty mistaken for certainty.

The most frequent ineligible code as of 2013 became dwelling vacant/ address not a dwelling. Ideally, this code would not be expected, provided a listing operation was conducted before fieldwork. Such households were more frequently reported in 2013 in rural areas than in any other survey year or urban areas. It could be argued that listing operation has become more burdensome in rural areas compared to the past, provided less people live in villages, many villages have a high share of elderly, and it might have become more difficult for listing staff to gain cooperation from villagers to detect occupied households. For instance, there might be buildings that are no longer occupied with households but may be used as summer houses by their previous owners, or as storage units, which might be mistaken by listers as occupied dwelling units. Another reason for an increase in this result code might be increased mobility of households over time, where households might be moving after listing operation and before the main fieldwork.

Among eligible interview codes, refusal and no competent respondent at home are major ones; postponed and dwelling not found have relatively low levels. Refusals seem to increase over time, especially in urban areas. Currently, highest refusal rates are observed in the West, and lowest in the East. As the major type of eligible non-contact, no competent respondent at home is higher in urban areas, likely a result of never-married single person households, households without children, as also suggested by Groves and Peytcheva (2008) and Lee et al. (2009).

The examination of survey outcomes revealed some hard to explain differences between DHS surveys conducted at different years. It was observed that in 1998 and 2008, codes other than completion were generally higher than surveys before and after them. There are no specific social or political events at these years that could affect the survey process, neither are there any differences in field implementation. It could be argued that each survey is prone to some degree of random error in terms of survey outcomes; having a different survey director, a different field coordinator, a different field training coordinator, field staff call reaching different networks of people – each contribute to survey outcomes to some extent. As part of this random variation, there are slight changes in terms of the month of year when the field work was conducted, which are often related to bureaucratic reasons. TDHS-1993 and TDHS-1998 were carried out in August, TDHS-2003 in December and January of the following year, TDHS-2008 and TDHS-2013 in September. With educational institutions being on summer breaks, families are more likely to be out of town in summer months, and it could

be speculated that harsh winter conditions might be an obstacle in terms of callbacks. Furthermore, in 1998, husbands were interviewed in a half-sample, which has not been done in any other TDHS. This might have put extra burden on field teams provided males are more difficult to find home, which might have caused more revisits for men rather than for households in this survey. In TDHS-2008, the result code no competent respondent at home being higher than in TDHS-2003 and TDHS-2013, could perhaps be associated with the data collection period of TDHS-2008: data collection –fell between Eid al-Fitr and Eid al-Adha (Islamic holidays). Therefore, the possibility of finding respondent at home to interview might be decreased because of the religious holiday. Kappelhof also (2014) underlines the significance of holidays for encountering nonresponse. In 2013, there was an additional follow-up fieldwork, which might have caused dwelling vacant/address not a dwelling to increase, and no competent respondent at home and household absent result codes to decrease with respect to previous surveys, because the follow-up may have revealed the real status of these households.

This study has some limitations. One was that in 2013, there was an attempt to keep response rates at a certain level in each cluster , and it is not possible to make comparisons over time when such targets are set. Thus response rate would be expected to be lower in 2013 in the absence of a follow-up study.

It is suggested for future TDHS surveys that for households that could not be contacted, that interviewers or field supervisors record some specific observations (were any neighbors contacted, was the building director contacted, was any other person asked, were there bills accumulated at the mailbox, were there shoes by the door, if household is absent-when they are expected to be back etc.). It could also be suggested that the other category be selected when not much could be learnt and interviewers fill out open ended explanations, yet this could potentially backfire with too many other categories with less details than needed. Finally, it is suggested that extra attention be given to result codes during field training for TDHSs in the future.

NOTES

1. The data sets for TDHS-2008 and TDHS-2013 that are available on Hacettepe University Institute of Population Studies Website include completed interviews only, and users need to contact the Institute for data sets with all result codes.
2. The codes partially completed have been added to the "other" column despite defining this category as eligible in Table 2. The reason here was not having access to this code in TDHS-1993 and TDHS-1998 from either data or survey report.

3. For TDHS-2003, TDHS-2008 and TDHS-2013, this denominator includes partially completed questionnaires. It was was not possible to differentiate this result code from "other" in TDHS-1993 and TDHS-1998, so they were excluded. The effect of this is anticipated to be negligible given the low level of partially completed questionnaires.
4. The determination of the clusters selected for revisits was not entirely based on response rates, but also on cost considerations.

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