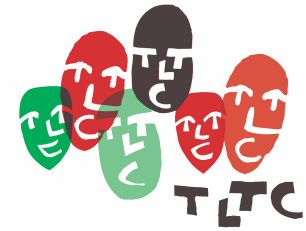


DOCUMENTATION GUIDE #11

Situating TLT and Balaka Within a Nationally Representative Perspective: Benchmarking TLT (2009-2011, 2015) to the Malawi Demographic and Health Surveys (2010, 2015)



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May 2019

INTRODUCTION

This document compares the characteristics of women enrolled in the Tsogolo la Thanzi (TLT) study to estimates generated by the Malawi Demographic and Health Surveys (MDHS), which are widely considered to be the gold standard for high-quality, nationally representative data.

Overview: *Tsogolo la Thanzi (TLT) Study*

Tsogolo La Thanzi (TLT) is a population-representative and longitudinal study set in Balaka in Southern Malawi. The TLT study was designed to understand the reproductive goals and behavior of young adults in a high-HIV-prevalence community. TLT used a unique approach: an intensive longitudinal design wherein respondents were interviewed every fourth month at TLT's centralized research center near the town's main market. Data collection ran from May 2009 to December 2011 (Waves 1-8) with follow-up rounds in 2015 and 2019. Respondents were randomly sampled from a household census conducted by the study team in 2009; respondents were between the ages of 15 and 25 at baseline. For more information about the study see (Yeatman, Chilungo, Lungu, Namadingo, & Trinitapoli, 2019).

Purpose of Report

The purpose of this document is to situate TLT respondents within a more expansive statistical portrait of Malawi, nationally. This report compares data from TLT women (enrolled in 2009 and followed in 2015) to nationally representative data from the MDHSeS collected in 2010 and 2016, corresponding roughly to TLT's observation period. TLT was designed as a population-representative sample of young women in a single community; it does not cover the entire reproductive age-range, nor can it be used to make claims about Malawi – along many dimensions of social life, the country is characterized by considerable sub-national variation across its three regions. TLT aims to understand young adults coming of age in a generalized HIV/AIDS epidemic and does so by focusing on a single geographic area – the trading town itself and households in surrounding villages within a 7km radius. Analysts, readers, and reviewers may want to know how the TLT sample compares to Malawi broadly, or how young-adults in this region differ from other age groups. The comparisons elaborated in this document will help readers and analysts evaluate

generalizability and appreciate the specific characteristics of the study setting and the restricted age-range.

Overview: *Malawi's Demographic and Health Surveys (DHS)*

Unlike TLT, the DHS surveys a nationally representative sample of reproductive-age women across all three regions of Malawi and is comprised of a much larger sample (over 23,000 in 2010; over 24,000 in 2015). The DHS data uses two-stage, cluster-based sampling to enroll women between the ages of 15 and 49. In the tables that follow, we have applied the appropriate weights for calculating means and percentages.

We leverage the DHS in three ways to generate estimates for: 1) all women in Malawi, 2) all young adults in Malawi (standardizing the age-range), and 3) young adults in the southern region (standardizing the age-range and the region). To construct the sub-samples, we restricted the DHS samples on age and region to align with the baseline age parameters of TLT: ages 15-25 in 2009; ages 21-31 in 2015. The southern region of the DHS is far larger than TLT's 7km catchment area. The items highlighted in this analysis were fielded with high degrees of comparability in the two studies. Where relevant, we note salient differences in question wording or response categories in the text and tables.

Organization

The report is organized into three sections. First, we discuss socioeconomic characteristics such as age, education, household condition, and household assets. Second, we examine the ethnic and religious composition of the two studies. Finally, we look at marriage and childbearing, including the number of living children and fertility preferences. In the text, we focus on the most salient comparison and establish high levels of comparability between the TLT sample and the characteristics of young women living in the southern region, according to the DHS.

SOCIOECONOMIC VARIABLES

According to the DHS, young adults in the southern region are quite similar to TLT respondents in terms of their socioeconomic characteristics; this is true both at 2010 and at 2015 (Table 1). The majority of households in Malawi, including our TLT respondents, are socio-economically disadvantaged and education levels are relatively low.

Education

Education levels differ between TLT respondents and the nationally representative views generated by the DHS. In 2010, young adults in the southern region had 6.37 years of schooling on average compared to 7.81 years for TLT respondents. The difference in education levels may be due to the fact that Balaka town has two secondary schools and a sizable population of boarding-school students. Compared to the national average of 5.33 years of schooling, young adults in

general have an educational advantage. These patterns hold in 2015, at which point TLT respondents, now age 21 to 31, have 8.02 years of schooling. Levels of schooling in the DHS were largely unchanged with just a slight increase in educational attainment for the national average and among young adults, nationally.

Flooring & Electricity

At the time they were enrolled in the study, 35% of TLT respondents were living in a house with what we call “improved flooring” – a substance other than mud/earth. 32% of DHS young adults in the southern region lived in similar conditions. These estimates and patterns are basically the same in 2015. In 2009, only 14% of TLT respondents have electricity in the household, and the same was true for 15% of DHS young adults in the southern region (which includes the urban areas of Blantyre and Zomba). These numbers are slightly lower at the national level (12% all young adults, 11% all women). Electricity was not measured during TLT’s 2015 follow-up.

Household Goods

With respect to household goods, TLT respondents and DHS young adults show no significant differences except in two variables: radio and bicycle. A higher percentage of TLT respondents have a radio in their household (74%), and the numbers are far lower among all DHS groups: 56-57%. Similarly, TLT respondents were more likely to have a bicycle (54%) compared to DHS samples, wherein bicycles were present in only 43-49% of households. These two advantages persist in the 2015 sample as well, with only very small differences in the prevalence of other household goods.

ETHNICITY AND RELIGION

Ethnic and religious differences by region are widely known and important to explore (Table 2).

Ethnicity

Both surveys asked about ethnicity using a question with eight identical response categories and the possibility for respondents to write-in an “other” response. In the DHS, the ethnic composition of the age-restricted sample of young adults is identical to the national break-down. At the national level, the Chewa are 34% of Malawi’s population, but regional differences in ethnicity are important: the Yao and Lomwe are concentrated in the south, while the Chewa are concentrated in the Central region, and Tumbuka in the north. Ngoni is the most prevalent ethnic group in Balaka (38% in TLT, but comprises only 10% of young adults in the southern region according to the DHS. Lomwe are more numerous in the southern region than in TLT (33% vs. 17%). The second most prevalent group in both the comparable DHS sample and in Balaka, according to TLT, is the Yao (24% and 27%, respectively). The remaining ethnicities are similarly distributed across the comparable DHS sample and TLT. The overall patterns were consistent in the 2015 samples.

Religion

Examining religious affiliation between the DHS and TLT, we observe significant differences between the two studies. To understand religious dynamics in the study, TLT used more fine-grained response categories than the DHS; we combined our responses to align as closely as possible, but we attribute the high levels of “other” in the DHS primarily to the differences in response categories between the two studies. At baseline, Balaka has a heavy concentration of Catholic young-adults (32% vs 21% nationally and 17% in the southern region). Balaka is home to St. Louis Montfort catholic parish (aka Balaka Mission), which was founded in the mid-1990s by Italian fathers, who also run many associated activities including Luntha Television and Montfort Media.

MARRIAGE AND FERTILITY

In this section we discuss differences in demographic characteristics that are substantively central to both studies – marital status and fertility (Table 3). Slight differences in the survey items between the two studies should be noted.

Marital Status

At baseline (2009), half of TLT women (50%) remained never-married; this is significantly higher than the estimate for DHS women of a similar age and region in 2010 (40%). This could be the result of the higher levels of schooling we observe among women in Balaka. By 2015, these differences had attenuated; TLT women were only slightly more likely to have never married (16% in TLT, 9% in DHS). Levels of divorce and widowhood are similar in the two studies.

Sexual Activity

Reported levels of sexual activity are nearly identical in TLT and the comparable DHS sample.

Desire & Timing for a Child

Although ideal family size is similar between TLT and the comparable DHS subsample (3.27 and 3.37, respectively), compared to their age-mates in the southern region as a whole, TLT respondents had, on average, fewer children at both points in time. In 2009, TLT women had 0.79 children on average while DHS women of a similar age and geographic region had 0.97.

92% of TLT women desired another child at 2009 compared to 82% of DHS young adults in the southern region. Among those who desired a child, 84% of TLT women and 69% of DHS women of the same age wanted to wait at least two years before having a child. However, the question on desired timing is also somewhat different between surveys. TLT allows for respondents to offer a non-numeric response (e.g. “it’s up to God”) while DHS only includes the “don’t know” response as an unprompted category. From the DHS, 2% of young adults in the southern region reported being unsure of their desired timing while 15% provided a non-numeric response.

In 2015, TLT women were age 21 to 31 and had 1.95 children on average. 79% of women desired another child and among those who desired a child, 76% wanted to wait at least two years for another child. DHS respondents had more children (2.25) and a higher percentage desired no more children (33% in DHS vs 20% in TLT). However, desired timing among those who wanted a child did not differ from TLT. As with the earlier survey rounds, the percent who report uncertainty is higher in DHS (3%).

Concluding Remarks

This report has served to elucidate some of the key similarities and differences between the TLT study and a national portrait of Malawi. On the majority of characteristics, TLT respondents are similar to their DHS counterparts (i.e. young adults in the southern region and of a comparable age range). This comparability should serve to reassure those working on and reviewing TLT analyses of its population-representativeness, particularly for characteristics that should not differ meaningfully based on geography or age. However, TLT respondents also represent a particular demographic and social context which should be at the forefront in analysts' minds as they develop new projects and research questions. TLT was designed to follow a cohort of individuals, men and women, coming of age in a generalized HIV/AIDS epidemic during a time period in which treatment for HIV/AIDS was expanding and the epidemic was beginning to slow in its rate of new infections and levels of mortality. It offers novel and in-depth measures of romantic relationships, sexual and reproductive health, HIV/AIDS, family composition, household characteristics, future expectations, and more – the majority of which cannot be gleaned from national-level surveys. Analysts and readers, therefore, can use this report to ensure that any work undertaken using TLT data takes full advantage of the data's greatest strengths while staying attuned to the ways in which this population shares or diverges from the national picture, as well as other subnational groups in Malawi.

REFERENCES

Yeatman, S., Chilungo, A., Lungu, S., Namadingo, H., & Trinitapoli, J. (2019). Tsogolo la Thanzi: A Longitudinal Study of Young Adults Living in Malawi's HIV Epidemic. *Studies in Family Planning*, 50(1), 71–84. <https://doi.org/10.1111/sifp.12080>

Table 1 Women's Socioeconomic Characteristics, DHS compared to TLT, 2010 and 2015

Geography Age Range	DHS 2010		TLT1, 2009		DHS 2015			TLT2, 2015
	Malawi 15-49	Malawi 15-25	Southern Region 15-25	Balaka 15-25	Malawi 15-49	Malawi 15-25	Southern Region 15-25	Balaka 15-25
	Mean / %	Mean / %	Mean / %	Mean / %	Mean / %	Mean / %	Mean / %	Mean / %
Age	27.99 [27.85, 28.12]	19.79 [19.70, 19.87]	19.84 [19.72, 19.97]	19.52 [19.35, 19.68]	28.11 [27.98, 28.24]	25.67 [25.58, 25.75]	25.67 [25.56, 25.78]	25.62 [25.45, 25.79]
Education level	5.33 [5.16, 5.51]	6.33 [6.15, 6.51]	6.33 [6.06, 6.61]	7.81 [7.67, 7.94]	5.92 [5.72, 6.12]	6.70 [6.46, 6.92]	6.33 [6.02, 6.64]	8.02 [7.86, 8.18]
<i>House floor material</i>								
Improved Flooring	0.26 [0.24, 0.29]	0.28 [0.25, 0.30]	0.32 [0.27, 0.36]	0.35 [0.33, 0.37]	0.29 [0.26, 0.32]	0.31 [0.27, 0.34]	0.31 [0.27, 0.36]	0.36 [0.33, 0.38]
Earth/Dung	0.74 [0.71, 0.76]	0.72 [0.70, 0.75]	0.68 [0.64, 0.73]	0.65 [0.63, 0.67]	0.71 [0.68, 0.74]	0.69 [0.66, 0.73]	0.69 [0.64, 0.73]	0.64 [0.62, 0.67]
Electricity	0.11 [0.10, 0.13]	0.12 [0.10, 0.14]	0.15 [0.12, 0.18]	0.14 [0.12, 0.15]	0.14 [0.11, 0.16]	0.15 [0.12, 0.18]	0.17 [0.13, 0.21]	-
<i>Household Goods</i>								
Radio	0.57 [0.56, 0.59]	0.56 [0.55, 0.58]	0.57 [0.54, 0.59]	0.74 [0.71, 0.76]	0.44 [0.42, 0.46]	0.45 [0.43, 0.47]	0.44 [0.41, 0.47]	0.60 [0.57, 0.62]
Television	0.14 [0.12, 0.16]	0.14 [0.12, 0.16]	0.17 [0.14, 0.19]	0.17 [0.15, 0.19]	0.15 [0.13, 0.18]	0.16 [0.13, 0.19]	0.16 [0.13, 0.20]	0.22 [0.20, 0.22]
Refrigerator	0.06 [0.04, 0.07]	0.06 [0.05, 0.07]	0.08 [0.05, 0.10]	0.08 [0.06, 0.09]	0.08 [0.06, 0.10]	0.09 [0.06, 0.11]	0.08 [0.06, 0.10]	0.11 [0.10, 0.13]
Bicycle	0.47 [0.46, 0.49]	0.45 [0.43, 0.47]	0.46 [0.43, 0.48]	0.54 [0.52, 0.57]	0.43 [0.42, 0.45]	0.42 [0.40, 0.44]	0.41 [0.38, 0.44]	0.55 [0.52, 0.57]
Car/Truck	0.03 [0.02, 0.04]	0.03 [0.02, 0.04]	0.03 [0.02, 0.05]	0.03 [0.02, 0.03]	0.05 [0.03, 0.06]	0.05 [0.03, 0.07]	0.03 [0.02, 0.04]	0.03 [0.02, 0.04]
Motorcycle/Scooter	0.02 [0.01, 0.02]	0.02 [0.01, 0.02]	0.02 [0.01, 0.02]	0.02 [0.01, 0.02]	0.03 [0.03, 0.03]	0.03 [0.02, 0.03]	0.03 [0.02, 0.04]	0.02 [0.01, 0.02]
Mobile phone *	-	-	-	-	0.33 [0.31, 0.35]	0.39 [0.37, 0.42]	0.37 [0.34, 0.41]	0.47 [0.45, 0.50]

* Not collected in TLT Baseline (2009)

Table 2 Ethnic and Religious Composition of DHS and TLT Samples, Women only, 2010 and 2015

Geography Age Range	DHS 2010			TLT1, 2009	DHS 2015			TLT2, 2015
	Malawi 15-49	Malawi 15-25	Southern Region 15-25	Balaka 15-25	Malawi 15-49	Malawi 15-25	Southern Region 15-25	Balaka 15-25
	Mean / %	Mean / %	Mean / %	Mean / %	Mean / %	Mean / %	Mean / %	Mean / %
<i>Ethnicity</i>								
Yao	0.13 [0.11, 0.16]	0.13 [0.11, 0.16]	0.24 [0.20, 0.29]	0.27 [0.25, 0.30]	0.13 [0.11, 0.15]	0.14 [0.12, 0.17]	0.25 [0.21, 0.29]	0.27 [0.25, 0.29]
Chewa	0.34 [0.31, 0.37]	0.35 [0.31, 0.38]	0.10 [0.09, 0.11]	0.12 [0.10, 0.14]	0.35 [0.31, 0.38]	0.35 [0.31, 0.38]	0.10 [0.08, 0.11]	0.07 [0.06, 0.08]
Lomwe	0.16 [0.14, 0.18]	0.16 [0.14, 0.18]	0.33 [0.29, 0.37]	0.17 [0.15, 0.18]	0.19 [0.17, 0.21]	0.19 [0.16, 0.21]	0.37 [0.34, 0.41]	0.16 [0.14, 0.18]
Tumbuka	0.09 [0.07, 0.11]	0.09 [0.07, 0.12]	0.02 [0.01, 0.02]	0.02 [0.01, 0.02]	0.09 [0.08, 0.11]	0.10 [0.08, 0.12]	0.02 [0.01, 0.02]	0.01 [0.01, 0.02]
Ngoni	0.13 [0.11, 0.15]	0.12 [0.11, 0.14]	0.10 [0.08, 0.12]	0.38 [0.36, 0.41]	0.12 [0.10, 0.13]	0.11 [0.10, 0.13]	0.10 [0.08, 0.13]	0.44 [0.42, 0.47]
Sena	0.05 [0.03, 0.06]	0.05 [0.03, 0.06]	0.10 [0.07, 0.13]	0.02 [0.01, 0.03]	0.04 [0.03, 0.04]	0.03 [0.03, 0.04]	0.07 [0.05, 0.09]	0.02 [0.01, 0.03]
Tonga	0.02 [0.01, 0.02]	0.02 [0.01, 0.02]	0.01 [0.00, 0.01]	0.01 [0.00, 0.01]	0.02 [0.01, 0.02]	0.02 [0.01, 0.02]	0.00 [0.00, 0.01]	0.00 [0.00, 0.01]
Other	0.08 [0.07, 0.09]	0.07 [0.06, 0.09]	0.10 [0.08, 0.12]	0.02 [0.01, 0.02]	0.06 [0.05, 0.07]	0.06 [0.05, 0.07]	0.08 [0.07, 0.10]	0.02 [0.01, 0.03]
<i>Religion</i>								
Catholic	0.21 [0.19, 0.22]	0.21 [0.20, 0.23]	0.17 [0.15, 0.19]	0.32 [0.30, 0.35]	0.18 [0.17, 0.19]	0.16 [0.15, 0.18]	0.14 [0.12, 0.16]	0.26 [0.24, 0.28]
CCAP	0.17 [0.15, 0.18]	0.18 [0.16, 0.20]	0.11 [0.09, 0.12]	0.11 [0.09, 0.12]	0.17 [0.16, 0.19]	0.17 [0.16, 0.19]	0.10 [0.08, 0.11]	0.10 [0.09, 0.12]
Anglican	0.02 [0.02, 0.03]	0.02 [0.02, 0.03]	0.02 [0.01, 0.03]	0.02 [0.01, 0.03]	0.03 [0.02, 0.03]	0.02 [0.02, 0.03]	0.02 [0.01, 0.03]	0.02 [0.02, 0.03]
Seventh Day Baptist	0.07 [0.06, 0.07]	0.06 [0.06, 0.07]	0.09 [0.07, 0.10]	0.09 [0.08, 0.11]	0.07 [0.06, 0.08]	0.07 [0.06, 0.08]	0.10 [0.08, 0.11]	0.08 [0.06, 0.09]
Muslim	0.13 [0.11, 0.15]	0.13 [0.11, 0.15]	0.22 [0.18, 0.27]	0.20 [0.18, 0.22]	0.12 [0.10, 0.15]	0.13 [0.11, 0.16]	0.22 [0.18, 0.26]	0.22 [0.20, 0.24]
No Religion	0.01 [0.01, 0.01]	0.00 [0.00, 0.01]	0.00 [0.00, 0.01]	0.00 [0.00, 0.00]	0.00 [0.00, 0.01]	0.00 [0.00, 0.01]	0.00 [0.00, 0.00]	0.00 [0.00, 0.01]
Other	0.40 [0.38, 0.42]	0.38 [0.36, 0.40]	0.40 [0.36, 0.43]	0.25 [0.23, 0.27]	0.42 [0.40, 0.44]	0.43 [0.41, 0.45]	0.43 [0.40, 0.46]	0.31 [0.30, 0.34]

Table 3 Marital and Fertility Status Comparison of DHS to TLT in 2010 and 2015

<i>Geography Age Range</i>	DHS 2010			TLT1, 2009	DHS 2015			TLT2, 2015
	<i>Malawi 15-49</i>	<i>Malawi 15-25</i>	<i>Southern Region 15-25</i>	<i>Balaka 15-25</i>	<i>Malawi 15-49</i>	<i>Malawi 15-25</i>	<i>Southern Region 15-25</i>	<i>Balaka 15-25</i>
	Mean / %	Mean / %	Mean / %	Mean / %	Mean / %	Mean / %	Mean / %	Mean / %
Marriage & Fertility								
<i>Marital Status</i>								
Never-Married	0.20 [0.19, 0.21]	0.42 [0.40,0.43]	0.40 [0.38,0.43]	0.50 [0.50,0.53]	0.21 [0.20,0.22]	0.10 [0.08,0.11]	0.09 [0.08,0.11]	0.16 [0.14,0.18]
Currently Married	0.67 [0.66, 0.69]	0.52 [0.50,0.53]	0.52 [0.50,0.55]	0.42 [0.40,0.45]	0.66 [0.65,0.67]	0.78 [0.76,0.79]	0.76 [0.74,0.78]	0.72 [0.70,0.74]
Ever Married	0.80 [0.31, 0.34]	0.58 [0.47,0.50]	0.60 [0.45,0.50]	0.48 [0.47,0.52]	0.79 [0.78,0.80]	0.90 [0.90,0.92]	0.91 [0.89,0.92]	0.84 [0.82,0.86]
Divorced/Separated	0.09 [0.09, 0.10]	0.06 [0.05,0.07]	0.07 [0.06,0.08]	0.07 [0.06,0.08]	0.10 [0.10,0.11]	0.12 [0.11,0.13]	0.13 [0.12,0.14]	0.11 [0.09,0.13]
Widowed	0.04 [0.03, 0.04]	0.01 [0.00,0.01]	0.01 [0.00,0.01]	0.01 [0.00,0.01]	0.03 [0.03,0.03]	0.01 [0.01,0.02]	0.01 [0.01,0.02]	0.01 [0.01,0.02]
<i>Sexual Activity</i>								
Ever had sex	0.86 [0.86, 0.87]	0.71 [0.69,0.72]	0.74 [0.72,0.76]	0.76 [0.74,0.84]	0.88 [0.88,0.89]	0.98 [0.97,0.98]	0.98 [0.98,0.99]	0.97 [0.97,0.98]
<i>Fertility/Preferences</i>								
Ideal Family Size	3.99 [3.93, 4.03]	3.39 [3.34,3.44]	3.37 3.29,3.44]	3.27 [3.16,3.38]	3.66 [3.62,3.70]	3.48 [3.43,3.53]	3.53 [3.46,3.60]	3.56 [3.51,3.61]
Living Children	2.57 [2.53, 2.61]	0.92 [0.89,0.95]	0.97 [0.92,1.01]	0.79 [0.74,0.84]	2.48 [2.43,2.53]	2.15 [2.10,2.20]	2.25 [2.18,2.32]	1.95 [1.89,2.02]
<i>Desire for a Child</i>								
Wants Another Child	0.55 [0.54, 0.55]	0.82 [0.81, 0.83]	0.82 [0.81, 0.84]	0.92 [0.90, 0.93]	0.50 [0.49, 0.51]	0.61 [0.60, 0.63]	0.58 [0.56, 0.60]	0.79 [0.78, 0.81]

(cont.) Marital and Fertility Status Comparison of DHS to TLT in 2010 and 2015

Desired Timing of Next Birth

Want Soon(<2 yrs)	0.19 [0.18, 0.20]	0.14 [0.13, 0.15]	0.14 [0.13, 0.16]	0.15 [0.13, 0.17]	0.17 [0.16, 0.18]	0.20 [0.19, 0.22]	0.21 [0.19, 0.23]	0.24 [0.21, 0.26]
Want Later(>2 yrs)	0.67 [0.66, 0.68]	0.69 [0.67, 0.70]	0.69 [0.67, 0.71]	0.84 [0.82, 0.86]	0.70 [0.69, 0.71]	0.73 [0.72, 0.75]	0.72 [0.70, 0.75]	0.76 [0.73, 0.78]
Unsure of Timing ¹	0.14 [0.13, 0.15]	0.17 [0.16, 0.19]	0.17 [0.15, 0.19]	0.01 [0.01, 0.02]	0.12 [0.12, 0.13]	0.07 [0.06, 0.08]	0.07 [0.06, 0.08]	0.01 [0.00, 0.01]

¹ Includes both unsure (2%/3%) and non-numeric responses (15%/3%). Percentages for 2010/2015 DHS comparable sample.