Subject: IPUMS-DHS Tip #3: Use POPWT to estimate the number of people with a characteristic
Posted by kingx025 on Fri, 22 Jun 2018 19:00:25 GMT
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Most DHS users know that they need to use weights with DHS data to get reliable estimates of the proportion of people with a given characteristic. The weights included in the DHS samples adjust for factors such as oversampling small regions and weight up to the total number of people sampled by the survey.

Sometimes you'd like to know the total number (or count) of people in a country who have a given characteristic. Knowing the absolute number of people with some characteristic helps policymakers budget and plan for the future. To calculate the number of household members with a given characteristic, you can use the IPUMS-DHS variable POPWT, an expansion factor. For example, POPWT could be used as to find the number of people in Tanzania in 2015 that slept under an insecticide-treated bednet the night before the survey.

POPWT, the IPUMS-DHS expansion factor for household members, is calculated using the DHS household weight (HV005) and population figures from the United Nations Population Division. POPWT gives estimates subject to the same margin of error as the original household weight. POPWT is currently available for only household members (variables from the PR files) but will soon be available for women of childbearing age (the IR files) as well.

For more information about the construction of POPWT, see the User Note about the expansion factor:
https://www.idhsdata.org/idhs/population_weights.shtml

Miriam King

Subject: Re: IPUMS-DHS Tip #3: Use POPWT to estimate the number of people with a characteristic
Posted by gonzalo_barreix on Tue, 22 Aug 2023 08:42:53 GMT
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Dear Miriam,
Very useful post about expansion factor.
I want to expand the Mozambique Malaria Indicators Survey 2018 for children (under 5 children) sample. I checked the link that you left that explains how the POPWT was generated for some DHS surveys but I still have doubts about how would the KIDWT would be constructed. May be you can clarifiy on this.
For expanding under5 children should I:

1)Use the KR file of the MIS 2018, and only with the alive kids compute:
KTWT= (v005/(sum of 2018 under5 v005))* (2018 Under5 Mozambique Population) ?
2)Use the PR file of the MIS 2018 and compute:
KTWT= (hv005/(sum of 2018 total population hv005))* (2018 Total Mozambique Population) ?

How is the proper way to do this?

Or maybe if it is easier to explain, it could be useful if you could clarify me how to exactly the KDWT is computed using an example as the one for POPWT shown in the link you left.

Thanks in advance
Gonzalo Barreix

Subject: Re: IPUMS-DHS Tip #3: Use POPWT to estimate the number of people with a characteristic
Posted by gcorcora on Tue, 22 Aug 2023 16:42:07 GMT
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Dear Gonzalo Barreix,

I can answer your question for Miriam, as I wrote the code for POPWT.

For expanding children under 5 in the Mozambique MIS 2018 survey, you will want to use the first of the two methods you mentioned.

Specifically, using the MIS 2018 Mozambique KR file compute:

KTWT= (v005/(sum of 2018 under age 5 in sample))*(2018 under age 5 Mozambique population)

I hope this helps! Please respond here if you have any further questions

Gretchen Corcoran

Subject: Re: IPUMS-DHS Tip #3: Use POPWT to estimate the number of people with a characteristic
Posted by gonzalo_barreix on Wed, 23 Aug 2023 07:34:52 GMT
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Thanks for the replay Gretchen!
A last question:
Also using the 2018 Mozambique MIS KT file, if I would like to expand the children population of age 0, how would be the correct way?

1- KTWTi= (v005i/(sum of 2018 under age 5 in sample))*(2018 under age 5 Mozambique population) for childen i age 0
2- KTWTi= (v005i/(sum of 2018 age 0 in sample))*(2018 age 0 Mozambique population) for childen i age 0

Best,
Gonzalo Barreix

Subject: Re: IPUMS-DHS Tip #3: Use POPWT to estimate the number of people with a characteristic
Posted by gcorcora on Mon, 28 Aug 2023 16:53:01 GMT
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Hi Gonzalo,

Great question! We used UN population numbers to calculate the population counts, which are only available in 5 year increments. Unfortunately that means there is no number available for population under age 1, so the second method (v005i/(sum of 2018 age 0 in sample))*(2018 age 0 Mozambique population) for children i age 0 isn't feasible unless you were able to get the numbers elsewhere. Thus the 1st method, (v005i/(sum of 2018 under age 5 in sample))*(2018 under age 5 Mozambique population) for children i age 0 is the option that would work with the data available.

Let me know if the above isn't clear or you have any further questions.

Thanks!

Gretchen Corcoran

Subject: Re: IPUMS-DHS Tip #3: Use POPWT to estimate the number of people with a characteristic
Posted by gonzalo_barreix on Fri, 01 Sep 2023 08:10:22 GMT
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Dear Gretchen,
Thanks again for your answer. So, in the case I finde the under 1 age population, the 2nd method would be better? Because I actually have that information, because there is also a disagregation by 1 year of age.

Thanks,
Gonzalo

Subject: Re: IPUMS-DHS Tip #3: Use POPWT to estimate the number of people with a characteristic
Posted by Anonymous on Mon, 11 Sep 2023 17:14:54 GMT
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Thanks for sharing this helpful tip! Using the POPWT variable to estimate absolute numbers is a great idea that I haven't tried before. Knowing the total number of people with certain

characteristics will definitely help with planning and resources allocation.

I appreciate you linking to the user note that explains how POPWT is calculated. It's useful to understand that it relies on the household weights and UN population data. Knowing it has a similar margin of error to the household weights gives me confidence in using it.

Being able to extend the analysis beyond just proportions to real counts of people will open up new possibilities for the research I can conduct with DHS data. I look forward to the upcoming expansion of POPWT to women of childbearing age. Thanks again calendar 2024 with holidays for sharing this invaluable tip!https://www.typecalendar.com/printable-yearly-calendarhttps://www.typecalendar.com/household-budget.html