Subject: Rotav Vaccine and nutrition Posted by backclac on Fri, 11 Aug 2023 02:01:42 GMT View Forum Message <> Reply to Message

I am new here. I am not sure of which DHS file to use(I guess the PR is appropriate) for these variables and the corresponding recode: Categorical covariates:

- 1. Sex (male or female)
- 2. BCG vaccination (yes or no)
- 3. Exclusively Breastfed (yes or no)
- 4. Pneumococcal vaccination (none, incomplete, complete)
- 5. Rotavirus vaccination
- 6. Diarrhea
- 7. Any insurance coverage (yes or no)
- 8. Education level of the mother (none or primary, high school, college or university)
- 9. Source of drinking water (piped, well or surface, bottled, other)
- 10. Type of toilet facility (flush toilet, latrine, without installation)
- 11. Wealth index (very low, low, medium, high, very high)
- 12. Treating water for drinking (yes or no)

Quantitative covariates:

- 1. Altitude (m above sea level)
- 2. Child age (months)
- 3. Birth weight (grams)
- 4. Number of residents in the household
- 5. Children's Height, Weight, Z-score

Please are these codes from pr file right for the variables above?

Variables: Description

V106: The highest level of education the household member attended.

HV205: Type of toilet facility in the household. Individual codes are country-specific, but the major categories are standard.

HV230B: Presence of water at hand washing place

HV235: Location of source for water

HV238A: Location of toilet facility

HV270: Wealth Index Variables

HA67:: Woman's highest year of education (see HV107)

HC1A: Child's age in days, calculated as HV807A HC32A.

HC2: Weight in kilograms (1 dec.)

HC3: Height in centimeters (1 dec.)

HC5: Height/Age Standard deviations

HC8: Weight/Age Standard deviations

HC11: Weight/Height Standard deviations

HC70: Height for age standard deviation (according to WHO)

HC71: Weight for age standard deviation (according to WHO)

HC72: Weight for height standard deviations (according to WHO)

HC70: Height for age standard deviation (according to WHO)
V418: Number of entries in the immunization history
H2: Whether a date of vaccination was recorded on the health card for BCG
H2D: BCG vaccination date - day.
H9A: Measles 2 vaccination. As for H2, H2D, H2M, H2Y
H56: Pneumococcal 3
H59: Rotavirus 3
M34: The first digit gives the units in which the respondent gave her answer.

M38: Whether the child drank anything from a bottle with a nipple during the previous day and night.

M39: The number of times the children received anything to eat, aside from breast milk, including both meals and snacks. Children who are exclusively breastfed are coded 0.BASE: Youngest children under 24 (36) months living with their mother.

Please I couldn't find these ??: Sex (male or female) ??: Diarrhea ??: Altitude (above sea level)

Thank you

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Tue, 15 Aug 2023 10:03:58 GMT View Forum Message <> Reply to Message

Hello,

Please help merge the pr file from Sub-Saharan African Countries(38 countries) I get error message whenever I do this:

...r

```
> sa4<-merge(gh,ug,by=c("hv001","hv002"),all.x=TRUE, all.y=TRUE)
> sa5<-merge(sa4,sz,by=c("hv001","hv002"),all.x=TRUE, all.y=TRUE)
> sa6<-merge(sa5,td,by=c("hv001","hv002"),all.x=TRUE, all.y=TRUE)
Error: cannot allocate vector of size 16.4 Mb
...r</pre>
```

kindly help me Thank you

Subject: Re: Rotav Vaccine and nutrition Posted by Janet-DHS on Tue, 15 Aug 2023 16:06:35 GMT Following is a response from DHS staff member, Tom Pullum:

You have made a good start at identifying variables. The main files that people use are the PR file, which lists all persons in the selected households (hv104 is sex), the IR file, for women age 15-49, and the KR file, for children born in the past 5 years (b4 is sex and h11 is diarrhea). The KR file includes most of the characteristics of the mother that are in the BR file. There are separate geographic files that include altitude and many other cluster-level characteristics.

The Guide to DHS Statistics (https://www.dhsprogram.com/Data/Guide-to-DHS-Statistics/inde x.cfm) may be helpful. Also you can easily find tutorials on the website. Click on the "Data" tab at http://www.dhsprogram.com.

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Wed, 16 Aug 2023 15:13:02 GMT View Forum Message <> Reply to Message

Dear Janet,

I am grateful for your quick response. It motivates me to carry on in this study. Thank you

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Wed, 23 Aug 2023 20:11:04 GMT View Forum Message <> Reply to Message

Hello

I have noticed that the Indicator Data API (https://api.dhsprogram.com/#/api-data.cfm)contains most of the indicators I need for my research project and it is easy to merge 37 SSA countries with the rdhs, devtools packages in the r language.

Please is it appropriate to use the indicator DATA API or do I strictly have to use the individual files /datasets and calculate the indicators myself?

Please which is the recommended way? Thank you

Subject: Re: Rotav Vaccine and nutrition Posted by Janet-DHS on Thu, 24 Aug 2023 17:58:19 GMT View Forum Message <> Reply to Message

Following is a response from DHS staff member, Tom Pullum:

You can definitely use the API indicators directly. They have been calculated from the data files. If you re-calculated them yourself, you would (or should!) get exactly the same results.

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Thu, 31 Aug 2023 12:07:38 GMT View Forum Message <> Reply to Message

Thank you

I can't access the API indicator today (31st August 2023, 20:01 China time). There is an error message when using the code I have been using to access the indicators for countries. \sum{r}

json_file<- fromJSON(" http://api.dhsprogram.com/rest/dhs/v8/data?countryIds=AO,BF, BJ,BU,CD,CF,CG,CI,CM,ET,GA,GH,GM,GN,KE,KM,LB,LS,MD,ML,MR,MW, MZ,NG,NI,NM,RW,SL,SN,ST,SZ,TD,TG,TZ,UG,ZA,ZM&indicatorId s=CN_NUTS_C_HA3")

Error in fromJSON(content, handler, default.size, depth, allowComments, : invalid JSON input

•••

Kindly advise me. Thank you

Subject: Re: Rotav Vaccine and nutrition Posted by admin on Thu, 31 Aug 2023 14:57:26 GMT View Forum Message <> Reply to Message

The JSON from your API request appears fine to us. Please check it again.

You can validate it here. https://jsonlint.com/

Also the recommended format is this: https://api.dhsprogram.com/rest/dhs/data?countryIds=AO,BF,BJ ,BU,CD,CF,CG,CI,CM,ET,GA,GH,GM,GN,KE,KM,LB,LS,MD,ML,MR,MW,MZ ,NG,NI,NM,RW,SL,SN,ST,SZ,TD,TG,TZ,UG,ZA,ZM&indicatorIds= CN_NUTS_C_HA3

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Mon, 04 Sep 2023 01:39:33 GMT Thank you for your quick response and guide

I have noticed that the error happens whenever I use this indicator code: CH_VAC1_C_PN3

I am forced to use an alternative like CH_VACC_C_PN3, which contains data from only three countries.

Thank you once again

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Mon, 04 Sep 2023 01:48:47 GMT View Forum Message <> Reply to Message

Hello Prof,

I have been able to extract the indicators needed for my project from the API using the following r syntax;

```{r}

#library

- > library(devtools)
- > library(usethis)
- > library(rdhs)
- > library(RJSONIO)
- > library(tidyverse)

#example

#No education ED\_EDUC\_W\_NED
> json\_file<- fromJSON(" https://api.dhsprogram.com/rest/dhs/data?countryIds=AO,BF,BJ
,BU,CD,CF,CG,CI,CM,ET,GA,GH,GM,GN,KE,KM,LB,LS,MD,ML,MR,MW,MZ
,NG,NI,NM,RW,SL,SN,ST,SZ,TD,TG,TZ,UG,ZA,ZM&indicatorIds= ED\_EDUC\_W\_NED")
> json\_data1<- lapply(json\_file\$Data, function(x){unlist(x)})
> APIdata23<-as.data.frame(do.call("rbind",json\_data1),stringsAsFactors = FALSE)
> xtabs(as.numeric(Value)~SurveyId,data=APIdata23)

#Selecting specific variables xt1<-APIdata23 %>% select(CountryName,SurveyYearLabel,Survey,Value, DenominatorWeighted) View(xt1)

#I then selected and copied the viewed table to Excel
#I then calculate the number of population (N) as
N =(Value/100)\*DenominatorWeighted
# I will then import the Excel file into r for complex analysis but I want to be sure if I am on track.

I have also realized that the indicator code CH\_DIAT\_C\_ORZ has some different values for the same survey year due to a change in DenominatorWeighted. I guess it is appropriate to use the values with the highest DenominatorWeighted

Kindly advice me Thank you

Subject: Re: Rotav Vaccine and nutrition Posted by Janet-DHS on Thu, 07 Sep 2023 21:18:21 GMT View Forum Message <> Reply to Message

Following is a response from DHS staff member, Tom Pullum:

It's difficult to figure out what you are asking, but I think the important issue is whether you should be doing this analysis with the API. It could be better to go to the data files. In your code, you are apparently trying to use a rate ("Value") and its denominator ("DenominatorWeighted") to calculate the numerator of the rate (which you call "N") so you can do some further analysis. Wouldn't it be better to do an individual-level analysis of the child data in the KR file? In the KR file you have information about immunizations and nutrition for individual children and you can make adjustments for the survey design (weights, clustering, and stratification). You will have information about the association between immunizations and nutrition, for example, if you use the KR file.

If your question is just about which of alternative values of "DenominatorWeighted" to use, that will depend on which subpopulations they describe--which should be documented on the API or on STATcompiler--and which subpopulation is most appropriate for your analysis. I don't think it would be safe just to go with the highest value.

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Fri, 08 Sep 2023 02:13:39 GMT View Forum Message <> Reply to Message

## Thank you

You got my questions right

I was having a challenge merging all Sub-Saharan African (SSA) countries together with the KR file, that's why I decided to use the API which has weighted values and r syntax for extracting indicators from all the SSA countries with ease. Then all the extracted indicators from the SSA countries were in one Excel sheet for further analysis with R programming language. However, I will revert to the KR files again as you advised.

Subject: Re: Rotav Vaccine and nutrition

I have replicated your CH\_VAC.R file in the GitHub ( https://github.com/DHSProgram/DHS-Indicators-R/blob/main/Cha p10\_CH/CH\_VAC.R), which is helpful for my research project. However, I need your advice on the following; 1. I noticed that Angola's KR file does not have the variable "KRdata\$h54" for Pneumococcal vaccines but rather h2d, h2m and h2y. These codes are the same for the Pneumococcal vaccination 1,2,& 3. Apparently I used h2 for PCV1, h2y for both PVC2 & PVC3 Please is this right?

2. Does the "#Total" variable, created in the Excel sheet represent the coverage for each vaccine or do I have to calculate it?

Please how do I calculate it, if I am supposed to?

3. Is it appropriate to use the "KRhw" variables to calculate the stunt and wast indicators for each SSA country?

Please let me know how to proceed

4. I also have to calculate the following indicators; "Exclusive Breastfeeding", "wealth index" and educational level.

Please are there variables in the KR file that will help me calculate those indicators or do I have to use a different file?

5. I will do logistic regression, multivariate regression, Propensity and Forest. Is it appropriate to use the "#Total" variable in the Excel table to calculate these variables?

Please permit me, because I am trying to understand DHS data and R programming language. Thank you

Subject: Re: Rotav Vaccine and nutrition Posted by Janet-DHS on Fri, 15 Sep 2023 21:36:51 GMT View Forum Message <> Reply to Message

Following is a response from DHS staff member, Tom Pullum:

You have asked a number of very specific questions and I probably can't answer all of them, especially since I do not use R. However, I have problems understanding your basic approach. Why are you using Excel? I can understand exporting summary results into Excel because of its advantages for formatting and graphics, but Excel is not good for analysis. The methods you describe in step 5 are not available in Excel (so far as I know, anyway). For example, I just don't understand your questions about "#Total" in steps 2 and 5.

Stunting, underweight, and wasting are calculated using hc70-hc72 in the PR file or hw70-hw72 in the KR file. You will find the steps in previous forum posts and in the Guide to DHS Statistics. The

estimates from the PR file refer to all children in the sample households and the estimates from the KR file refer to the children who are also in the birth histories of the women in the survey of women.

Exclusive breastfeeding is also a constructed variable, using code related to infant and young child feeding (IYCF) that is available on github. The wealth quintiles are coded in all the files--hv270 in the PR file and v190 in the IR and KR files.

Your goal of assembling lots of indicators for all SSA surveys is very ambitious. I suggest that you either (a) use the indicators as they exist in STATcompiler or the API, or (b) dramatically reduce the number of surveys or indicators that you want to include. When I suggested going to the KR files, I didn't realize that you planned to use so many indicators.

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Sat, 16 Sep 2023 13:12:47 GMT View Forum Message <> Reply to Message

Thank you I will go back to the API indicators I am grateful

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Wed, 11 Oct 2023 02:16:47 GMT View Forum Message <> Reply to Message

Hello Prof.

1. Please is it possible to calculate improved water and sanitation indicators restricted to children under 5 years who had diarrhoea 2 weeks before the survey? I have seen your syntax on PH\_Water.R and PH\_Sani.R using the PR file but is it possible to use KR file?

2. I used the KR file to calculate other Child Health indicators restricted to children under 5 years who had diarrhoea 2 weeks before the survey.

In the context of standardization or using the same target group (children under 5 years who had diarrhoea 2 weeks before the survey), is it possible to use the KR file?

Example #exclusive Breastfeed ```{r} KRiycf <- KRiycf %>% mutate(nt\_ebf = case\_when(ch\_diar==1 &

```
age<6 & nt_bf_status==1 ~ 1 ,
age<6 & nt_bf_status!=1 ~ 0,ch_diar==1 ~ 0)) %>%
set_value_labels(nt_ebf = c("Yes" = 1, "No"=0)) %>%
set_variable_labels(nt_ebf = "Exclusively breastfed - last-born under 6 months")
```

Where I think "ch\_diar==1", represents children who had diarrhoea 2 weeks before the survey. so the syntax above is supposed to generate children who had diarrhoea 2 weeks before the survey and were exclusively breastfed. 3. Please is that right?

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Thu, 12 Oct 2023 01:52:51 GMT View Forum Message <> Reply to Message

Please one more thing. How do I calculate the total number of clusters and mothers (15-49 years) who were interviewed for KR file variables? Thank you

Subject: Re: Rotav Vaccine and nutrition Posted by Janet-DHS on Fri, 13 Oct 2023 17:30:53 GMT View Forum Message <> Reply to Message

Following is a response from DHS staff member, Tom Pullum:

The water and sanitation indicators are household-specific. They are among the hv2\* variables in the HR file. You can merge them into the KR file by sorting and matching hv001 hv002 in the HR file with v001 v002 in the KR file. Then relate them to h11 (diarrhea in the past two weeks).

The KR file only contains children born in the past 5 years. You do not need to add any restrictions to get children born in the past 5 years.

If you want to see whether sanitation is related to diarrhea you need to include children who DID NOT have diarrhea, as well as children who DID. You cannot establish a relationship after selecting on the dependent variable.

I don't know what you mean by "standardization". If you are referring to the method of direct standardization, I don't see how it's relevant in this context.

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Sat, 14 Oct 2023 10:25:16 GMT Thank you for the response.

I thought my project should focus only on children under 5 years old who had diarrhoea but I understand you. It should be a Kind of "case" and "control" group.

By standardization or uniformity; I meant using the same target group that had diarrhoea for calculating my indicators. After determining those who had diarrhoea and those who did not.

However, I will use both populations in the calculation as advised.

I am just wondering about the effect of this indicator variable "ch\_diar==1" in my syntax below, adopted from CH\_DIA.R. on github.

My understanding is to generate only children who answered yes to "Diarrhea in the 2 weeks before the survey" and were exclusively breastfed or breastfeeding. This will be the same for estimating other indicators.

Please how do I submit the cross-tabulation generated from my R syntax for verification? I believe it will help me explain my confusion better.

Example

## # //Diarrhea symptoms

```
```{r}
cgkr <- cgkr %>%
 mutate(ch_diar =
      case_when(
        (h11=1 | h11=2) \& b5=1 \sim 1,
        b5==1 ~ 0 )) %>%
 set_value_labels(ch_diar = c("Yes" = 1, "No"=0)) %>%
 set variable labels(ch diar = "Diarrhea in the 2 weeks before the survey")
...
#//# //Diarrhea treatment
 `{r}
cgkr <- cgkr %>%
 mutate(ch_diar_care =
      case_when(
        ch diar==1 &
         (h12a == 1 | h12b == 1 | h12c == 1 | h12d == 1 | h12e == 1 | h12f == 1 |
         h12g == 1 | h12h == 1 | h12i == 1 | h12j == 1 | h12k == 1 | h12l == 1 |
         h12m == 1 | h12n == 1 | h12o == 1 | h12p == 1 | h12q == 1 | h12r == 1 |
         h12s == 1 |
                             h12u = 1 | h12v = 1 | h12w = 1 | h12x = 1 ) \sim 1,
        ch_diar==1 ~ 0)) %>%
 set_value_labels(ch_diar_care = c("Yes" = 1, "No"=0)) %>%
 set_variable_labels(ch_diar_care = "Advice or treatment sought for diarrhea")
```

ch_diar==1 & nt_ebf: "Diarrhea in the 2 weeks before the survey" and were/are exclusively
breastfed/ breastfeeding???
```{r}
cgkr <- cgkr %>%
mutate(nt\_ebf =
case\_when(ch\_diar==1 &
age<6 & nt\_bf\_status==1 ~ 1,
age<6 & nt\_bf\_status!=1 ~ 0,ch\_diar==1 ~ 0)) %>%
set\_value\_labels(nt\_ebf = c("Yes" = 1, "No"=0 )) %>%
set\_variable\_labels(nt\_ebf = "Exclusively breastfed - last-born under 6 months")
````

I am grateful for your guidance.

• • •

Subject: Re: Rotav Vaccine and nutrition Posted by psychebeyondpsychologist on Tue, 17 Oct 2023 12:50:42 GMT View Forum Message <> Reply to Message

At Psyche & Beyond, we strive to solve the complexities affecting the quality of life to help individuals improve their mental health and well being. We are a specialist Child & Adult private mental health practice, providing comprehensive mental health consultation, assessment, and intervention for a wide range of mental health issues. We support children, adults and families to manage and overcome the challenges and struggles they often face in their daily lives. We offer counselling services through highly qualified, licensed and professionally trained counsellors. Our therapists adopts a person-centred approach, which means that counselling and support is customised to meet the unique needs of each client.

Subject: Re: Rotav Vaccine and nutrition Posted by Janet-DHS on Tue, 17 Oct 2023 16:30:04 GMT View Forum Message <> Reply to Message

Following is a response from DHS staff member, Tom Pullum:

Sorry--I don't use R. Basically I recommend that you think in terms of variables rather than sub-populations. Children can be classified according to a nutrition variable (for example, with categories for exclusive breastfeeding, partial breastfeeding, not being breastfed at all) and diarrhea in the past two weeks (yes / no). You can cross-tabulate these two variables, or you can do a logit regression of the diarrhea variable on the nutrition variable, to see whether there is an association. You need to include controls for age, etc., which is much easier with a multivariate method such as regression than with tabulation. You should be able to find many examples of this type of analysis if you search the literature on child health and nutrition.

If you restrict your analysis to children who have diarrhea, then you can only describe that group, and can't get at how they differ from children who do not have diarrhea.

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Wed, 18 Oct 2023 01:54:21 GMT View Forum Message <> Reply to Message

Thank you I appreciate that.

Please help me estimate the following;1. Total number of clusters in the survey2. Mortality among the under-five years (due to diarrhoea, if possible)

Thank you once again, your continuous guidance has been helpful to me

Subject: Re: Rotav Vaccine and nutrition Posted by Janet-DHS on Mon, 23 Oct 2023 19:25:36 GMT View Forum Message <> Reply to Message

Following is a response from DHS staff member, Tom Pullum:

In Stata there would be many ways to find out the number of clusters in a survey. Here is an illustration of two of them with the Angola 2015-16 survey. For Stata commands such as these you can extract the numerical results for later use. There are probably similar commands in R.

use "...AOPR71FL.DTA", clear

* The following command will tell you how many unique values hv001 has codebook hv001

* Alternative approach gen n=1 collapse (sum) n, by(hv001) gen line=_n

* The maximum value of "line" will be the number of clusters summarize line

The KR file includes all children born in the past 5 years, whether they are alive or not. The variable b5 is 1 if the child is alive, 0 if the child has died. But if the child has died, the question about diarrhea in the past two weeks is not applicable. It is not possible to examine the

relationship between diarrhea and survival using DHS data.

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Tue, 24 Oct 2023 00:08:48 GMT View Forum Message <> Reply to Message

Thank you, Prof.

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Thu, 14 Dec 2023 23:30:19 GMT View Forum Message <> Reply to Message

Hello Prof,

Thank you for your help. I've come to a stage in my project where I need to predict outcome variables. However, I'm aware that the survey year varies for each SSA country. I'm utilizing the latest survey year of the DHS. Could you please indicate which file or data from the DHS would assist in predicting my outcomes over time (year) and conducting inequality analysis based on place of residence, maternal education, and wealth index? Thank you

Subject: Re: Rotav Vaccine and nutrition Posted by Janet-DHS on Fri, 22 Dec 2023 14:18:41 GMT View Forum Message <> Reply to Message

Following is a response from DHS staff member, Tom Pullum:

The choice of file depends on your cases or units of analysis. I believe you are analyzing outcomes for children born in the past 5 years, so the KR file would be appropriate. That file includes most of the mother's variables from the IR file, including residence, education, and the wealth index. I suggest that you look at inequality in health outcomes by residence (v025) and region (v024), with education (v106) and wealth (v190) as mediating or intervening variables.

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Sat, 23 Dec 2023 06:33:26 GMT View Forum Message <> Reply to Message

Thank you

Given that each country has a different survey year, how can I predict the outcome based on the survey year? I have come across articles that use the same survey year for member countries in their projections, but how is this done?

Following is a response from DHS staff member, Tom Pullum:

DHS estimates apply only to the date of data collection. We do not make projections, which require at least two surveys, and I would not even recommend interpolating between surveys. If someone else has used DHS data this way, you will have to contact them to find how they did it.

In 2022 I prepared a working paper on the topic of projecting with DHS surveys (https://www.dhsprogram.com/pubs/pdf/WP182/WP182.pdf). The goal was to be able to find whether results in a new DHS survey are consistent with what would have been expected from earlier surveys. However, my basic finding was that projections are too sensitive to the amount of historical data being used, and the inclusion of covariates and nonlinear terms, and must be treated very cautiously. That's why this was issued as a working paper rather than a methodological report.

Subject: Re: Rotav Vaccine and nutrition Posted by backclac on Thu, 04 Jan 2024 08:27:34 GMT View Forum Message <> Reply to Message

Thank you Prof.

Subject: Re: Rotav Vaccine and nutrition Posted by Anonymous on Fri, 02 Feb 2024 10:57:48 GMT View Forum Message <> Reply to Message

I think its hard to know since rotavirus vaccine is given around the same time as symptoms start for some babies. In my case, I think it irritated an already irritable digestive system. My baby didn't eat well for a week after each dose. But the same was true of accidental dairy or soy exposure. What helped us was a much more aggressive reflux treatment, going dairy and soy free, and using periactin to increase appetite. We see a feeding team that includes a GI, dietician, an Speech Pathologist.9apps apk

Subject: Re: Rotav Vaccine and nutrition Posted by Anonymous on Tue, 19 Mar 2024 10:46:21 GMT View Forum Message <> Reply to Message

Thank you