

WORKING ON DHS-8 QUESTIONNAIRES IN EXCEL

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Introduction to Microsoft Excel

An Excel worksheet is a grid with columns and rows. The boxes with light gray outlines where the columns and rows intersect are called cells. Every piece of text in the questionnaire is contained in its own cell. To select a cell, click on it once. You can then cut, copy, paste, or delete a cell or range of cells.

Question text is populated using a formula. The formula uses the question number to the left of (or above) the cell in which the formula resides to match to the appropriate text on the translation worksheet. Changes to question text should only be made on the translation worksheet.

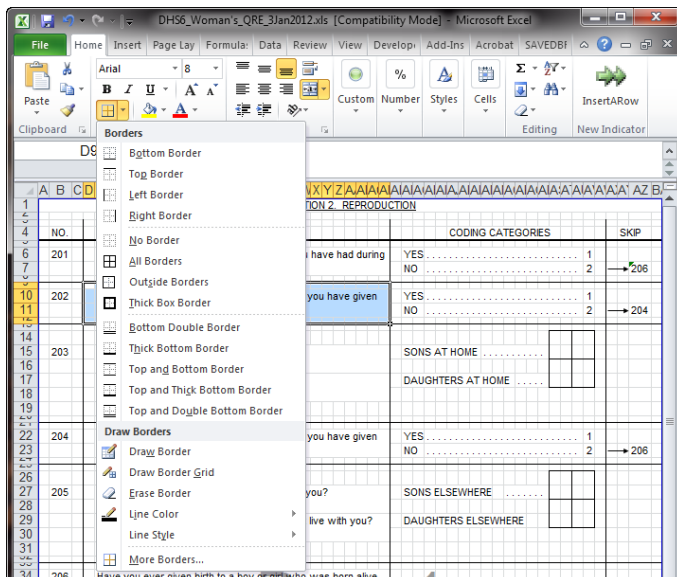
Each column has a letter directly above it. To select an entire column, click on the letter at the top of the column. Rows are designated by numbers to their left. To select an entire row, click on the number to the left of the row. To select all the cells in the Excel worksheet, click on the gray space above Row 1 and to the left of Column A. The instructions in this document are for users of Microsoft Office Excel 2010 or newer versions. The questionnaire files will work in older versions of Excel, but the menus and options may be different.

Questionnaire structure

If you have used Excel before, you will notice the layout of the questionnaire is somewhat unusual, especially the column width and row height. Excel is being used here as a kind of virtual graph paper. The question numbers, question text, coding categories, skip arrows, and skip instructions are contained in the cells, or the boxes of the virtual graph paper.

The lines between questions are simply borders of cells. To draw a border, select the cells to which you want to apply a border, click on the arrow next to the Borders button on the Home ribbon (see Figure 1), and choose the border style you want from the pull-down menu. The boxes in which interviewers record numbers are also cells with a border assigned to them. For the lines between questions, use the standard border style. For the thick lines around filters, use the thick border style.

Figure 1



What to do if... you see only one section of the questionnaire

The questionnaire is made up of several Excel worksheets. In general, there is one section of the questionnaire per worksheet. To move between worksheets, click on the tabs at the bottom of the window (see Figure 2).

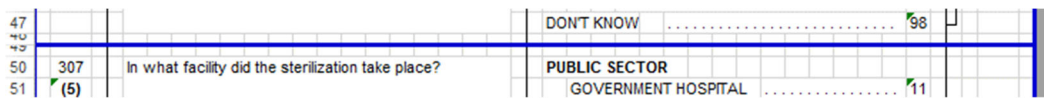
Figure 2



What to do if... you don't see any solid blue lines (page breaks)

The questionnaires should be viewed in Page Break Preview (View > Page Break Preview). In Page Break Preview, the solid blue lines around the questionnaire indicate page boundaries. Solid lines are manual page breaks (see Figure 3). If a dotted line appears, it indicates a soft page break—in other words, where Excel is going to start a new page unless a manual page break is inserted before it. All the page breaks in the questionnaire should be manual page breaks; otherwise, Excel may insert a soft page break into a page that is too long, and it may insert that break in the middle of a question.

Figure 3



To convert a soft (automatic) page break to a manual page break, click on the dotted blue line and drag it up or down. To move a manual page break, just click on the solid blue line and drag. If you drag it too far down the page, Excel will try to fit too much information on one page and it will automatically reduce the size of the font, which will print out too small to read. See "[Printing](#)" for information on correcting this problem.

Translations worksheet

The text for each question in the questionnaire is entered on the Excel worksheet named 'translations' (see Figure 4). This worksheet does not need to be printed.

Figure 4



The first column in the translation worksheet is the CSPro variable. The second column is for the CSPro condition used when one question has different forms depending on prior information. For example, this question is asked two different ways depending on if the pregnancy resulted in a live birth or a still birth - "Where did you give birth to (NAME IN 407)?" or "Where did you deliver this stillbirth?". The third column contains the question number used in the Excel file. This should exactly match the number in the questionnaire worksheet. The formula uses this number to link the question text to the correct place in the questionnaire.

The text for other languages should be entered in a single cell directly to the right of the corresponding question number. Each row will automatically increase to fit the text (AutoFit Row Height) and the text will automatically wrap to the next line within the cell (Wrap Text) (see Figure 5).

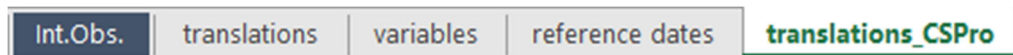
Figure 5

CSPro Field	CSPro Condition	Question Num	ENGLISH	LANGUAGE 2
			IF LESS THAN ONE YEAR, RECORD '00' YEARS.	
AM106_BLOCK		106	In what month and year did you move here?	
AM107		107	Just before you moved here, which [PROVINCE/REGION/STATE] did you live in?	
AM108		108	Just before you moved here, did you live in a city, in a town, or in a rural area?	
AM109		109	Why did you move to this place?	
AM110_BLOCK		110	In what month and year were you born?	
			How old were you at your last birthday?	
AM111		111	COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT.	
AM112		112	In general, would you say your health is very good, good, moderate, bad, or very bad?	
AM113		113	Have you ever attended school?	
AM114		114	What is the highest level of school you attended: primary, secondary, or higher?	
			What is the highest [GRADE/FORM/YEAR] you completed at that level?	
AM115		115	IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'.	

Translations_CSPro worksheet

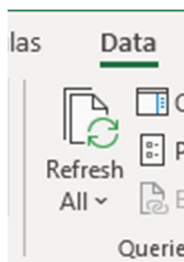
The question text needs to be reformatted before it can be used by CSPro. The worksheet named 'translations_CSPro' provides the input for CSPro (see Figure 6).

Figure 6



Nothing in this worksheet should be change manually. The reformatting is handled by Power Query. Once the translations are finalized in the 'translations' worksheet, go to the 'Data' ribbon and click 'Refresh All' (see Figure 7).

Figure 7



This process will add the CSPro dynamic variables to question text, insert CAPI specific instructions to select questions, and repeat the prompts for dietary recall questions, and finally add the question number to the question text (see Figure 8). The data processing specialist can then use this table to update the QSF file used by the CAPI data collection applications.

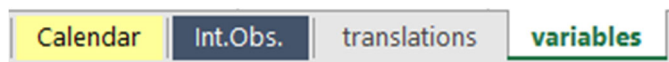
Figure 8

Index	CSPro Field	CSPro Condition	ENGLISH
44	A215	curocc() in 1	215-1. Think back to your first pregnancy. Was that a single pregnancy, twins, or triplets?
45	A215	curocc() in 2:24	215-2. Think back to your next pregnancy. Was that a single pregnancy, twins, or triplets?
46	A216	A215 = 1	216-1. Was the baby born alive, born dead, or did you have a miscarriage or abortion?
47	A216	twinnum = 1	216-2. Was the first baby in this pregnancy born alive or born dead?
48	A216	twinnum > 1	216-3. Was the next baby in this pregnancy born alive or born dead?
49	A217		217. Did the baby cry, move, or breathe?
48	A218		218. What name was given to the baby?
50			RECORD NAME.
51	A219		219. Is ~A218(APLINE)~ a boy or a girl?
52	A220_BLOCK	pregtype = 1	220-1. On what day, month, and year was ~A218(APLINE)~ born?
53	A220_BLOCK	pregtype = 0	220-2. On what day, month, and year did this pregnancy end?
54	A221_BLOCK		221. How long did this pregnancy last in weeks or months?
55	A222	curocc() in 1	222-1. Were there any other pregnancies before this pregnancy?
56	A222	curocc() in 2:24	222-2. Were there any other pregnancies between the previous pregnancy and this pregnancy?
57	A222A		222A. Have you had any pregnancies that ended since the last pregnancy mentioned?
58	A224		224. Is ~A218(APLINE)~ still alive?
59	A225	A219(APLINE) = 1	225-1. How old was ~A218(APLINE)~ at his last birthday?
60	A225	A219(APLINE) = 2	225-2. How old was ~A218(APLINE)~ at her last birthday?
61	A226		226. Is ~A218(APLINE)~ living with you?
62	A228_BLOCK	A219(APLINE) = 1	228a1. How old was ~A218(APLINE)~ when he died?
63	A228_BLOCK	A219(APLINE) = 2	228b1. How old was ~A218(APLINE)~ when she died?
	62	A228N	A219(APLINE) = 1 THEN ASK: Exactly how many months old was ~A218(APLINE)~ when he died?
64			RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS. 228b2. IF '12 MONTHS' OR '1 YR', ASK: Did ~A218(APLINE)~ have her first birthday?
	63	A228N	A219(APLINE) = 2 THEN ASK: Exactly how many months old was ~A218(APLINE)~ when she died?
65			RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.

Variables worksheet

The worksheet named 'variables' contains a table of the human readable dynamic question text and the CSPro dynamic variable used by the CAPI system (see Figure 9).

Figure 9



This table contains the text and variables used by the standard DHS-8 data collection applications (see Figure 10). This table only needs updating if the survey is adding survey specific questions that will use a dynamic text variable. Consult with the data processing specialist for any question additions. Questions in the same section can use the same placeholder. For example, a country specific question added to Section 5 should use {NAME IN 503}. Never use just {NAME}. The last column lists which questions use which variables and is for reference only.

Figure 10

	A	B	C
1	CSPRO Variable	Human Text	Used in Question
2	~A208~	(NUMBER OF BIRTHS)	209
3	~A218(APLINE)~	(NAME IN 218)	219, 220, 224, 225, 226, 227, 228
4	~ALPHMETH~	(METHOD)	314, 322, 330, 317D, 317F, 317H
5	~EVENT1~	(EVENT ONE)	317B, 317D
6	~MNSTHR1~ ~YEAR1~	(MONTH/YEAR ONE)	317B, 317D
7	~EVENT2~	(EVENT TWO)	317B
8	~MNSTHR2~ ~YEAR2~	(MONTH/YEAR TWO)	317B
9	~MNSTHR1~ ~A314Y~	(DATE FROM 314)	322
10	~MNSTHR1~ ~A406Y~	(DATE FROM 406)	408b, 434b, 447b, 464b, 476b, 478b
11	~A407~	(NAME IN 407)	438, 439, 440, 441, 442, 443, 447a, 452, 453, 454, 460, 461, 462, 463, 469, 470, 471, 473, 480, 482, 483, 485, 486, 408a, 434a, 435a, 436a, 447a, 464a, 473b, 473e, 476a, 478a
12	~FACILITY~	(FACILITY IN 435)	447a, 447b, 460
13	~A503N~	(NAME IN 503)	Q503N, 504, 505, 507, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529
14	~A603N~	(NAME IN 603)	604, 605, 606, 608, 610, 615, 618, 619, 620, 621, 622, 629, 630, 631, 633, 607a, 607b, 607c, 609a, 609b
15	~A635N~	(NAME IN 635)	639, 640, 641, 642, 636a
16	~A407(BIRTHS2)~	(CHILD NAME)	1015
17	~PARTNER~	(husband/partner)	709, 710, 711, 712, 715a, 715b, 719, 720, 818, 819, 820, 822, 902, 903, 906, 907, 919, 920, 921, 922, 1049, 1050
18	~PARTNER~s	(husband/s/partner's)	908

Reference dates worksheet

The dates in questions, filters, and instructions are populated using formulas. The dates are saved on a separate worksheet named “reference dates” at the end of the questionnaire (see Figure 11). This worksheet does not need to be printed.

Figure 11



Change the year of fieldwork to the year of the start of fieldwork. In the event that the survey will span two calendar years, use the earlier year (the year the fieldwork starts). For example, if a survey is to span 2022-2023 set the year of fieldwork to 2022. If the survey does span two years, changes will also need to be made to the calendar (see “[What to do if... the survey will span two calendar years](#)”).

Changing only the year of fieldwork in the “reference dates” worksheet will calculate the other reference dates and change the question, filter, or instruction text in the questionnaire accordingly (see Figure 12). See “Reference dates formulas” to understand how the formulas work. While the formulas do the work for you, it is critical that all results of the formulas be checked to ensure that the correct dates are appearing.

Figure 12

	A	B
1	YEAR OF FIELDWORK:	2022
2	FIVE YEARS BEFORE SURVEY:	2017
3	CHILD OLDER THAN 5:	2016
4	CHILD UNDER 4:	2019
5	CHILD UNDER 3:	2020
6	CHILD UNDER 16:	2007
7		

What to do if... the survey will span two calendar years?

If the survey will span two calendar years, the calendar will need to be lengthened to include both years. Select the "calendar" worksheet to switch to the calendar. At the bottom of the calendar, copy the last year's rows to the bottom of the calendar, remembering to include the blank line between years. Then change the formulas for the years to be one higher than previously.

For example, change the formula for the next to last year to be =TEXT(FW_YR-4,"####") instead of =TEXT(FW_YR-5,"####"). Make a similar change for each year up to the year of the start of fieldwork, and then for the second year of fieldwork, change the formula to be =TEXT(FW_YR+1,"####"). Note that will also need to adjust the scaling for everything to fit on one page.

Reference dates formulas

Several filters and instructions and some questions contain dates. These dates are populated from the values in the "reference dates" worksheet. These formulas contain the text portion of the instruction, filter, or question plus a placeholder for the year saved as a named range. For the instruction in Figure 13 below, the formula has text in quotes ("") combined with the date by the ampersand (&). Although this process is automatic

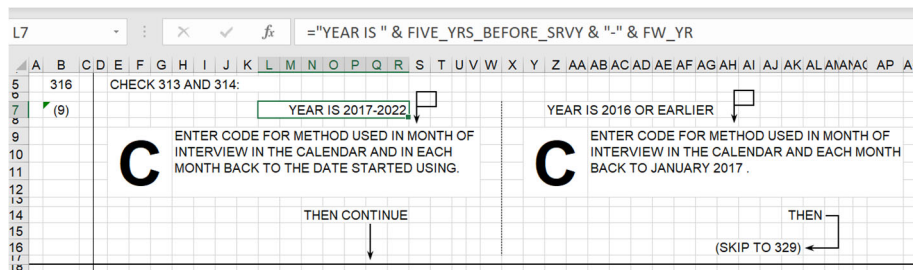
Formula

= "YEAR IS " & FIVE_YRS_BEFORE_SRVY & "-" & FW_YR

Result

YEAR IS 2017-2022

Figure 13



Three types of question text formulas

Formulas are used to populate the space reserved for each question text within the other Excel worksheets in the questionnaire. The formula is the same for most, but not all, questions. The formula uses named ranges to reference the list of all questions (translations table), the selected language (Languages_Selected), and the list of all languages in the questionnaire (Language_Options) which is the same as the languages listed on the cover page. The formula also uses relative cell references using the question location (INDIRECT and ADDRESS functions). Finally, the VLOOKUP function combines all this information to populate the question text. This manual will not go into detail regarding these Excel functions. Next, each question text formula will be described.

This formula can be pasted directly into the space for a new question as long as the question number is in the same row and exactly three columns to the left of the question space:

Question Formula Type 1:

The formula matches the question number in the questionnaire worksheet to the same question number in the translation worksheet. The text is then populated for the selected language. For instance, in Figure 14, cell B9 contains the question number 202 and the merged cells E9-T10 contain the formula that populates the cell with the question text which is exactly 3 columns to the right. See the COLUMN()-3 part of the formula. If the question location changes, change this part of the formula.

```
=VLOOKUP(@INDIRECT(ADDRESS(ROW(),COLUMN()-3)),INDIRECT("translations[[Question Num]:['& Language_Selected &']]"),MATCH(Language_Selected,Language_Options,0)+1,FALSE)
```

Figure 14

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES		SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES	1	
		NO	2	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES	1	
		NO	2	→ 204

Question Formula Type 2:

Some questions, like those in the birth history section, are arranged with the question number directly above the question text. For these questions, a slightly different formula is needed. As you can see in Figure 15, the question number for 215 is located in cell V7 while the question text is located in the merged cells V10-AC20. This formula works for questions where the question number is exactly 3 rows above and in the same column as the question space. See the ROW()-3 part of the formula. If the question location changes, change this part of the formula.

```
=VLOOKUP(INDIRECT(ADDRESS(ROW()-3,COLUMN())),Language_Translations,
```

MATCH(Language_Selected,Language_Options,0),FALSE)

Figure 15

W14 =VLOOKUP(@INDIRECT(ADDRESS(ROW()-5,COLUMN())),INDIRECT("translations[[Question Num]:['& Language_Selected &']")),MATCH(Language_Selected,Language_Options,0)+1,FALSE)

SECTION 2. REPRODUCTION							
1	214 Now I would like to record all your pregnancies including live births, stillbirths, miscarriages, and abortions, starting with your first pregnancy.						
2	RECORD ALL PREGNANCIES. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.						
3							
4							
5							
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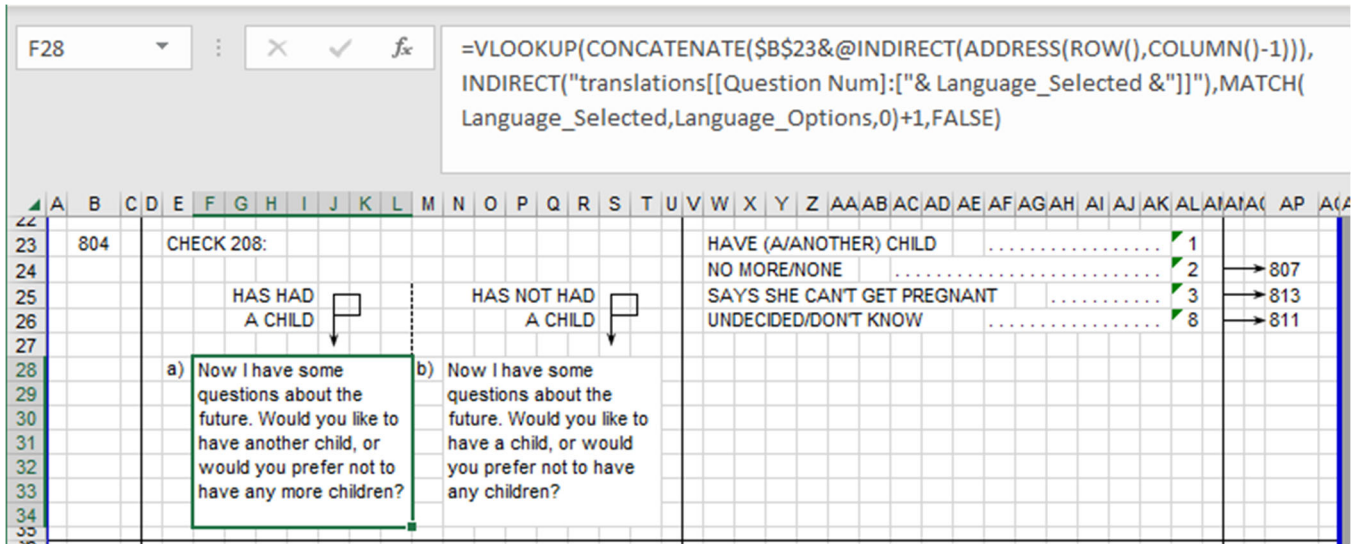
Question Formula Type 3:

Questions with internal filters or sub-questions use a different formula. For these questions, the question number and the sub-question letter are used together to uniquely identify the question text. In Figure 16, question number 804 contains two sub-questions, a) and b) depending on whether the respondent is pregnant or not. The formula contains a fixed reference to the question number in cell B23 and a relative reference to the sub-question letter in same row as the question but one column to the left. See the COLUMN()-1 part of the formula.

The reference to the question number must be changed for each separate question. This formula only applies to WQ705, for other questions you must update the reference to \$B\$23.

```
=VLOOKUP(CONCATENATE($B$23&@INDIRECT(ADDRESS(ROW(),COLUMN()-1))),INDIRECT("translations[[Question Num]:['& Language_Selected &']")],MATCH(Language_Selected,Language_Options,0)+1,FALSE)
```

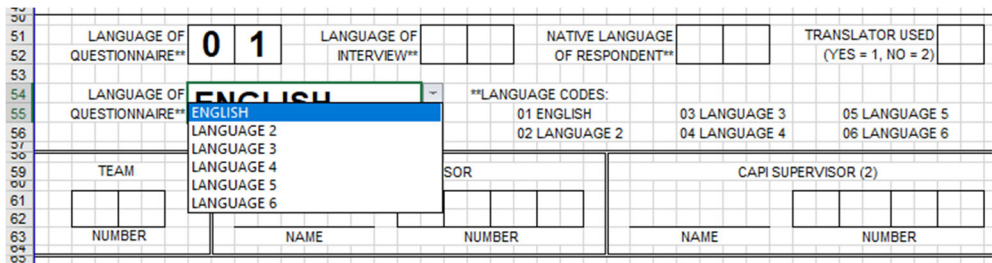
Figure 16



Language of questionnaire

The cover page contains a selection box for choosing the language of the questionnaire. Select the merged area with the language name and click the down arrow to change languages. Once selected, the formulas will automatically update the question text using the selected language (see Figure 17).

Figure 17



What to do if... the question text space displays #N/A

Every question in the questionnaire must have a corresponding line in the translation worksheet. If questions are renumbered or new questions are added, you need to update the translation worksheet as well. The question number in the questionnaire must exactly match the question number in the translation worksheet. Question numbers are formatted as General which stores them as number not as text.

Adding new questions

To insert a new question, it is best to copy and paste an existing question. Here's how:

1. Choose a question to copy that is formatted like the question you want to insert. If you want to insert a question with several coding categories, choose a question with several coding categories. If you want to insert a question that only has responses of YES/NO, choose a question that has responses of YES/NO to copy.
2. Highlight the rows of the question you want to copy (by pointing to the grey row numbers). Highlight the entire rows, not just the cells. Then select copy (Home > Copy, or Ctrl-C) (see Figure 18).

Figure 18

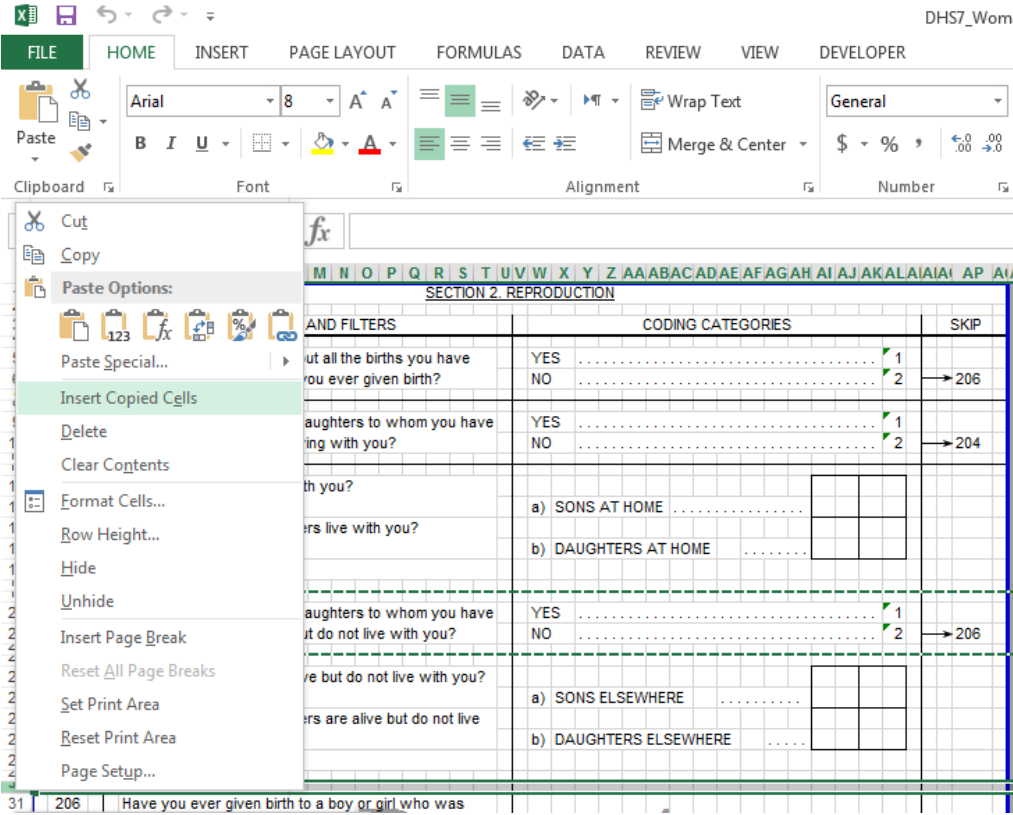
The screenshot shows the Microsoft Excel interface with the 'HOME' ribbon selected. The active cell is A19. The spreadsheet contains a table titled 'SECTION 2. REPRODUCTION' with columns for 'NO.', 'QUESTIONS AND FILTERS', 'CODING CATEGORIES', and 'SKIP'. Row 20 is highlighted in grey, indicating it is selected for copying. The table data is as follows:

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES 1 NO 2	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES 1 NO 2	→ 204
203	a) How many sons live with you? b) And how many daughters live with you? IF NONE, RECORD '00'.	a) SONS AT HOME b) DAUGHTERS AT HOME	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES 1 NO 2	→ 206
205	a) How many sons are alive but do not live with you? b) And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	a) SONS ELSEWHERE b) DAUGHTERS ELSEWHERE	

3. Find the question that will come after your new question. Select the first row of it by clicking on the grey row number to the left of the row. It should be one of the rows with a very short height. You may need to zoom in (View > Zoom) to see what you are doing.

4. Right-click anywhere inside the highlighted row and choose Insert Copied Cells from the menu (see Figure 19)

Figure 19



5. Delete the content of the old question (highlight the cells and press Delete) and type in the new question. If you need to delete a row, select the row to be deleted, right-click, and choose Delete from the menu. To add a new row, select the row below where you want the new row to appear, right-click, and choose Insert from the menu.

Deleting questions

To delete a question, select all the rows of the question (not just the cells), right-click on the highlighted rows, and choose Delete from the menu. Ensure that you also delete the question row on the translation worksheet using this same method. If you delete a question with a skip arrow and the skip arrow remains, you will have to delete it manually. Select the arrow and Delete.

Editing questions

All changes to the question text should be made on the translation worksheet. When adding a new question, first add it to the questionnaire and add a line with the exact same question number to the translation worksheet. To edit question text that is already in the questionnaire, find the row in the translation worksheet that contains that question number and change the text in that cell.

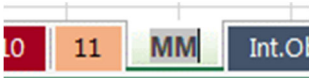
Working with modules

Previously, the modules were stored as separate Excel files. Those files are still maintained for external use and posting to The DHS Program website. However, internal users should utilize the Master Excel Questionnaire. This is an Excel file that contains the Model Questionnaire content and all the Modules available for that questionnaire in one file. There is quite a bit of work in incorporating modules into a questionnaire now that the questionnaires include translation formulas. The work involved in incorporating the translation formulas for the modules has been done for you in the Master Questionnaires. All you have to do is delete the modules you do not need – this will involve deleting the Module Worksheet AND all the Module questions that appear in the translation worksheet. Any renumbering of questions will need to be done in both the section worksheet and the translation worksheet. Ensure that the numbers match exact for each question or the wrong text will be returned in the formula.

What to do if... you need to change a worksheet name?

After adding a module, you may want to change the name of the tab (or worksheet) in the Excel questionnaire file. Double click with the left mouse button in the tab name. The text will be highlighted and you can now type a new name (see Figure 23).

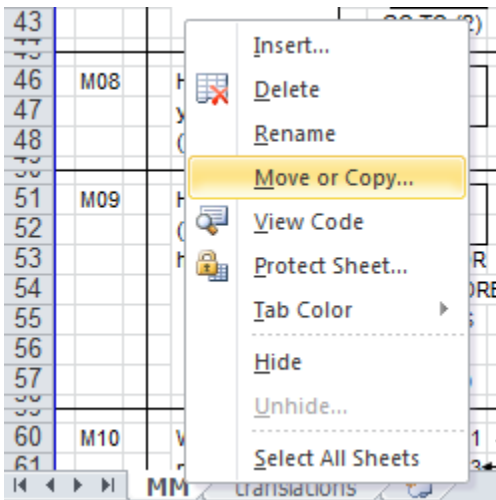
Figure 23



Adding entire worksheets

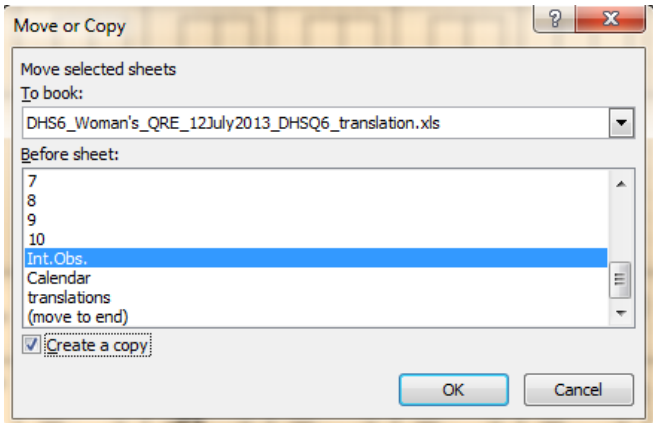
You can add entire worksheets that are stored in separate Excel files. To add an entire worksheet to the questionnaire, open the file from which you want to add and the questionnaire to which you want it added. Right click the worksheet tab in the file you want to add and select Move or Copy (see Figure 24).

Figure 24



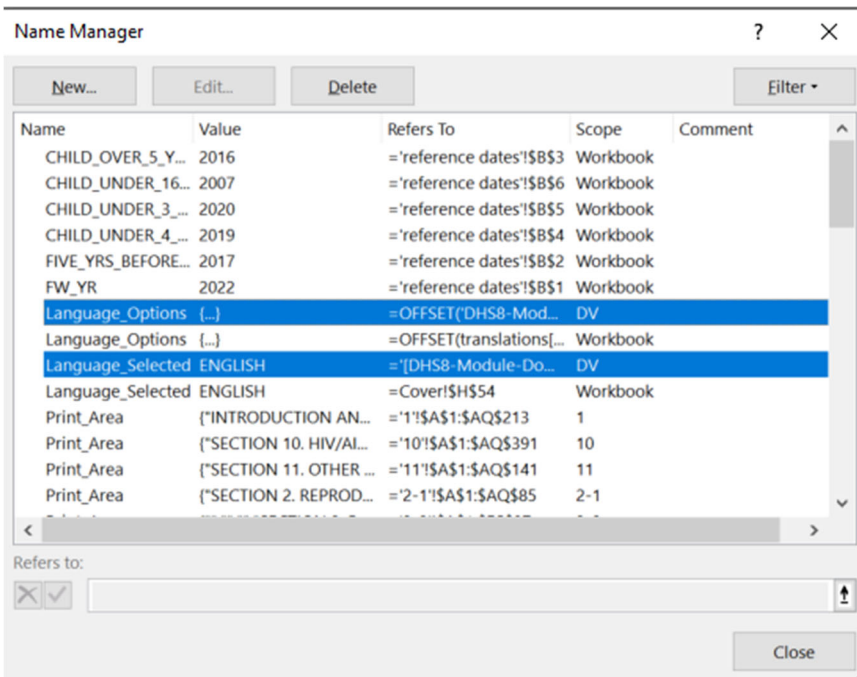
Select the questionnaire to which you want to add this worksheet in the ‘To book’ dialog box, then select the worksheet that you want it to come before, and select ‘Create a copy’ (see Figure 25). The new worksheet will now be added to the questionnaire. In this example, the worksheet will be added before the Interviewer Observations worksheet.

Figure 25



If the new worksheet contains formulas using named ranges, you are not finished because the formulas in the new worksheet are referencing the original file and not the new file. To incorporate the formulas correctly, you will need to delete Named Ranges that were copied over from the source file. Click the Formulas ribbon and select Name Manager. You will see a list of names. Delete any items that ‘Scope’ is not set to Workbook. Note that you cannot change the scope from a single worksheet to the entire workbook. In this example, select the two items with the ‘Scope’ of DV and delete them (see Figure 26).

Figure 26



The question will now display ‘#N/A’ instead of the question text. This is because the question numbers cannot be found in the translation page of the questionnaire file. Copy the question number and text from the translation page in the original file and paste those cells after the last row with text in the translation page of the questionnaire file. If renumbering the questions, be sure to change the numbers in both the questionnaire section and the translation page.

Displaying numbers

Excel will display “#” instead of the number that is residing in the cell if the column width is not wide enough for the number and the cell format is set to Number or General (see Figure 27). To fix this, select the cell with “#”, change the format to Text, and then re-enter the number (see Figure 28). Alternatively, you can enter an apostrophe followed by the number, e.g. ‘944. This automatically formats the number as text.

Figure 27

DAYS AGO	1	
WEEKS AGO	2	
MONTHS AGO	3	
YEARS AGO	4	
IN MENOPAUSE/ HAS HAD HYSTERECTOMY ...	#	
BEFORE LAST BIRTH	995	
NEVER MENSTRUATED	996	

Figure 28

The screenshot shows the Excel interface with the Number Format dropdown menu open. The menu lists the following options:

- General: No specific format
- Number: 994.00
- Currency: \$994.00
- Accounting: \$994.00
- Short Date: 9/20/1902
- Long Date: Saturday, September 20, 1902
- Time: 12:00:00 AM
- Percentage: 99400.00%
- Fraction: 994
- Scientific: 9.94E+02
- Text: 994 (highlighted)

The background shows a spreadsheet with a question in cell A138: "When did your last menstrual period start?" and a question in cell A242: "After the birth of a child, can a woman become pregnant before her menstrual period has..."

All question numbers should be formatted as numbers. If the question number is formatted differently between the questionnaire and the translation worksheet, this will cause an error in the translation formula.

What to do if... you typed in “01” and Excel changed it to “1”

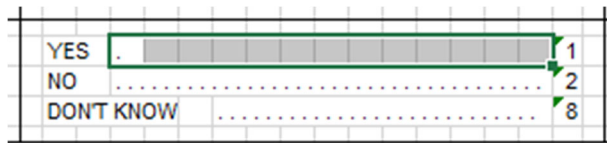
Another related problem is that Excel will display “01” as “1” if the cell format is set to anything other than text. Use the two ways described above to solve this problem. The easiest way is to simply enter the number with a preceding apostrophe, e.g. '01.

Dot leaders

The row of dots leading to a category number (called a *dot leader*) is created using only one dot, one space, and a special setting in the Home > Alignment dialog box. Here's how to do it:

1. Type “. ” (a period/full stop, followed by a space) in the first empty box to the right of the text. To avoid problems printing the questionnaire, make sure the cell with the dot leader does not overlap the text to its left.
2. Select that cell and all the blank cells to its right, up to the coding category itself (see Figure 29).

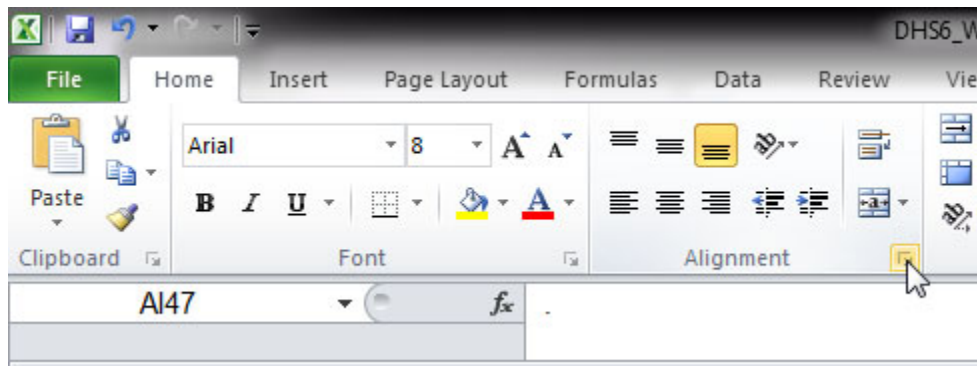
Figure 29



YES	.										1
NO	.	.	.	.	.	.	.	.	.	.	2
DONT KNOW	.	.	.	.	.	.	.	.	.	.	8

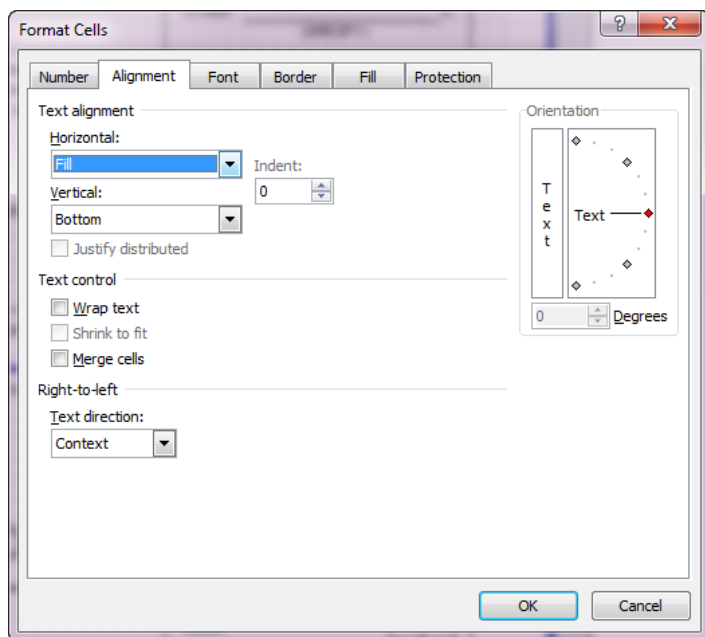
3. Go to Home > Alignment, click on the more arrow (see Figure 30).

Figure 30



4. Under “Alignment”, choose “Fill” from the “Horizontal” drop-down menu (see Figure 31).

Figure 31



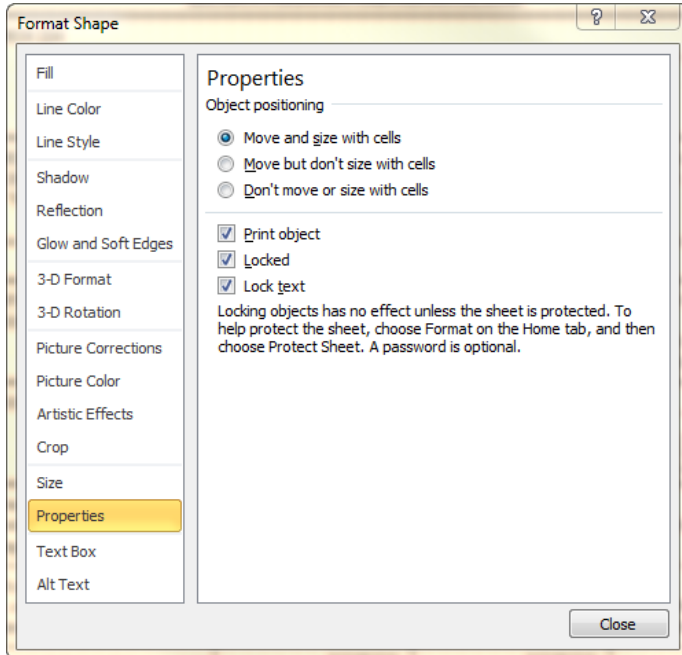
Making global changes

To make changes that affect all the worksheets in a document at once—for instance, to change the header or footer for the entire document—right-click on any of the tabs at the bottom of the screen and choose Select All Sheets. **WARNING:** Any changes you make will apply to ALL sheets. This includes changes such as deleting cell contents, so be very careful what you do when multiple sheets are selected. Note that changing the header or footer with all worksheets selected will also apply the same page layout and scaling that are used in the current worksheet even if you only change the footer. Make global changes sparingly, if ever. It is generally a good idea to save your work before choosing Select All Sheets in case a change was made you did not anticipate and do not want, you can revert back to the previous version. When you have finished making changes, right-click on any worksheet and select Ungroup Sheets from the menu, otherwise, future changes to one worksheet will continue to be made to all grouped worksheets.

Skip arrows and boxes

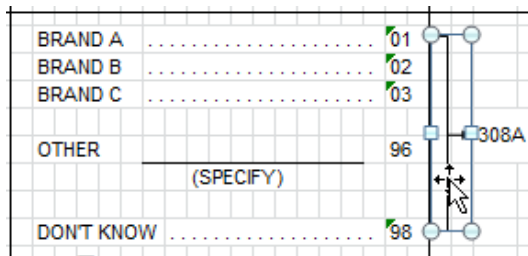
The skip arrows and filter boxes are Excel Shapes. Simple skip arrows are one single line with an arrow at the end. More complex shapes, like bracketed skips or filter boxes, are grouped objects. The Shapes can be anchored to the cells they are in, which means they will move and size with that cell. However, they can also be set to move but not size with the cell, or be set to not move and not size. The skip arrows should all be set to 'Move and size with cells' (see Figure 32).

Figure 32



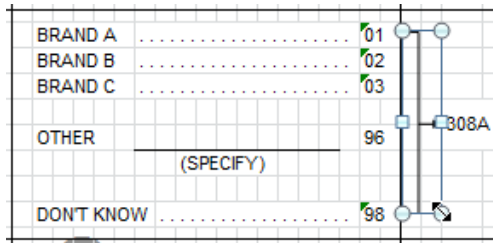
Unless you need an entirely new skip arrow shape, there is no need to create skip arrows from scratch. It is easier to copy a skip arrow or filter box that looks like what you need and modify it. The easiest way to copy and paste Shapes is to select the Shape, not the cell. To select the Shape only, move the mouse over the shape (a skip arrow, for example) and click when the mouse becomes four black arrows (see Figure 33).

Figure 33



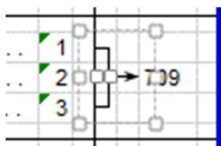
To modify an existing Shape (for instance, to shorten the number of coding categories that are bracketed), select the Shape and then click and hold a corner. This will resize the skip arrow (see Figure 34).

Figure 34



To move individual lines within a bracketed skip arrow, click the skip arrow once to select then click again on the part which you want to move. The larger grouped object will be outlined in dashed lines while the component piece will be selected with white squares at the ends. Using the arrow keys, move the selected piece up or down (see Figure 35). To delete a Shape, simply click on it to select it, and press Delete.

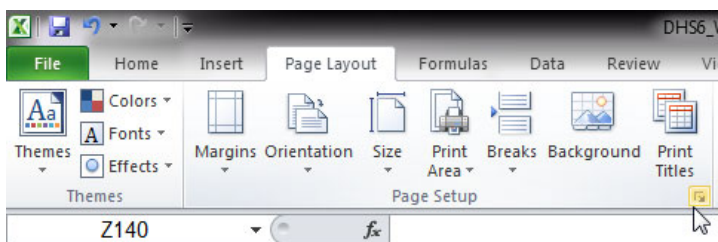
Figure 35



Page numbering

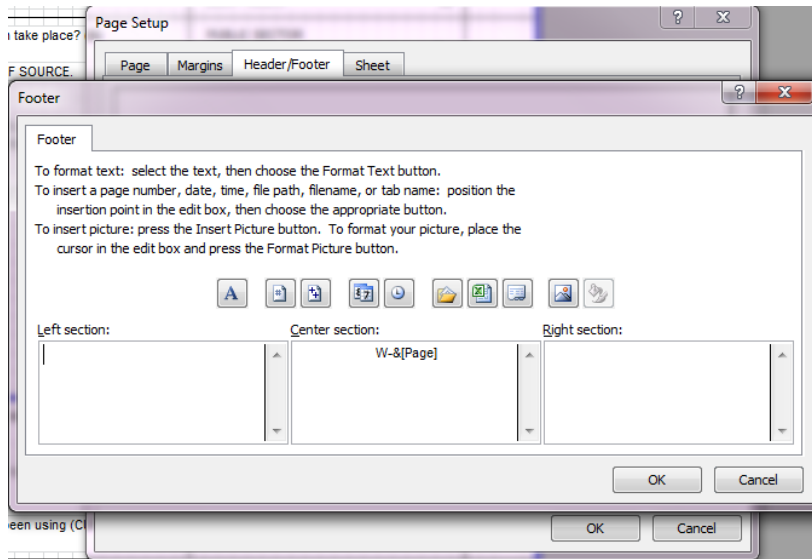
Page numbers are added to the questionnaire using a Custom Footer. To modify the Custom Footer for one worksheet at a time, click the more arrow in the Page Layout > Page Setup menu (see Figure 36).

Figure 36



Under the Header/Footer tab, click Custom Footer. In the Woman’s Questionnaire you will see the text “W- &[Page]” in the Center section (see Figure 37). Excel will replace &[Page] with the relative page number when printing. (In the Man’s Questionnaire you will see “M-&[Page]” in the Custom Footer).

Figure 37



Version control

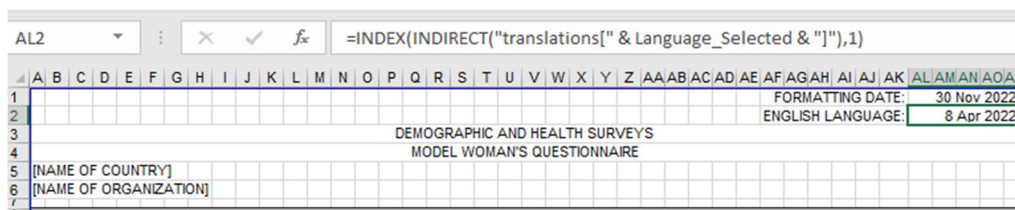
The questionnaire will require many revisions during the questionnaire design process. Keeping careful records of the multiple files created is critical. Each time you save the Excel file, you should change the name of the file. The standard file name convention is:

DHS8_[TYPE]_QRE_[TWO LETTER LANGUAGE CODE]_[DDMMYYYY]_DHSQ8

For example - the women’s questionnaire in English: DHS8_Womans_QRE_EN_29Dec2021_DHSQ8

The questionnaire also contains a place for two dates on the cover page. The Formatting Date is the date when changes were last made to the format, order, or structure of the questionnaire. This date should be changed when questions are added, removed, or re-ordered. The Language date is populated using a formula. This is the date that is entered on the translation worksheet and should reflect the latest version of each language (see Figure 38).

Figure 38



Language Date Formula:

```
=INDEX(INDIRECT("translations[" & Language_Selected & "]"),1)
```

Protecting worksheets

By default, the Model questionnaire files are locked (protected). This means that certain changes are not allowed. For example, users can insert, delete, and resize rows but not columns. Question text formulas cannot be edited. To unlock the worksheet, click the Review ribbon and click 'Unprotect Sheet'. There is no password required. This unlocks the current worksheet and not the entire workbook.

Printing

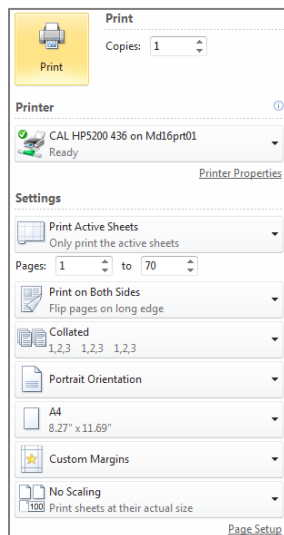
Rather than printing directly from Excel to a printer, we suggest that you create a PDF. There are many free PDF print drivers. To print the entire questionnaire including the translation worksheet, go to File > Print, and under the Settings section, choose "Print Entire Workbook" then click Print. To print just the questionnaire, select all worksheets except "translations", "translations_CSPPro", "variables", and "reference dates". Selected worksheets (tabs) will be a lighter color (see Figure 39).

Figure 39



If you want to print just one section of the questionnaire, you can choose the "Print Active Sheets" button. However the page numbering will not reflect the actual questionnaire page numbers. To print just part of the questionnaire with the correct page numbers, go to File > Print, but don't choose "Print Active Sheets". Instead, choose "Print Entire Workbook", then click the pages in preview and determine which page numbers you wish to print. When you know what pages you need, enter the page numbers you want under "Pages" and click Print (see Figure 40).

Figure 40



What to do if... the PDF file creation software prompts for multiple files?

When printing the entire workbook, you may encounter a problem including the ‘translations’ and ‘reference dates’ worksheets. The print format of these worksheets is set differently than the other worksheets. The PDF creation software will break the print job at this point, prompting you to create an additional file. If this happens, just click cancel on the second file name prompt. The first print request will create a file with the questionnaire worksheets excluding these two worksheets.

What to do if... the skip arrows print in different locations than how they appear on the screen

The skip arrows are Excel Objects and their exact placement is determined by the print driver. If the skip arrows are shifting when printing directly to a printer, first create a PDF of the questionnaire in Excel and then print the PDF file. You can use Adobe or any free PDF creator software.

What to do if... the page prints out too small, with very small text, boxes, and arrows

If the manual page breaks are too far apart and allow the page to include too many questions, Excel will automatically reduce the scale of the output to fit the page. Under Page Layout, check the Scale. Change the scale and adjust the page breaks. All worksheets in the Model Questionnaires have been formatted at 100% (except the household schedule, pregnancy history, and biomarker questionnaires) and to fill the maximum space on both an 8.5” x 11” and an A4 piece of paper.

What to do if... the last border on a page shows on screen but does not print

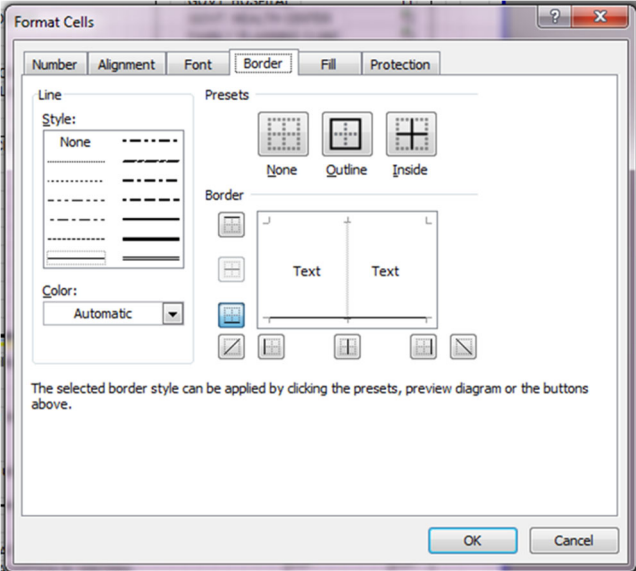
Another common printing problem is that the line below a question shows on screen but does not print, as in Figure 41.

Figure 41

714	Have you been married or lived with a man only once or more than once?	ONLY ONCE	1
		MORE THAN ONCE	2

The last row before the page break must have a bottom border. If the first row after the page break contains a top border only, the print preview will look correct but the printed file will be incorrect. Check the borders by selecting the last row on a page, which is the row just before the page break. Ensure that a bottom border is applied (see Figure 42).

Figure 42



Tips

1. No need to reinvent the wheel. If you need to insert a question, start with an existing question, copy and paste. If you need to insert a new questionnaire section, copy an existing worksheet, paste it, and use it as a template for your new section (right-click on the worksheet, choose Move or Copy, check the “Create a copy” box, and click OK). If you need a new skip arrow, adapt an existing skip arrow. Every time you create something from scratch instead of copying something that already exists, the questionnaire format or structure will become less consistent.
2. Do not change column widths. If you change the width of a column, it affects that whole section of the questionnaire. If it is absolutely necessary to change a column width (for example, if you need to create a complicated table similar to the household schedule in the household questionnaire), create a new worksheet for that section and change the width of the columns for just that worksheet.
3. Keep previous versions of the questionnaire but change the date each time significant modifications are made. Ensure that the date in the file name is the same as the date on the cover page.
4. The formulas can be replaced at any time with the results as text. Simply copy and paste as results as values (see Figure 43, the icon with 123).

Figure 43

