SOP 6. Dietary Dataset production using DINO

1. What
This SOP describes the procedure to follow when generating dietary data outputs from DINO.

2. When
To be carried out for all dietary assessment projects as required. This SOP should only be followed once the dietary data checks have been completed (see SOP 5- Checks to be carried out on Dietary Datasets before producing tables)

3. Who
To be used by anyone who is involved in using DINO for diet coding and data analysis.

4. Why
To provide an accurate dietary dataset.

5. Procedure
There are numerous steps involved in creating a dietary dataset that are all listed in section 1, in sequential order, with full details of how to carry out each step. Section 2 describes how to import Excel datasets into SPSS, if required.

SECTION 1: PRODUCING THE DATA FILES

Once all the checks are completed from SOP 5, four dataset files should be produced from DINO as Excel files:

Dataset 1 - Raw data – remains as an Excel file and is helpful for checking outliers
Dataset 2 - Daily totals – exported into an Excel file and then can be imported into SPSS
Dataset 3 – Food groups - exported into an Excel file and then can be imported into SPSS
Dateset 4 – Subjects file – remains as an excel file

The raw data and daily totals are commonly used for data checking. Final versions of datasets should not be prepared until data checks have been completed (see SOP 5).
NB Datasets are provided as standard in Excel so they can be imported into their statistical package of choice, if you require this.

To begin, open DINO, from the main menu select '**Data Analysis'**, then **'Analyse – With Final Data Export'** and you will have a screen as below.

SOP 6. Dietary Dataset production using DINO

Create a new record. To move into a new record use the arrow buttons on the bottom of the screen. These buttons can be used to navigate through the subject records entered.

 First record

 Previous record

 Next record

 Last record

 New record

In the study tab enter an Analysis Name and Author. Then select the study to analyse from the drop down menu and study date.
Note: while the record screen stays open the analysis record can be amended, once closed the record is fixed and you need to start again.

1. **Dataset 1 -Producing the Raw Data file**

a) From the main menu select '**Data Analysis**', then '**Analyse – With Final Data Export'.** Create a new record and label as study name _rawdata_(date and initials)
b) Select the study as appropriate.
c) From the nutrients code tab select all the nutrients you want to include in the analysis; click and drag to create a list or holding Ctrl while clicking on each nutrient.
d) Keep the Daily Totals box unchecked ie, make no changes.

e) Press Test to check the output tabulation contains all the fields you need and make corrections if required.
f) Select Excel and press test to export the dataset.
g) Save the Excel file as (Studyname)_rawdata_(dateandinitials).xls

2. Dataset 2 - Producing the Daily Totals file

a) Continuing this process from the Raw Data file screen used above, keeping all variables the same but placing a tick in the Daily Totals box. Keep food group level set to None.
b) Press Test to check the output tabulation contains all the fields you need and make corrections if required.
c) Select Excel and press test to export the dataset.
d) Save the Excel file as (Studyname)_DailyTotalNutrients_(dateandinitials).xls

3. Dataset 3 - Producing the Food Group file

This file is used to examine the nutrient contribution of each food group

a) Continuing from the daily totals file screen used above, keeping all variables the same and the Daily Totals box ticked.
b) In the food groups level box select 'Food Main'
c) Press Test to check the output tabulation contains all the fields you need and make corrections if required.
d) Select Excel and press test to export the dataset.
e) Save the Excel file as (Studyname)_FoodGroupNutrients_(dateandinitials).xls

4. Dataset 4 – Subjects file

a) From the main menu select `**Data Analysis**`, then `**Subject Diary Records**`, select the Study Name then click on Run Analysis to excel.
b) Save the excel file as (Studyname)_Subjectinfo_(dateandinitials).xls

Additional information

To display data by meal time slots
This output uses the Meal Times tab in the 'analyse data' form. Exact times and meal slots can only be exported in the raw data file for the full dataset. If you want meal slots to be shown in the daily totals or food group files you need to select each meal time individually, producing outputs for all times slots, then merge the outputs together into the same Excel file. To include all meal times leave all slots unselected (this is the default setting). To select specific slots click on those needed prior to exporting the dataset.

Showing data by individual food code
This output uses the Foods tab in the `analyse data` form. Select the desired food code/s and then continue with any dataset creation as shown above. This could be useful for some specific studies if intervention foods have been consumed or if commonly consumed foods are required only but this output is not generally offered as the same results can be achieved using filtering/sorting of the raw data file.

SOP 6. Dietary Dataset production using DINO

SECTION 2: IMPORTING EXCEL DATASETS INTO SPSS

When the data checks have been done the Excel files (raw data, daily totals and daily food group totals) can be imported in SPSS. NB Datasets are provided as standard in Excel so they can be imported into their statistical package of choice, if you require this. It is not advisable to transfer the Excel data to SPSS until all of the data checks have been done.

1. Transferring Excel files to SPSS

   a) Open SPSS, choose File – Open – Data, this gives you the Open file box
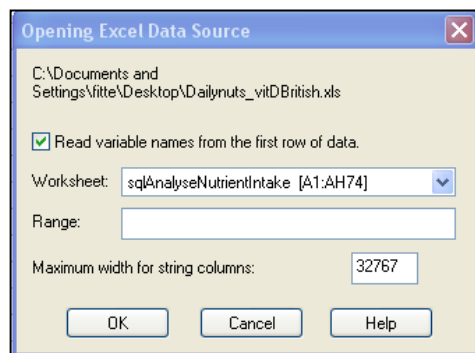
    b) Select the Excel file to import to SPSS (NB you need to change the 'files of type' drop down to read .xls files), press Open, tick the Read variable names box, press OK

   c) See pages 79-81 of SPSS 14 Made Simple for more details.

2. Additional analysis using SPSS: mean of (4) day intakes (aggregate daily)

    a) Using the SPSS file of the Daily Totals, sort by subject ID

    b) Go to Data – Aggregate, and complete box as below left to add an N_Break

SOP 6. Dietary Dataset production using DINO
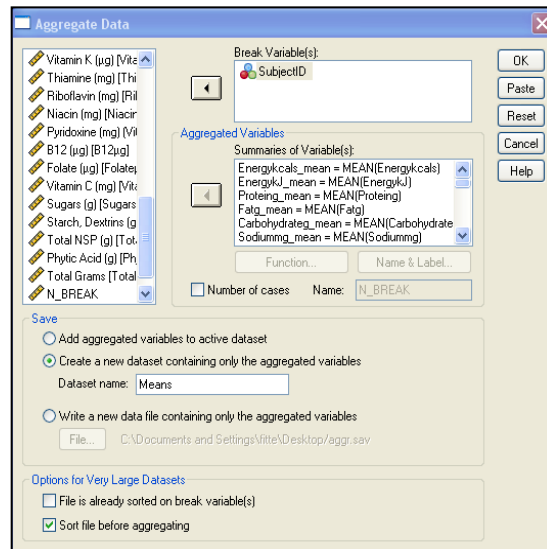
c) Check all subject ID's have the expected number of food record days.

d) To aggregate into means go to Data – Aggregate again and complete the box as above right, selecting all the nutrients into the Summaries of variables box (ensure it states = MEAN) and create a new dataset.
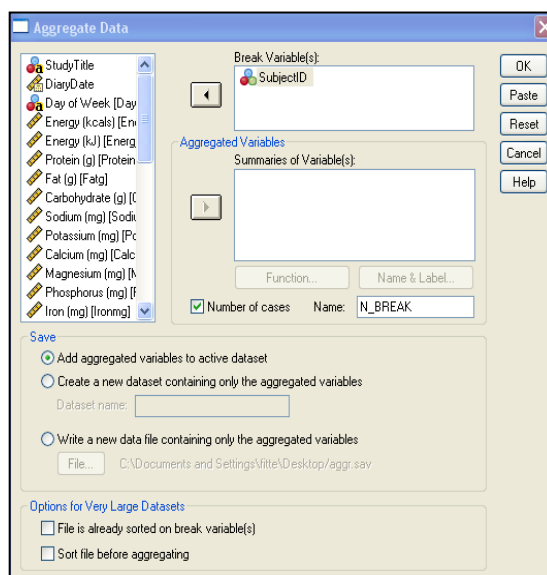

e) Use the mean of 4 days to check for outliers again. Ages can be added to the dataset at this stage by merging with additional files, so that you can check the nutrient intake is suitable for the age of subject.

f) Note this is the same check as completed using DINO daily totals – if that procedure has been followed this one is not required

3. **Additional analysis using Excel: Pivot tables to show % nutrient/food group**

a) Using the daily totals by food groups Excel dataset.

SOP 6. Dietary Dataset production using DINO

b) Select the columns to include in the pivot table, insert – pivot table, press ok.
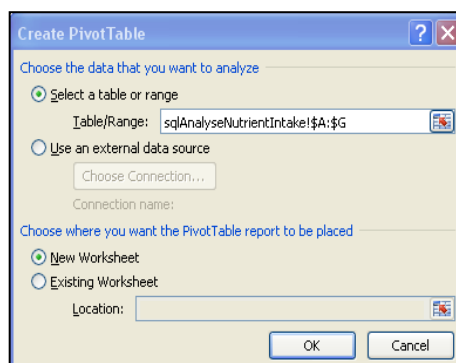
c) Drag and drop the variables into the boxes as shown below left, ensure the Values of the nutrient is changed to SUM as shown below right.
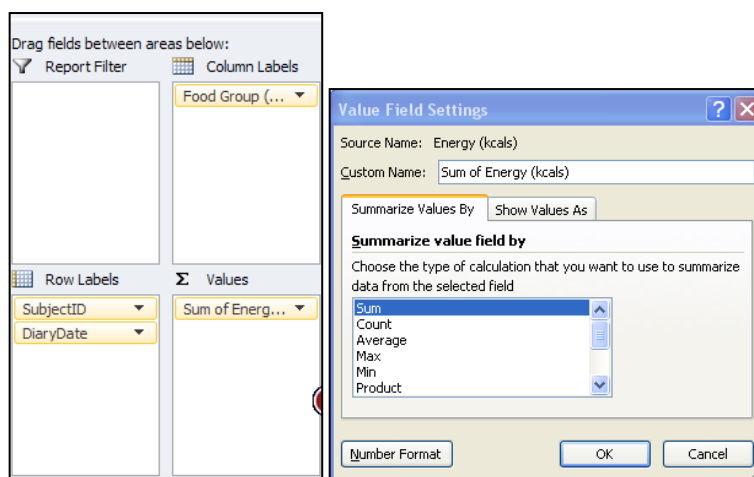
d) From the pivot table sheet copy and paste (VALUES option) the worksheet into a new tab so that changes can be made. Fill in missing 0s, then you can calculate the % of the total intake from specific food groups.

e) You can use the $ in the formula to stick to copying the specific cell across.

6. Related Documentation

Doc Number	Title
SOP 5	Checks to be carried out on Dietary Datasets before producing tables

SOP 6. Dietary Dataset production using DINO