Spotlight Session: Statistics with MAXQDA Stats

- MAXQDA Stats is a statistics module that is included in the MAXQDA Analytics Pro version. If you are using a license for MAXQDA Analytics Pro, a tab "Stats" appears in the MAXQDA menu. Stats can be started from within MAXQDA and offers the frequently used method of descriptive and inferential statistics. MAXQDA Stats supports mixed method analysis very effectively and offers two major special features:

  1. Linking and interaction of qualitative and quantitative data of a

  MAXQDA project

  2. Interactive result tables

What can you do with MAXQDA Stats?

- Perform statistical analysis of MAXQDA data (codes and document variables)
- Perform statistical analysis of external data sets, e.g. online surveys
- Enter and analyze new data, e.g. from paper and pencil surveys
- Create charts and diagrams
- Transform and recode data
- Export results and data to Word, Excel, and SPSS

What is the idea behind MAXQDA Stats?

- Supporting mixed methods research, i.e. the combination of qualitative and quantitative research
- Supporting the combination of qualitative and quantitative methods of analysis
- Use Stats to analyze stand-alone quantitative data

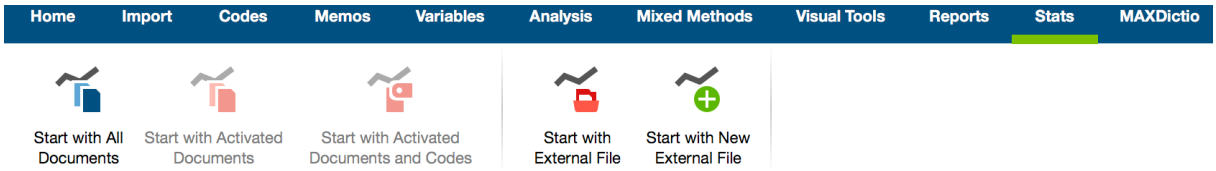
Statistics available in Stats

The most used methods of descriptive and inferential statistics are integrated in Stats

1. **Frequency tables**
2. **Descriptive statistics**: mean, standard deviation, variance, median, quartiles, minimum, maximum, range, sum, standard error, 95% confidence interval for the mean
3. **Crosstabs**: absolute and relative frequencies, row and column percentages, expected frequencies, residuals, standardized residuals, adjusted standardized residuals; Chi-square, Phi, Cramer's V, contingency coefficient C
4. **One-way analysis of variance**: with output descriptive statistics and Levene test of homogeneity of variance
5. **Correlation**: Pearson's r and Spearman's rho
6. **Scale analysis**: Cronbach's alpha

Starting Stats

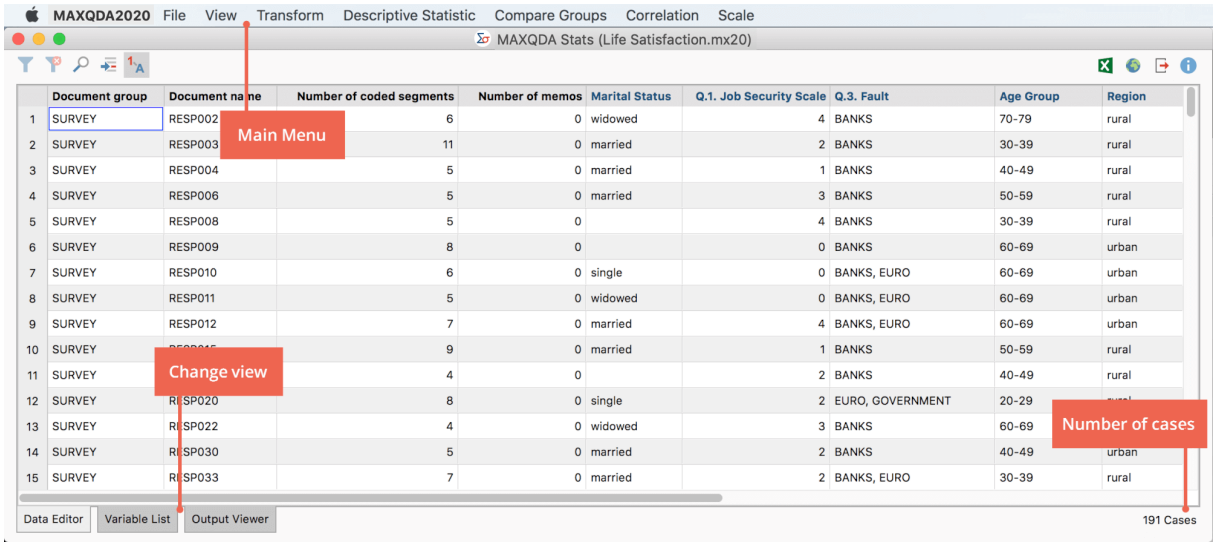
MAXQDA Stats is launched from the tab **Stats** in MAXQDA's main ribbon menu (only in the version Analytics Pro). Select one of five different options:



Tab „Stats" in MAXQDA's main menu

After starting Stats, the MAXQDA 4-windows-screen is hidden. You see the Stats interface and the Stats menu.

Note: If you want to work with an external file, such as an SPSS dataset, you must first create an empty MAXQDA project so that you can start Stats from there.



Interface of Stats with three views to choose from: Data Editor, Variable List, and Output Viewer

You may switch between three different views:

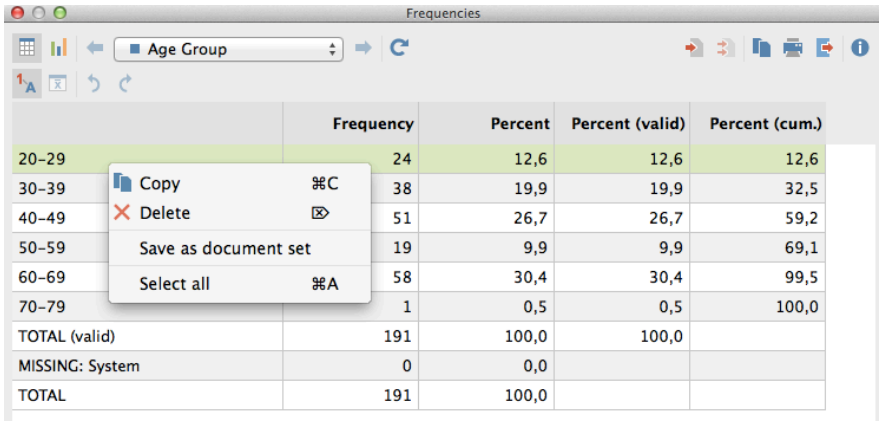
Data Editor: Here you may view and edit your data. If you have started Stats with MAXQDA's data, the data editor shows the document variables: The documents form the rows, the variables form the columns.

Variable List: In this view you create new variables and define variable labels, missing values and value labels.

Output Viewer: In this view you can store results tables and diagrams.

Statistics Example #1: Frequencies

Choose "Descriptive Statistics > Frequencies" to analyze the frequency of variables. The result tables can be sorted according to your needs. You may delete rows and the table will be updated immediately. You also may save cases (documents) with particular values as data set in order to later analyze later the qualitative data of these persons.

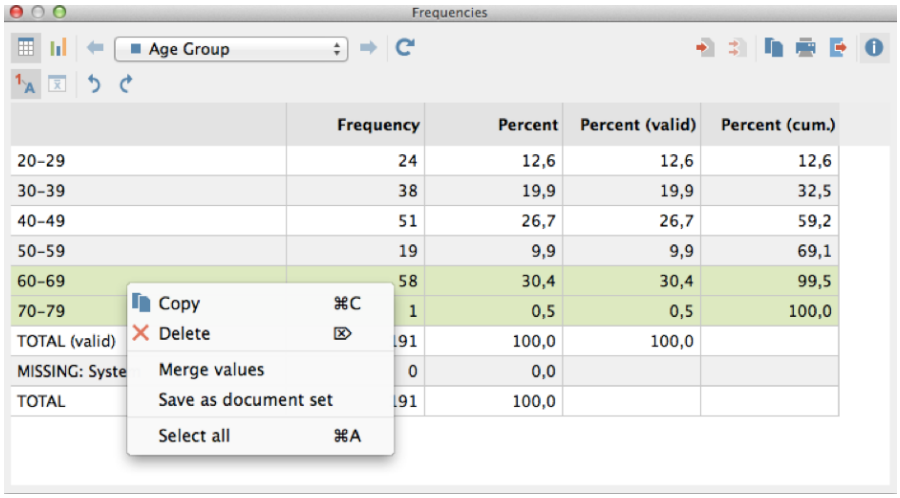


	Frequency	Percent	Percent (valid)	Percent (cum.)
20-29	24	12,6	12,6	12,6
30-39	38	19,9	19,9	32,5
40-49	51	26,7	26,7	59,2
50-59	19	9,9	9,9	69,1
60-69	58	30,4	30,4	99,5
70-79	1	0,5	0,5	100,0
TOTAL (valid)	191	100,0	100,0	
MISSING: System	0	0,0		
TOTAL	191	100,0		

Interactive table of results

Interactivity:

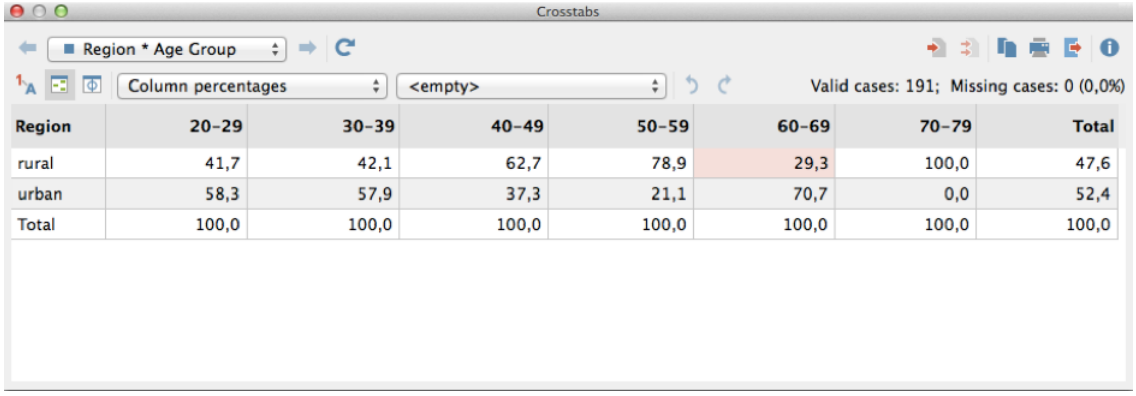
- Clicking on a column header sorts the table.
- By right-clicking on a row, it can be deleted and is removed from the table. The numbers in the table are updated.
- If you select several rows, they can be combined, and the table is immediately updated.



Combine values using the context menu

Statistics Example #2: Crosstabs

After the selection of variables for the row and the columns, the result table is displayed. Significant cells of the table can be highlighted, which makes it much easier to find relevant combinations of variable values. The frequency of individual variable values corresponds to the number of documents in which these variable values occurred. In this case, a compilation of documents is available behind each frequency count. This compilation of documents can be saved as a document set in MAXQDA: Right-click on a cell and select "Save as document set".



Highlighted cells indicate strong positive deviations from the expected value (blue) and strong negative deviations (red)

In the cells of the table different values like row percentages or column percentages can be displayed. Also measures of association like Chi Square, Phi or Cramer's V can be computed. But the best is that you can transfer all the information to the table to MAXQDA and save the documents behind a cell as "Document Set".

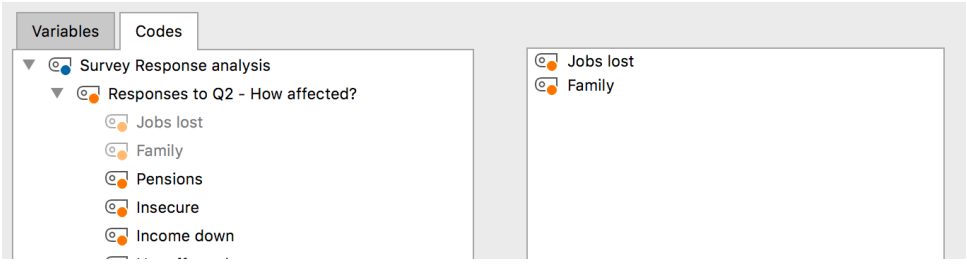
Transfer results to the Output Viewer

After the tables have been created and adapted according to your needs, they can be transferred to the Output Viewer from which can later be exported:

- Click the Insert into output viewer icon to transfer the currently displayed results table to the Output Viewer.
- Click the Insert all result tables into output viewer icon to transfer all created tables to the Output Viewer at once.

Analysis of code frequencies

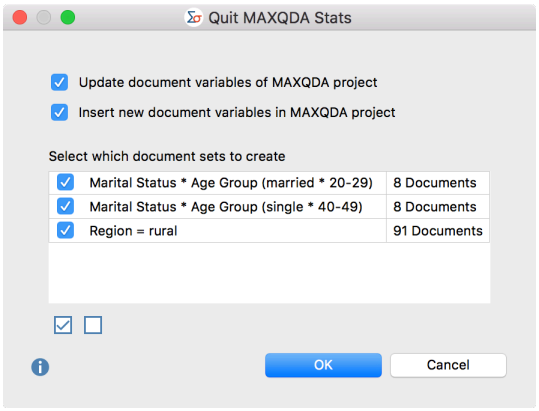
If you have started Stats for a MAXQDA project, not only the document variables but also the code frequencies per document are available for analysis. This means that for each document in Stats, information is available on how often a selected code has been assigned in that document. Therefore, you can select and analyze both document variables and codes of the MAXQDA project in many dialog fields.



Select codes to create a frequency table

Closing Stats and returning to the MAXQDA project

By closing the Stats window, you exit MAXQDA Stats and return to the MAXQDA project. If you have analyzed the data of a MAXQDA project in Stats, a dialog appears in which you can select whether the changed and newly created variables are to be transferred to the document variables. You can also specify that the created document sets are to be created in the MAXQDA project.



Options when ending MAXQDA Stats

In principle, the transfer of variables from MAXQDA Stats to the MAXQDA project occurs in exactly the same manner as when data is read in MAXQDA using the Import data (document variables) function.