CHAPTER 7. ANALYSIS REPORTS

PBCAT provides limited analysis functions within the software for production of simple data summaries. Analysis options are available through the *Reports* menu. (See figure 81.) Additionally, any reports created may be exported to Excel with the click of a button for additional analyses or the creation of graphics. For more sophisticated analyses, the entire database can be exported to another software application. (See chapter 8.)
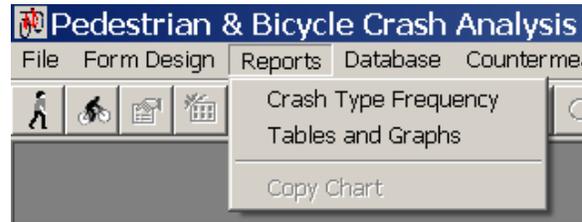

Figure 81. Image. Select analysis options.

CRASH TYPE FREQUENCY

Crash type frequency reports may be created by selecting this option in the *Reports* menu. The report produced from this analysis includes a count of crashes by either crash type or crash group. The steps to create this type of report are as follows:

(1) Select the *Data Source*. This step includes selecting the database from the list of available databases in the dropdown list and choosing the data type (either pedestrian or bicyclist). The database shown when the reports window appears will be the default database that was set in *Preferences*.
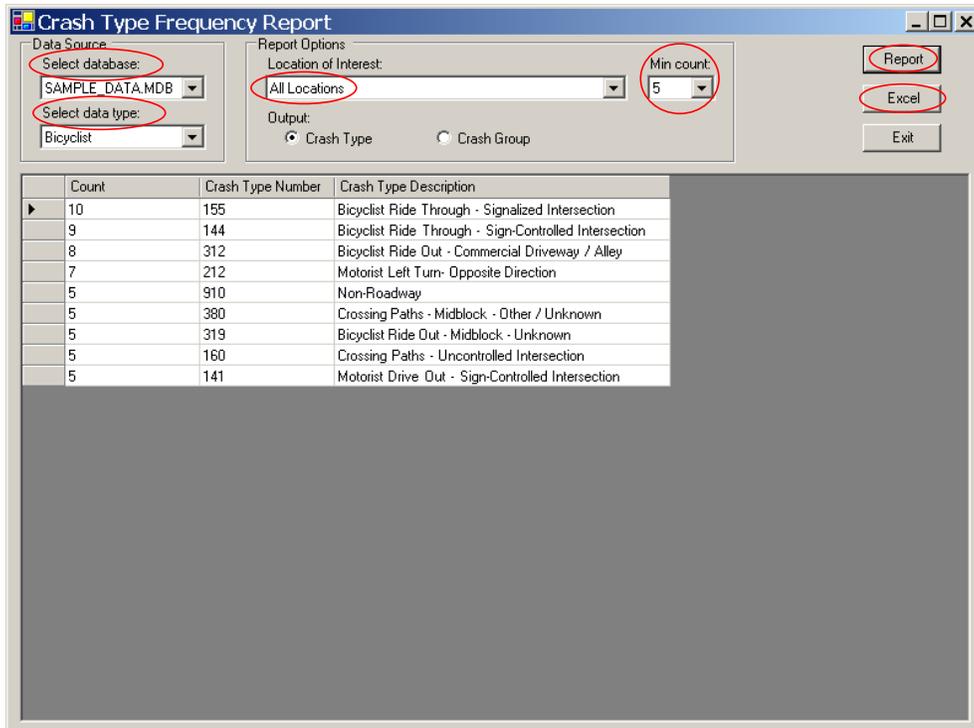

Figure 82. Image. Produce a list of crash types or crash groups in order of frequency.

(2) Set the *Report Options*. The user has several options for the report being produced. First, choose the *Location of Interest*. Reports may be produced for all locations, intersections and intersection-related locations, nonintersection locations, or nonroadway locations. Next, set the *Min count* value, which will be the threshold that must be met in order for a crash type or crash group to be included in the table. As shown in figure 82, a minimum of five crashes were required for any given crash type. Finally, specify whether the results should be produced for individual crash types or for crash groups.

(3) After specifying the report parameters, click *Report* to produce the table.

(4) If desired, click the *Excel* button to export the results to an Excel workbook.

TABLES AND GRAPHS

To create single-variable tables or cross-tabulations of two variables, select the *Tables and Graphs* option from the *Reports* menu. The steps for creating customized tables or charts are shown in figure 83. All but the last step are done on the *Data Selection* tab. The last step is done on the *Crash Type* tab.

(1) Select the *Data Source*. This step includes selecting the database from the list of available databases in the dropdown list and choosing the data type (either pedestrian or bicyclist). The database shown when the reports window appears will be the default database that was set in *Preferences*.
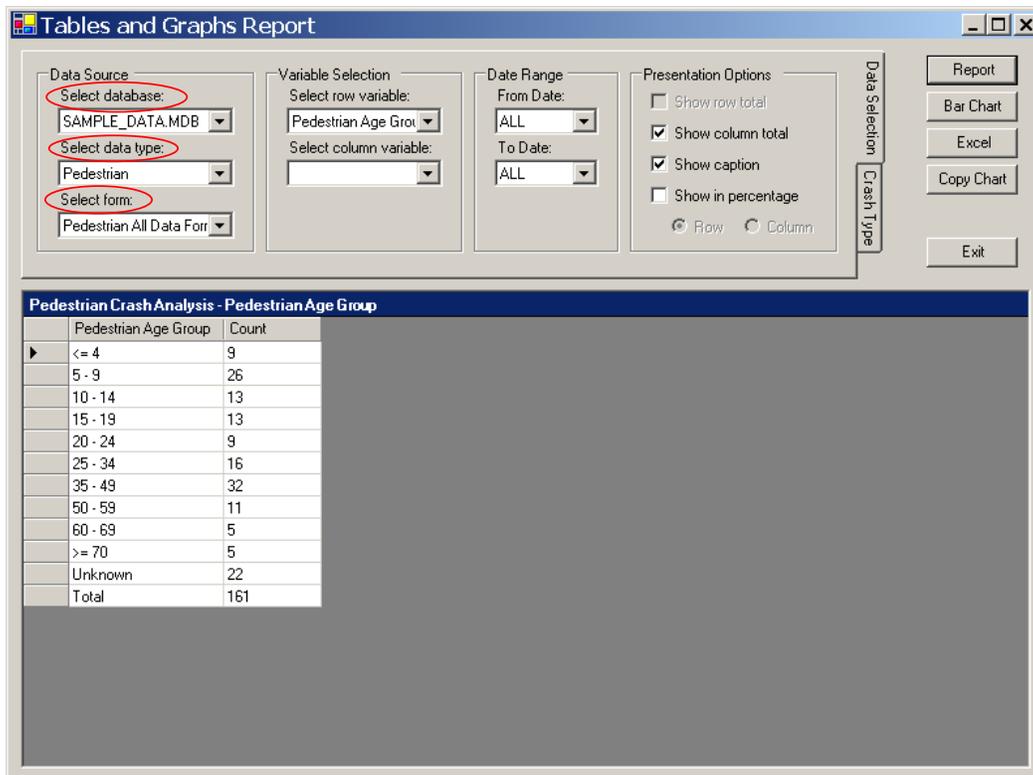

Figure 83. Image. Produce single-variable and multivariate tables.

(2) Make the *Variable Selection*. For a single-variable (one-way) table, choose a row variable only. For two-way tables, choose a row variable and a column variable. The variables available will be those present on the form selected in step 1.

(3) Specify a date range (month/year in the dropdown list) if desired.

(4) Choose other *Presentation Options*, such as row and column totals, captions, and percentages (either row or column).

(5) Click on the *Crash Type* tab if the report should only be produced for a specific set of crash types or crash groups. **Note: the default setting will include all crashes in the database, irrespective of the crash type or crash group. However, there may be times when a user wants to look specifically at a characteristic (such as age) for a certain type of crash.**

(6) After specifying the report parameters, click *Report* to produce the table. For one-way tables, a graphical presentation of the report can be produced by clicking *Bar Chart*. To return to the table, click *Report* a second time.

(7) If desired, click the *Excel* button to export the results to an Excel workbook.

EXAMPLES

Following are two examples that illustrate report production. One of the databases installed with the PBCAT application is named SAMPLE_DATA.MDB. The user is encouraged to use this database and experiment with creating reports.

Example 1—Bicyclist Crashes—Light Conditions

Step 1: Set *Data Source* parameters. Using each dropdown list, set database to "SAMPLE_DATA.MDB," data type to "Bicyclist," and form to "Bicyclist All Data Form."

Step 2: Make the *Variable Selection*. Choose "Light Conditions" from the dropdown list as the row variable. Leave the column variable blank.

Step 3: Specify *Date Range*. Be sure the date entries are set to "All."

Step 4: Choose the *Presentation Options*. Check "Show column total" and "Show caption."

Step 5: Produce the report Click the *Report* button. The table shown in figure 84 will appear with the caption showing the type of analysis and variable chosen. The number of crashes in each light condition category is presented in the second column, along with the total.
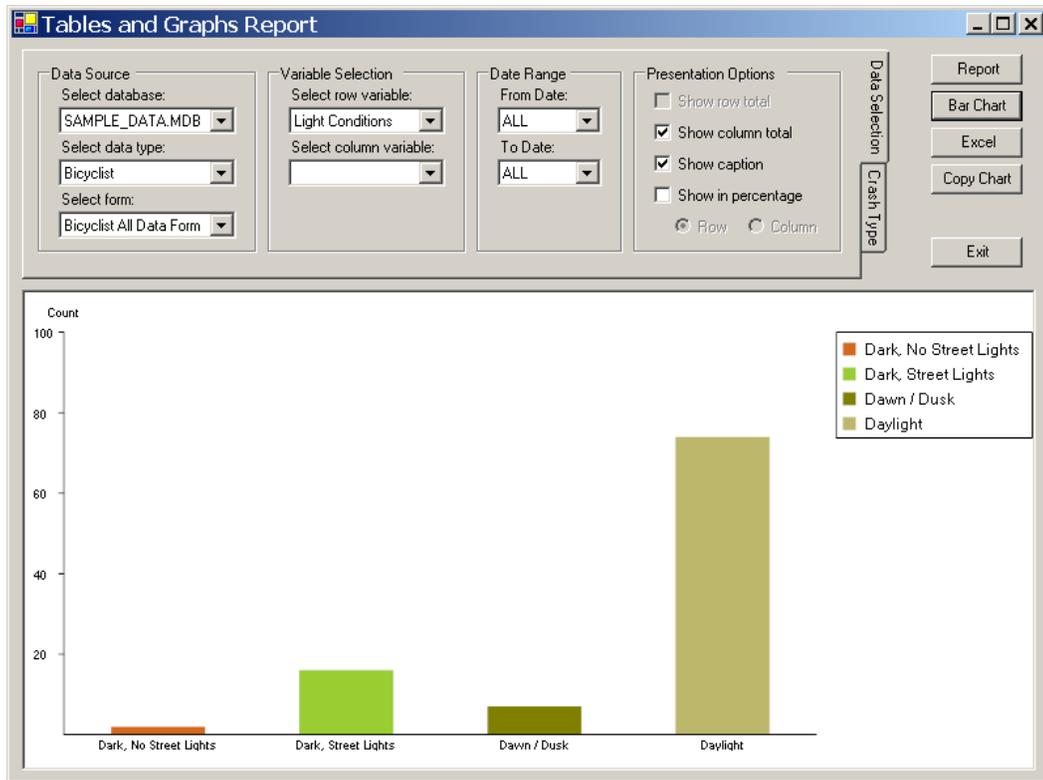
Figure 84. Image. Produce a single-variable table.

Step 6: Produce a graph. Click the *Bar Chart* button to present the results in a graph. (See figure 85.)
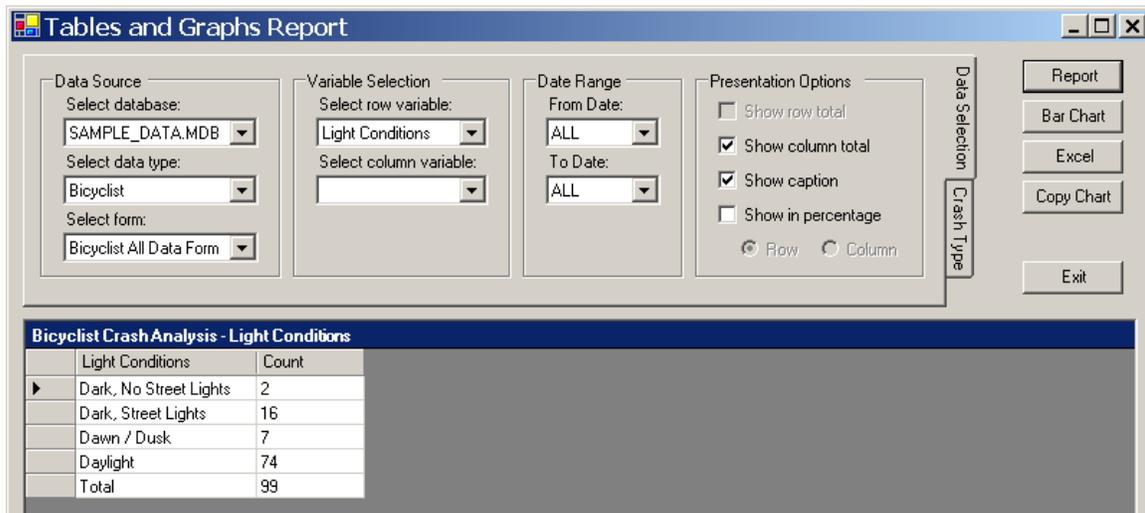

Figure 85. Image. Produce a graph of a single-variable table.

Step 7: Export results. Click *Excel* to export the results to a Microsoft Excel workbook. (See figure 86.)

Example 2—Pedestrian Crashes—Crash Types and Pedestrian Age

Step 1: Set *Data Source* parameters. Using each dropdown list, set database to "SAMPLE_DATA.MDB," data type to "Pedestrian," and form to "Pedestrian All Data Form."

Step 2: Make the *Variable Selection*. Choose "Crash Type Description" from the dropdown list as the row variable. Choose "Pedestrian Age Group" as the column variable. **Note: the age groups used in the report will be those set on the *Age Groups* tab in *Preferences*.**

Figure 86. Image. Export results to Excel.

Step 3: Specify *Date Range*. Be sure the date entries are set to "All."

Step 4: Choose the *Presentation Options*. Check "Show row total," "Show column total," and "Show caption."

Step 5: Produce report. Click the *Report* button. The table shown in figure 87 will appear with the caption showing the type of analysis and variables chosen. The number of crashes for each crash type is shown as distributed across the age groups. Totals are shown for both rows (each crash type) and columns (each age group).

Figure 87. Image. Produce a multivariate table.

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Step 6: Change *Presentation Options*. Check the "Show in percentage" box and click on the "Column" radio button.

Step 7: Produce new report. Click the *Report* button to produce the report shown in figure 88. The table will appear as before with the caption showing the type of analysis and variables chosen. However, the cells will be filled with column percentages as opposed to frequencies.
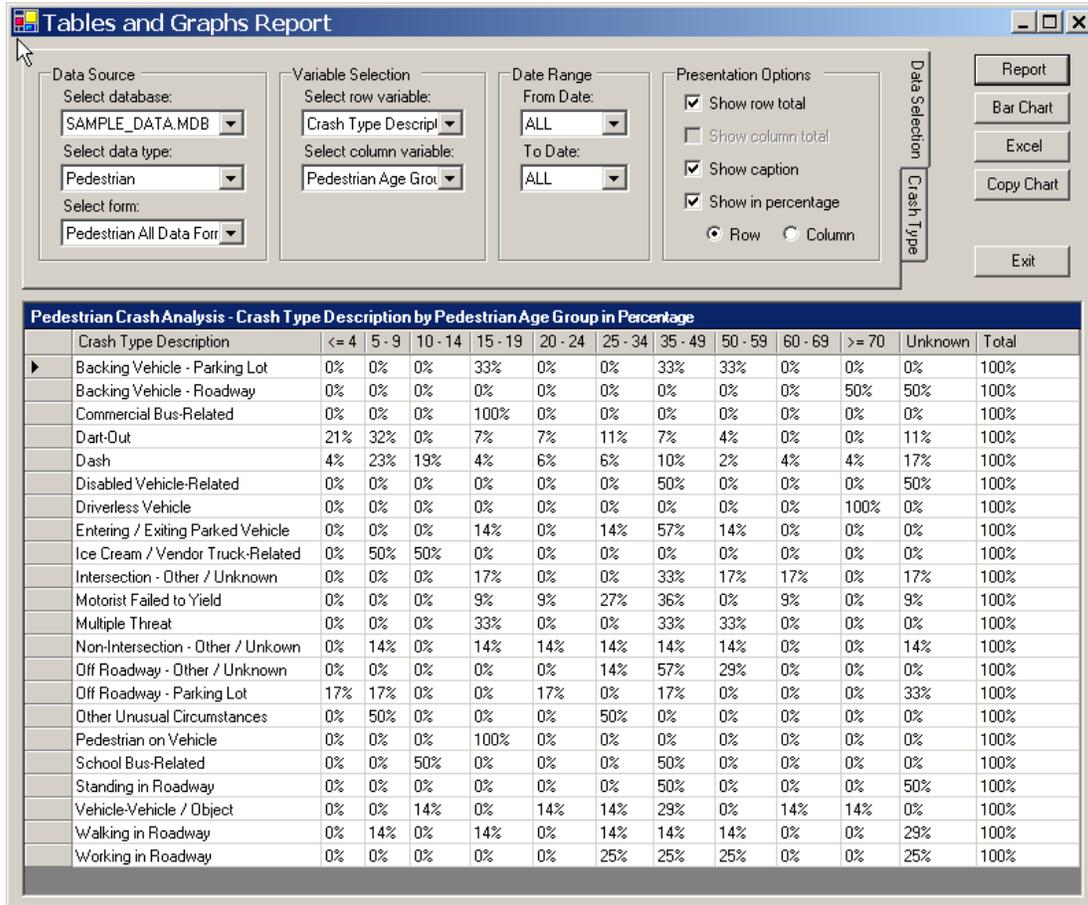

Figure 88. Image. Present results as percentages.