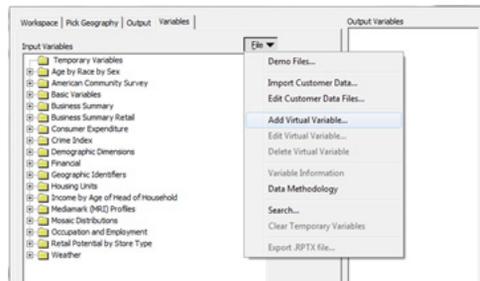

The following outlines the steps involved in creating custom (virtual) variables in **Allocate**.

1. Open up **Allocate**. The program defaults to the **Workspace** tab, but we will make our custom variables under the **Variables** tab, so please click on that tab. In the **Variables** tab, click on the **File** button and select **Add Virtual Variable**.

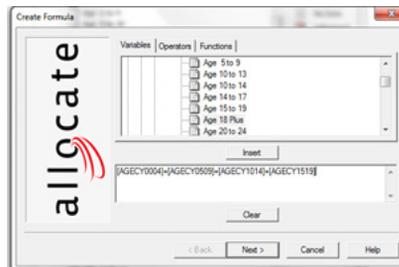


A **Create Formula** window will pop-up (see screen cap below). There are 3 tabs:

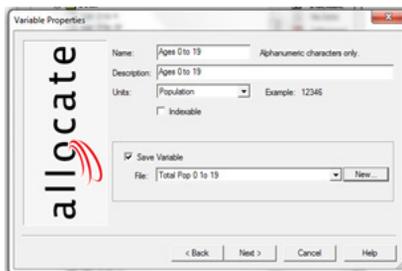
- **Variables** – this tab shows all the current variables available to you in Allocate.
- **Operators** – this is a list of Boolean operators (eg. And, Or, =, <>, +, -, *, etc)
- **Functions** – this is a list of statistical functions (eg. Sine, If, Max, Regex, etc)

2. Build your custom variable by creating a formula in the formula box (at the bottom of the window). You can either double-click on any **Variable/Operator/Function** tab to add it to your formula box, use the **Insert** button to move it to the formula box, or type directly into the formula box.

In the example below, we have created a formula that adds the total number of people in four age groups: 0 to 4, 5 to 9, 10 to 14, and 15 to 19. I clicked on each age bracket I needed to add to the formula, then on the **Insert** button and then put a + sign in between each of the age brackets to add them together.



3. We now have our formula in place, so we can click the **Next** button. A **Variable Properties** window will pop up. This is where you will name and save your new variable.

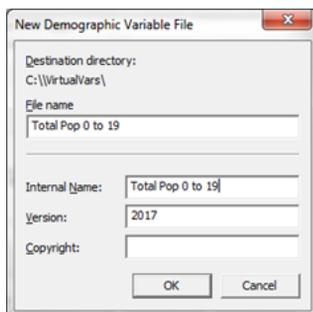


In the **Name** box we've given the variable its internal name that the software will use. You cannot use any graphic symbols or leave any spaces in this box, so we have used the name "TotalPop_0_to_19".

In the **Units** drop-down menu you will find a long list of possible numerical styles to choose from. Because we have created a population variable, we have chosen Population.

Checking the **Indexable** box makes the variable available to be used in any indexing calculations you wish to perform in Allocate.

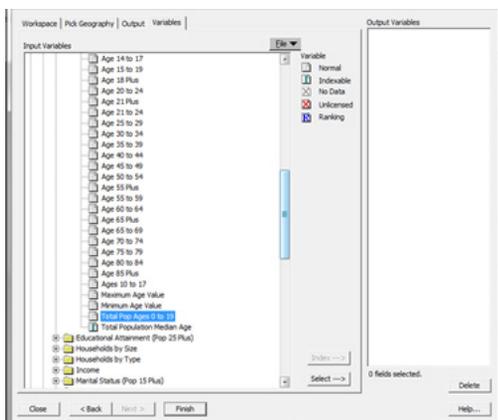
Click the **Save Variable** check-box to turn on the **New** button. Click this button to open up a small window. Here you will have to enter a File Name and an Internal Name. We always copy and paste what we had entered in the Description box above into these two boxes.



Note: Virtual Variables automatically save into a specific directory and it is recommended that you don't change this or save to another location.

4. Click the **Next** button and a window will pop-up asking where in the Allocate list of variables you want your new variable to appear. It is recommended that you go down into the folder that contains the variables you used to build the formula.

In our example, we clicked on the folder that contained our **Age** variables within the variables folder. We then click the **Finish** button and our new variable will appear right where we've chosen.



Alternatively, we could create a brand-new folder to house all of our newly created variables. To do this, click on the **New Category** button to add a new main folder to your list, or go within an existing folder a click the **New Vintage** button to add a sub-folder within the main/parent folder. Name it anything you want. Once your new folder is created, click on it and click the **Finish** button to add your new variable to your new folder.

Your new variable will now appear in the folder you chose, ready to be used in analyses.

Note: to **Edit** or **Delete** a virtual variable, do the following:

- Make sure the variable you want to edit/delete is selected in the **Variables** tab.
- Click on the **File** button in the **Variables** tab.
- Choose either **Edit Virtual Variable** or **Delete Virtual Variable**.

