How do I standardize variables in SPSS?

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Standardizing variables in SPSS refers to the process of transforming data values into a standardized scale. This is done in order to make comparisons and interpretations easier. To standardize variables in SPSS, you will need to use the "Transform" function and select "Recode into Different Variables". From there, you can choose the variable you want to standardize and specify the desired mean and standard deviation. This will result in all values being transformed to the same scale, making it easier to compare and analyze the data. Standardizing variables is a common practice in data analysis and can help ensure accuracy and consistency in your results.

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Consider the file we call smauto that contains four variables, make, mpg, weight and price.

```
get file 'c:https://stats.idre.ucla.edu/wp-content/uploads/2016/02/smauto.sav'.
list.
```

```
MAKE MPG WEIGHT PRICE

AMC Concord 22 2930 4099
AMC Pacer 17 3350 4749
AMC Spirit 22 2640 3799
Buick Century 20 3250 4816
Buick Electra 15 4080 7827

Number of cases read: 5 Number of cases listed: 5
```

You can use the descriptives command with the save subcommand to make standardized variables. The command below makes standardized values for mpg and weight (called zmpg and zweight).
The save subcommand tells SPSS to make and save the z-scores of the variables listed on the descriptives command. SPSS saves the new variable(s) by placing a "z" in front of the variable name.

```
DESCRIPTIVES VARIABLES = mpg weight
/SAVE.
```

	N	Minimum	Maximum	Mean	Std. Deviation
MPG	5	15	22	19.20	3.114
WEIGHT	5	2640	4080	3250.00	541.618
Valid N (listwise)	5				

You can confirm that the variables were standardized properly with the descriptives command.

```
descriptives variables = mpg weight price zmpg
zweight.
```

	N	Minimum	Maximum	Mean	Std. Deviation
MPG	5	15	22	19.20	3.114
WEIGHT	5	2640	4080	3250.00	541.618

PRICE	5	3799	7827	5058.00	1606.718
Zscore(MPG)	5	-1.34854	.89903	.0000000	1.00000000
Zscore(WEIGHT)	5	-1.12626	1.53245	.0000000	1.00000000
Valid N (listwise)	5				

The results above show that indeed zmpg and zweight are standardized (the mean is very close to, but not exactly 0 due to slight rounding error).

Instead of accepting the default name given to the standardized variables, you can name the variables yourself. For example, if you wanted to name the variables std_mpg and std_weight, you could include these names after each variable name. You can also shorten the syntax to include only an abbreviation for the descriptives command.

```
desc mpg (std_mpg) weight (std_weight)
/save.
```