How can I convert string variables into date variables in SPSS?

Authored by

stats writer

June 30, 2024

In order to convert string variables into date variables in SPSS, follow these steps:

1. Open the Data Editor in SPSS.
2. Select the string variable(s) that you want to convert to date variables.
3. Click on the "Transform" menu and select "Date and Time Wizard."
4. Select the option "Convert a string variable to a date variable" and click "Next."
5. Choose the appropriate date format for your variables and click "Next."
6. Select the destination for your new date variables and click "Finish."
7. The string variables will now be converted into date variables in the selected format.

This method allows for a quick and efficient conversion of string variables to date variables in SPSS, making it easier to perform data analysis and manipulation.

How can I convert string variables into date variables? | SPSS FAQ

Sometimes date data have been entered as string variables, and these variables need to be converted into numeric variables. Date variables are numeric variables in SPSS, and as such, they can be added, subtracted, etc. Specifically, date variables in SPSS are the number of seconds since the beginning of the Gregorian calendar, which was October 14, 1582.

Let's look at an example data set below. We see that we have date data

entered as string variables in three different ways. The examples below
will show how to convert each of these into date (numeric) variables that can
used in calculations.

```
data list list
/day1 (a2) month1 (a2) year1 (a4) date2 (a12) date3 (a12).
begin data.
12 06 2005 06/12/2005 06-Dec-2005
14 05 2004 05/14/2004 05-May-2004
01 01 1998 01/01/1998 01-Jan-1998
end data.

list.
```

```
day1 month1 year1 date2 date3

12 06 2005 06/12/2005 06-Dec-2005
14 05 2004 05/14/2004 05-May-2004
01 01 1998 01/01/1998 01-Jan-1998

Number of cases read: 3 Number of cases listed: 3
```

Example 1

In the example below, we work with the variable date3. If your date variable is entered exactly like this, then you can use the numeric function to convert it into a numeric variable. We use the compute command with the numeric function to create a new variable called your_date that is a numeric version of the string variable date3. We then create a copy of your_date (called your_date1). We use the formats command to give your_date and your_date1 different formats, so that you can see what number is associated with each of the dates displayed in your_date1. To be clear: your_date and your_date1 are the same variables formatted differently.

```
compute your_date = numeric(date3, date11).
compute your_date1 = your_date.
```

format your_date (f14.0) your_date1 (date12).
exe.

list.

day1 month1 year1 date2 date3 your_date your_date1

12 06 2005 06/12/2005 06-Dec-2005 13353206400 06-DEC-2005
14 05 2004 05/14/2004 05-May-2004 13303094400 05-MAY-2004
01 01 1998 01/01/1998 01-Jan-1998 13102992000 01-JAN-1998

Number of cases read: 3 Number of cases listed: 3

Example 2

In this example, we will work with the three variables day1, month1 and
year1. First, we will make numeric versions of these variables using the
compute command with the numeric function. Next, we use the
compute command with the date.dmy function to

combine the numeric
variables into a single date variable. The date.dmy function
requires numeric variables as arguments, so we must make numeric versions of the
string variables for use with this function. We then use the formats
command to format the new date variable (called my_date). Note that
the execute command (shorted to exe.) is needed after the
formats command, or the next command will not run. The
delete variables command is used to remove the unneeded variables from the
data set.

```
compute dn = numeric(day1, f4.0).
compute mn = numeric(month1, f4.0).
compute yn = numeric(year1, f4.0).
exe.

compute my_date = date.dmy(dn, mn, yn).

formats my_date (date11).
```

exe.
delete variables dn mn yn.

list.

day1 month1 year1 date2 date3 your_date your_date1 my_date

12 06 2005 06/12/2005 06-Dec-2005 13353206400 06-DEC-2005 12-JUN-2005
14 05 2004 05/14/2004 05-May-2004 13303094400 05-MAY-2004 14-MAY-2004
01 01 1998 01/01/1998 01-Jan-1998 13102992000 01-JAN-1998 01-JAN-1998

Number of cases read: 3 Number of cases listed: 3

Example 3

This example is very similar to Example 2, except that the date is contained
in a single string variable, called date2. Because the whole date
is contained in the string variable date2, we need to start by breaking

date2 into three parts: month, day and year. To start this
process, we first create the three string variables (called m1, d1
and y1). Next, we populate the new string variables using the
compute command with the substr function. In the third step, we
create numeric versions of the string variables using the compute command
with the numeric function. After that, the compute command
with the date.dmy function is used to combine the numeric versions of the
day, month and year variables (dn, mn and yn). The
date.dmy function can only take numeric variables as arguments, so we could
not use the string versions of these variables. In the last step, we
format the new date variable, called new_date, with the formats
command. We selected the adate11 format, but you could use any date
format that you like. Note that the execute command

(shorted to
exe.) is needed after the formats command, or the next command will
not run. We also used the delete variables command to remove the
unneeded variables from data set.

```
string m1 (a2).
string d1 (a2).
string y1 (a4).
exe.

compute m1 = substr(date2, 1, 2).
compute d1 = substr(date2, 4, 2).
compute y1 = substr(date2, 7, 4).

compute mn = numeric(m1, f4.0).
compute dn = numeric(d1, f4.0).
compute yn = numeric(y1, f4.0).

compute new_date = date.dmy(dn, mn, yn).

formats new_date (adate11).
exe.
delete variables d1 m1 y1 dn mn yn.
```

exe.

list.

day1 month1 year1 date2 date3 your_date your_date1 new_date

12 06 2005 06/12/2005 06-Dec-2005 13353206400 06-DEC-2005 06/12/2005
14 05 2004 05/14/2004 05-May-2004 13303094400 05-MAY-2004 05/14/2004
01 01 1998 01/01/1998 01-Jan-1998 13102992000 01-JAN-1998 01/01/1998

Number of cases read: 3 Number of cases listed: 3

For more information

For more information on the use of date data, please visit
Reading dates into
SPSS and using date variables ,
Inputting and
manipulating dates in SPSS and
Looping

with dates .