

---

Subject: Selecting sample within one standard deviation in R

Posted by [berhardt93](#) on Tue, 15 Feb 2022 20:00:29 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Hi,

I'm looking at the Nigeria 2018 DHS. I created a variable "tot\_encounters" that calculates the number of sexual encounters reported by an individual in the past 12 months by adding the values from their most recent, second most recent, and third most recent partners. I also created the weighting variable "weight".

I found the mean of the weighted variable:

```
weighted.mean(yesNUIS$tot_encounters, yesNUIS$weight)
```

Then I found the standard deviation:

```
weighted_var <- wtd.var(yesNUIS$tot_encounters, yesNUIS$weight)
weighted_sd <- sqrt(weighted_var)
```

Weighted mean = 27.78

Standard deviation = 25.57

Now I want to select all observations that fall within one standard deviation (2.21-53.35). When I tried to do this, the sample was 80% of the original sample, not 68% (aka. the number of observations within one standard deviation of the mean):

```
sdNUIS <- yesNUIS
sdNUIS %<>%
  dplyr::filter(tot_encounters > 2.2057 & tot_encounters < 53.3527)
```

How would I make sure that this filter only includes the 68% within one standard deviation of the weighted mean?

Thanks!