

5.2: Creating or Modifying Variables Using Mutate()

Often we will want to either create a new variable based on an existing variable, or modify the value of an existing variable. Within the tidyverse, we do this using a function called `mutate()`. Let's start with a toy example by creating a data frame containing a single variable.

```
toy_df <- data.frame(x = c(1,2,3,4))
glimpse(toy_df)
```

```
## Observations: 4
## Variables: 1
## $ x <dbl> 1, 2, 3, 4
```

Let's say that we wanted to create a new variable called `y` that would contain the value of `x` multiplied by 10. We could do this using `mutate()` and then assign the result back to the same data frame:

```
toy_df <- toy_df %>%
  # create a new variable called y that contains x*10
  mutate(y = x*10)
glimpse(toy_df)
```

```
## Observations: 4
## Variables: 2
## $ x <dbl> 1, 2, 3, 4
## $ y <dbl> 10, 20, 30, 40
```

We could also overwrite a variable with a new value:

```
toy_df2 <- toy_df %>%
  # create a new variable called y that contains x*10
  mutate(y = y + 1)
glimpse(toy_df2)
```

```
## Observations: 4
## Variables: 2
## $ x <dbl> 1, 2, 3, 4
## $ y <dbl> 11, 21, 31, 41
```

We will use `mutate()` often so it's an important function to understand.

Here we can use it with our example data frame to create a new variable that is the sum of several other variables.

```
myDataFrame <-
  myDataFrame %>%
  mutate(total = x + y + z)

kable(myDataFrame)
```

n	x	y	z	total
russ	1	4	7	12

n	x	y	z	total
lucy	2	5	8	15
jaclyn	3	6	9	18
tyler	4	7	10	21

`mutate()` is a function that creates a new variable in a data frame using the existing variables. In this case, it creates a variable called `total` that is the sum of the existing variables `x`, `y`, and `z`.

5.2.1 Remove a column using the `select()` function

Adding a minus sign to the name of a variable within the `select()` command will remove that variable, leaving all of the others.

```
myDataFrame <-  
  myDataFrame %>%  
  dplyr::select(-total)  
  
kable(myDataFrame)
```

n	x	y	z
russ	1	4	7
lucy	2	5	8
jaclyn	3	6	9
tyler	4	7	10

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