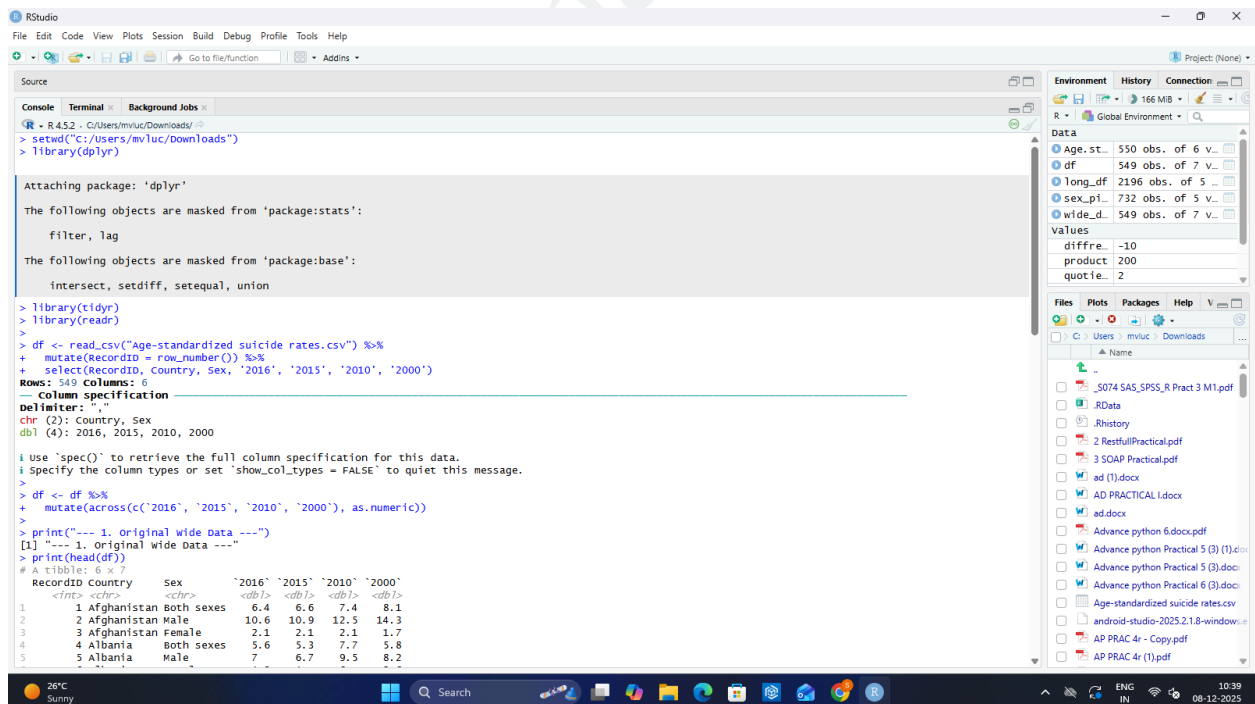


**SHETH L.U.J AND SIR M.V. COLLEGE**  
**SUBJECT NAME: DATA ANALYSIS WITH SAS/SPSS/R**

**Module 1 Practical 11**

**Aim:** Reshaping data using pivot\_longer()/pivot\_wider() (R).

**OUTPUT:**



```
R - R 4.5.2 - C:/Users/mvluc/Downloads/
> setwd("C:/Users/mvluc/Downloads/")
> library(dplyr)

Attaching package: 'dplyr'

The following objects are masked from 'package:stats':
  filter, lag

The following objects are masked from 'package:base':
  intersect, setdiff, setequal, union

> library(tidyverse)
> library(readr)
> df <- read_csv("Age-standardized suicide rates.csv") %>%
+   mutate(RecordID = row_number()) %>%
+   select(RecordID, Country, Sex, '2016', '2015', '2010', '2000')
Rows: 549 Columns: 6
#> column specification
#>   delimiter: ","
chr (2): Country, Sex
dbl (4): 2016, 2015, 2010, 2000

i use `spec()` to retrieve the full column specification for this data.
i Specify the column types or set `show_col_types = FALSE` to quiet this message.

> df <- df %>%
+   mutate(across(c("2016", "2015", "2010", "2000"), as.numeric))
> 
> print("--- 1. Original wide data ---")
[1] "--- 1. Original wide data ---"
> print(head(df))
# A tibble: 6 x 7
  RecordID Country Sex      2016 2015 2010 2000
  <int> <chr> <chr> <dbl> <dbl> <dbl> <dbl>
1     1 Afghanistan Both sexes  6.4  6.6  7.4  8.1
2     2 Afghanistan Male      10.6 10.9 12.5 14.3
3     3 Afghanistan Female    2.1  2.1  2.1  1.7
4     4 Albania Both sexes  5.6  5.3  7.7  5.8
5     5 Albania Male        7  6.7  9.5  8.2
```

# SHETH L.U.J AND SIR M.V. COLLEGE

## SUBJECT NAME: DATA ANALYSIS WITH SAS/SPSS/R

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins
Source
Console Terminal Background Jobs
R - R4.5.2 - C:/Users/mvuc/Downloads/
1 1 Afghanistan Both sexes 6.4 6.6 7.4 8.1
2 2 Afghanistan Male 10.6 10.9 12.5 14.3
3 3 Afghanistan Female 2.1 2.1 2.1 1.7
4 4 Albania Both sexes 5.6 5.3 7.7 5.8
5 5 Albania Male 7 6.7 9.5 8.2
6 6 Albania Female 4.3 4 6 3.6
> # -----
>
> long_df <- df %>%
+ pivot_longer(
+   cols = c('2016', '2015', '2010', '2000'),
+   names_to = "Year",
+   values_to = "Rate"
+ ) %>%
+ mutate(Year = as.integer(Year))
>
> print("---- 2. Long Format (pivot_longer) ----")
[1] "---- 2. Long Format (pivot_longer) ----"
> print(head(long_df, 8))
# A tibble: 8 x 5
  RecordID Country Sex Year Rate
  <int> <chr> <chr> <int> <dbl>
1 1 Afghanistan Both sexes 2016 6.4
2 2 Afghanistan Male 2015 10.6
3 3 Afghanistan Female 2010 2.1
4 4 Albania Both sexes 2000 5.3
5 5 Albania Male 2016 7
6 6 Afghanistan Male 2015 6.7
7 2 Afghanistan Male 2010 9.5
8 2 Afghanistan Male 2000 8.2
> # -----
>
> wide_df_original <- long_df %>%
+ pivot_wider(
+   names_from = Year,
+   values_from = Rate
+ )
>
> print("---- 3. Wide Format (back to original using pivot_wider) ----")
[1] "---- 3. Wide Format (back to original using pivot_wider) ----"
> print(head(wide_df_original))
# A tibble: 6 x 7
  RecordID Country Sex '2016' '2015' '2010' '2000'
  <int> <chr> <chr> <dbl> <dbl> <dbl> <dbl>
1 1 Afghanistan Both sexes 6.4 6.6 7.4 8.1
2 2 Afghanistan Male 10.6 10.9 12.5 14.3
3 3 Afghanistan Female 2.1 2.1 2.1 1.7
4 4 Albania Both sexes 5.6 5.3 7.7 5.8
5 5 Albania Male 7 6.7 9.5 8.2
6 6 Albania Female 4.3 4 6 3.6
> # -----
>
> sex_pivot_df <- long_df %>%
+ pivot_wider(
+   id_cols = c(Country, Year),
+   names_from = Sex,
+   values_from = Rate
+ )
>
> print("---- 4. Sex Pivot (spreading 'Sex') ----")
[1] "---- 4. Sex Pivot (spreading 'Sex') ----"
> print(head(sex_pivot_df))
# A tibble: 6 x 5
  Country Year "Both sexes" Male Female
  <chr> <int> <dbl> <dbl> <dbl>
1 Afghanistan 2016 6.4 10.6 2.1
2 Afghanistan 2015 6.6 10.9 2.1
3 Afghanistan 2010 7.4 12.5 2.1
4 Afghanistan 2000 8.1 14.3 1.7
5 Albania 2016 5.6 7 4.3
6 Albania 2015 5.3 6.7 4
>
> write_csv(sex_pivot_df, "SuicideRatesPivotedBySexR.csv")
>
```