Phan tich left hand

Minh

2024-02-29

## Load bộ số liệu và các packages

## ── Attaching core tidyverse packages ──────────────────────── tidyverse 2.0.0 ──  
## ✔ dplyr 1.1.3 ✔ readr 2.1.4  
## ✔ forcats 1.0.0 ✔ stringr 1.5.0  
## ✔ ggplot2 3.4.3 ✔ tibble 3.2.1  
## ✔ lubridate 1.9.2 ✔ tidyr 1.3.0  
## ✔ purrr 1.0.2   
## ── Conflicts ────────────────────────────────────────── tidyverse\_conflicts() ──  
## ✖ dplyr::filter() masks stats::filter()  
## ✖ dplyr::lag() masks stats::lag()  
## ℹ Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors  
##   
## Attaching package: 'rstatix'  
##   
##   
## The following object is masked from 'package:stats':  
##   
## filter

## So sánh khác biệt về trung bình của chỉ số M\_left theo các biến

Tạo hàm tính 95%CI

Tạo hàm so sánh trung bình bằng Wilcox.test nếu subgroup có 2 level

Tạo hàm so sánh bắt cặp các trung bình bằng Wilcox.pairwise test nếu group có >2 level

Tạo hàm vẽ Forest plot

Hàm để tạo bảng

Sub group list = “Gender”, “Race”, “Smoking”, “Obesity”, “BMI\_25\_30”, “Stress index”, “Type of skins”, “Hypertension”, “Age\_stage”,

## Tạo bảng và Forest plot với biến M\_left

|  | Subgroup\_Category | Subgroup | n\_M\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 14.96357 | 5.495636 | 24.43151 | NA |
| 23 | Age\_stage | 2 | 36 | 22.81132 | 19.440530 | 26.18211 | NA |
| 25 | Age\_stage | 3 | 13 | 25.94262 | 21.422210 | 30.46302 | NA |
| 26 | Age\_stage | 4 | 12 | 23.79097 | 17.918859 | 29.66309 | NA |
| 28 | Age\_stage | 5 | 1 | 26.64000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 17.88417 | 6.823834 | 28.94450 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 19.73143 | 16.712568 | 22.75029 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 26.02997 | 22.140859 | 29.91908 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 25.30629 | 21.127897 | 29.48467 | NA |
| 1 | Gender | 0 | 31 | 20.94035 | 17.632857 | 24.24784 | 0.2154052 |
| 2 | Gender | 1 | 44 | 23.48846 | 20.402056 | 26.57487 | 0.2154052 |
| 22 | Hypertension | 0 | 54 | 23.62721 | 21.087551 | 26.16686 | 0.1692291 |
| 21 | Hypertension | 1 | 21 | 19.37019 | 14.676701 | 24.06368 | 0.1692291 |
| 9 | Obesity | 0 | 68 | 22.13969 | 19.700701 | 24.57869 | 0.6423395 |
| 8 | Obesity | 1 | 7 | 25.30629 | 21.127897 | 29.48467 | 0.6423395 |
| 4 | Race | 0 | 11 | 27.78006 | 23.894647 | 31.66547 | NA |
| 3 | Race | 1 | 61 | 21.14676 | 18.576270 | 23.71725 | NA |
| 5 | Race | 2 | 3 | 29.03667 | 14.978064 | 43.09527 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 20.23782 | 14.140197 | 26.33544 | 0.5899825 |
| 6 | Smoking | Do not smoke | 62 | 22.89599 | 20.443073 | 25.34891 | 0.5899825 |
| 14 | Stress index | 0 | 57 | 21.22492 | 18.613309 | 23.83654 | 0.0344199 |
| 13 | Stress index | 1 | 18 | 26.26792 | 22.062629 | 30.47320 | 0.0344199 |
| 15 | Type of skins | 1 | 10 | 25.85290 | 22.222387 | 29.48341 | NA |
| 16 | Type of skins | 2 | 4 | 30.88750 | 22.829044 | 38.94596 | NA |
| 17 | Type of skins | 3 | 40 | 19.81858 | 16.428800 | 23.20837 | NA |
| 18 | Type of skins | 4 | 11 | 26.52508 | 23.376846 | 29.67330 | NA |
| 19 | Type of skins | 5 | 6 | 16.12917 | 3.795124 | 28.46321 | NA |
| 20 | Type of skins | 6 | 4 | 29.81750 | 22.056154 | 37.57885 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

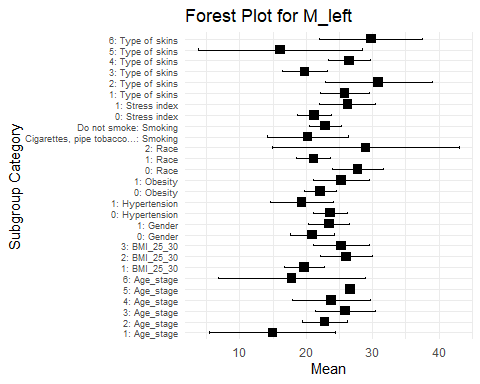
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.0345998 |
| Race | 1 | 2 | 0.2528587 |
| Race | 0 | 2 | 0.7692308 |
| BMI\_25\_30 | 3 | 1 | 0.2779697 |
| BMI\_25\_30 | 3 | 2 | 0.5898838 |
| BMI\_25\_30 | 1 | 2 | 0.0219978 |
| Type of skins | 1 | 2 | 0.3036963 |
| Type of skins | 1 | 3 | 0.0743624 |
| Type of skins | 1 | 4 | 0.8094047 |
| Type of skins | 1 | 5 | 0.1178821 |
| Type of skins | 1 | 6 | 0.1418581 |
| Type of skins | 2 | 3 | 0.0357566 |
| Type of skins | 2 | 4 | 0.1772894 |
| Type of skins | 2 | 5 | 0.0666667 |
| Type of skins | 2 | 6 | 0.6857143 |
| Type of skins | 3 | 4 | 0.0465347 |
| Type of skins | 3 | 5 | 0.3617886 |
| Type of skins | 3 | 6 | 0.0751965 |
| Type of skins | 4 | 5 | 0.0782159 |
| Type of skins | 4 | 6 | 0.4117216 |
| Type of skins | 5 | 6 | 0.0380952 |
| Age\_stage | 2 | 6 | 0.2351609 |
| Age\_stage | 2 | 3 | 0.3635583 |
| Age\_stage | 2 | 4 | 0.5967653 |
| Age\_stage | 2 | 1 | 0.0671509 |
| Age\_stage | 2 | 5 | 0.8648649 |
| Age\_stage | 6 | 3 | 0.1517765 |
| Age\_stage | 6 | 4 | 0.2128852 |
| Age\_stage | 6 | 1 | 0.6282051 |
| Age\_stage | 6 | 5 | 0.5714286 |
| Age\_stage | 3 | 4 | 0.6885222 |
| Age\_stage | 3 | 1 | 0.0369453 |
| Age\_stage | 3 | 5 | 1.0000000 |
| Age\_stage | 4 | 1 | 0.1002620 |
| Age\_stage | 4 | 5 | 1.0000000 |
| Age\_stage | 1 | 5 | 0.5000000 |

Forest plot 

## Tạo bảng và Forest plot với biến Kv100\_left

|  | Subgroup\_Category | Subgroup | n\_Kv100\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 31.33286 | 12.6681862 | 49.99753 | NA |
| 23 | Age\_stage | 2 | 36 | 25.54701 | 20.5606139 | 30.53341 | NA |
| 25 | Age\_stage | 3 | 13 | 15.20115 | 10.5767033 | 19.82560 | NA |
| 26 | Age\_stage | 4 | 12 | 11.43278 | 9.0214276 | 13.84413 | NA |
| 28 | Age\_stage | 5 | 1 | 10.23000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 26.07861 | 6.3962153 | 45.76101 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 23.97123 | 19.0408775 | 28.90158 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 19.77728 | 14.1479686 | 25.40658 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 17.07595 | 10.2526939 | 23.89921 | NA |
| 1 | Gender | 0 | 31 | 27.32293 | 20.7703554 | 33.87550 | 0.0197723 |
| 2 | Gender | 1 | 44 | 18.03458 | 14.8347000 | 21.23447 | 0.0197723 |
| 22 | Hypertension | 0 | 54 | 23.72681 | 19.3877444 | 28.06587 | 0.1098467 |
| 21 | Hypertension | 1 | 21 | 17.10881 | 12.7310651 | 21.48655 | 0.1098467 |
| 9 | Obesity | 0 | 68 | 22.36766 | 18.6977497 | 26.03757 | 0.5179169 |
| 8 | Obesity | 1 | 7 | 17.07595 | 10.2526939 | 23.89921 | 0.5179169 |
| 4 | Race | 0 | 11 | 22.03712 | 12.8112869 | 31.26296 | NA |
| 3 | Race | 1 | 61 | 22.17564 | 18.3161215 | 26.03516 | NA |
| 5 | Race | 2 | 3 | 15.13667 | -12.7716596 | 43.04499 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 13.21333 | 9.3911239 | 17.03554 | 0.0090455 |
| 6 | Smoking | Do not smoke | 62 | 23.68966 | 19.8086852 | 27.57064 | 0.0090455 |
| 14 | Stress index | 0 | 57 | 21.62570 | 17.6893481 | 25.56206 | 0.7706487 |
| 13 | Stress index | 1 | 18 | 22.65931 | 15.4564579 | 29.86215 | 0.7706487 |
| 15 | Type of skins | 1 | 10 | 21.67467 | 11.3879153 | 31.96142 | NA |
| 16 | Type of skins | 2 | 4 | 13.44000 | 0.5662737 | 26.31373 | NA |
| 17 | Type of skins | 3 | 40 | 22.52825 | 17.3218793 | 27.73462 | NA |
| 18 | Type of skins | 4 | 11 | 20.75735 | 14.3561247 | 27.15857 | NA |
| 19 | Type of skins | 5 | 6 | 31.40917 | 15.6675263 | 47.15081 | NA |
| 20 | Type of skins | 6 | 4 | 13.02750 | -3.0382357 | 29.09324 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

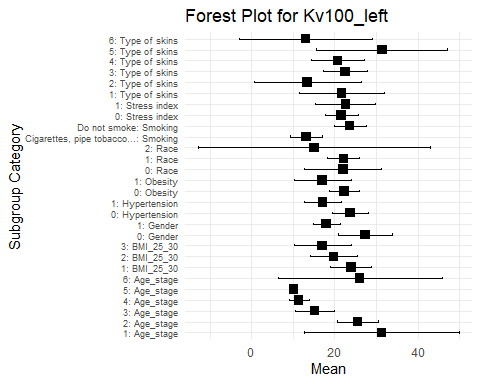
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.7781469 |
| Race | 1 | 2 | 0.3738219 |
| Race | 0 | 2 | 0.3681319 |
| BMI\_25\_30 | 3 | 1 | 0.3609738 |
| BMI\_25\_30 | 3 | 2 | 0.9143366 |
| BMI\_25\_30 | 1 | 2 | 0.1761183 |
| Type of skins | 1 | 2 | 0.6353646 |
| Type of skins | 1 | 3 | 0.7291166 |
| Type of skins | 1 | 4 | 0.6539029 |
| Type of skins | 1 | 5 | 0.1805694 |
| Type of skins | 1 | 6 | 0.1418581 |
| Type of skins | 2 | 3 | 0.5410936 |
| Type of skins | 2 | 4 | 0.0776557 |
| Type of skins | 2 | 5 | 0.0666667 |
| Type of skins | 2 | 6 | 0.8857143 |
| Type of skins | 3 | 4 | 0.7094372 |
| Type of skins | 3 | 5 | 0.1407712 |
| Type of skins | 3 | 6 | 0.1523967 |
| Type of skins | 4 | 5 | 0.2160633 |
| Type of skins | 4 | 6 | 0.2256410 |
| Type of skins | 5 | 6 | 0.0380952 |
| Age\_stage | 2 | 6 | 0.9581111 |
| Age\_stage | 2 | 3 | 0.0259458 |
| Age\_stage | 2 | 4 | 0.0004619 |
| Age\_stage | 2 | 1 | 0.3563386 |
| Age\_stage | 2 | 5 | 0.2702703 |
| Age\_stage | 6 | 3 | 0.2100103 |
| Age\_stage | 6 | 4 | 0.0414781 |
| Age\_stage | 6 | 1 | 0.4452214 |
| Age\_stage | 6 | 5 | 0.5714286 |
| Age\_stage | 3 | 4 | 0.1095483 |
| Age\_stage | 3 | 1 | 0.0144737 |
| Age\_stage | 3 | 5 | 0.5714286 |
| Age\_stage | 4 | 1 | 0.0071843 |
| Age\_stage | 4 | 5 | 1.0000000 |
| Age\_stage | 1 | 5 | 0.5000000 |

Forest plot 

## Tạo bảng và Forest plot với biến δ\_left

|  | Subgroup\_Category | Subgroup | n\_δ\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 3.545000 | 1.971976 | 5.118024 | NA |
| 23 | Age\_stage | 2 | 36 | 4.740787 | 3.996630 | 5.484944 | NA |
| 25 | Age\_stage | 3 | 13 | 3.544462 | 2.801791 | 4.287132 | NA |
| 26 | Age\_stage | 4 | 12 | 2.787222 | 1.714190 | 3.860254 | NA |
| 28 | Age\_stage | 5 | 1 | 2.720000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 4.083611 | 1.081193 | 7.086029 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 3.964167 | 3.273596 | 4.654738 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 4.189904 | 3.387318 | 4.992490 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 3.828167 | 2.179677 | 5.476656 | NA |
| 1 | Gender | 0 | 31 | 4.547688 | 3.761914 | 5.333462 | 0.0932600 |
| 2 | Gender | 1 | 44 | 3.664803 | 3.063144 | 4.266463 | 0.0932600 |
| 22 | Hypertension | 0 | 54 | 4.532207 | 3.982997 | 5.081417 | 0.0002427 |
| 21 | Hypertension | 1 | 21 | 2.737643 | 1.969361 | 3.505925 | 0.0002427 |
| 9 | Obesity | 0 | 68 | 4.050478 | 3.537542 | 4.563414 | 0.8057764 |
| 8 | Obesity | 1 | 7 | 3.828167 | 2.179677 | 5.476656 | 0.8057764 |
| 4 | Race | 0 | 11 | 5.386333 | 4.359396 | 6.413270 | NA |
| 3 | Race | 1 | 61 | 3.746393 | 3.244868 | 4.247919 | NA |
| 5 | Race | 2 | 3 | 4.816667 | -6.265660 | 15.898993 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 2.438974 | 1.680263 | 3.197686 | 0.0026188 |
| 6 | Smoking | Do not smoke | 62 | 4.363274 | 3.837431 | 4.889118 | 0.0026188 |
| 14 | Stress index | 0 | 57 | 3.737012 | 3.224877 | 4.249146 | 0.0471568 |
| 13 | Stress index | 1 | 18 | 4.956667 | 3.804374 | 6.108960 | 0.0471568 |
| 15 | Type of skins | 1 | 10 | 4.964217 | 3.837509 | 6.090925 | NA |
| 16 | Type of skins | 2 | 4 | 4.810000 | 2.668322 | 6.951678 | NA |
| 17 | Type of skins | 3 | 40 | 3.444417 | 2.867520 | 4.021313 | NA |
| 18 | Type of skins | 4 | 11 | 5.000530 | 3.534564 | 6.466497 | NA |
| 19 | Type of skins | 5 | 6 | 3.994167 | 1.119009 | 6.869324 | NA |
| 20 | Type of skins | 6 | 4 | 4.150000 | -2.022264 | 10.322264 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

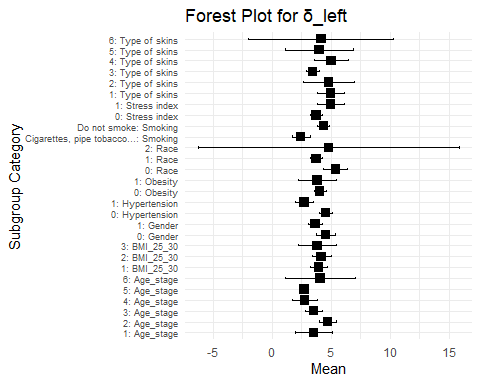
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.0061606 |
| Race | 1 | 2 | 0.9114818 |
| Race | 0 | 2 | 0.4560440 |
| BMI\_25\_30 | 3 | 1 | 0.9430552 |
| BMI\_25\_30 | 3 | 2 | 0.6509314 |
| BMI\_25\_30 | 1 | 2 | 0.6587036 |
| Type of skins | 1 | 2 | 0.7332667 |
| Type of skins | 1 | 3 | 0.0138243 |
| Type of skins | 1 | 4 | 0.8632668 |
| Type of skins | 1 | 5 | 0.1805694 |
| Type of skins | 1 | 6 | 0.1878122 |
| Type of skins | 2 | 3 | 0.1257731 |
| Type of skins | 2 | 4 | 1.0000000 |
| Type of skins | 2 | 5 | 0.3523810 |
| Type of skins | 2 | 6 | 0.3428571 |
| Type of skins | 3 | 4 | 0.0403913 |
| Type of skins | 3 | 5 | 0.7566633 |
| Type of skins | 3 | 6 | 0.6830703 |
| Type of skins | 4 | 5 | 0.3501939 |
| Type of skins | 4 | 6 | 0.4893773 |
| Type of skins | 5 | 6 | 0.7619048 |
| Age\_stage | 2 | 6 | 0.4503330 |
| Age\_stage | 2 | 3 | 0.0715061 |
| Age\_stage | 2 | 4 | 0.0068830 |
| Age\_stage | 2 | 1 | 0.1870064 |
| Age\_stage | 2 | 5 | 0.3783784 |
| Age\_stage | 6 | 3 | 1.0000000 |
| Age\_stage | 6 | 4 | 0.6062818 |
| Age\_stage | 6 | 1 | 0.9452214 |
| Age\_stage | 6 | 5 | 1.0000000 |
| Age\_stage | 3 | 4 | 0.1653552 |
| Age\_stage | 3 | 1 | 0.8772962 |
| Age\_stage | 3 | 5 | 0.4285714 |
| Age\_stage | 4 | 1 | 0.4723280 |
| Age\_stage | 4 | 5 | 1.0000000 |
| Age\_stage | 1 | 5 | 1.0000000 |

Forest plot 

## Tạo bảng và Forest plot với biến T\_left

|  | Subgroup\_Category | Subgroup | n\_T\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 28.54214 | 24.42954 | 32.65475 | NA |
| 23 | Age\_stage | 2 | 36 | 31.60815 | 30.54110 | 32.67520 | NA |
| 25 | Age\_stage | 3 | 13 | 32.26823 | 30.49758 | 34.03888 | NA |
| 26 | Age\_stage | 4 | 12 | 31.02736 | 27.84706 | 34.20766 | NA |
| 28 | Age\_stage | 5 | 1 | 33.13000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 29.47750 | 24.03498 | 34.92002 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 30.08278 | 28.80867 | 31.35689 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 32.27346 | 31.02791 | 33.51901 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 33.84457 | 32.26321 | 35.42593 | NA |
| 1 | Gender | 0 | 31 | 31.44366 | 30.23091 | 32.65640 | 0.8590947 |
| 2 | Gender | 1 | 44 | 31.01694 | 29.75506 | 32.27882 | 0.8590947 |
| 22 | Hypertension | 0 | 54 | 31.58660 | 30.68990 | 32.48331 | 0.6538657 |
| 21 | Hypertension | 1 | 21 | 30.18200 | 27.97502 | 32.38898 | 0.6538657 |
| 9 | Obesity | 0 | 68 | 30.92039 | 29.98517 | 31.85561 | 0.0354124 |
| 8 | Obesity | 1 | 7 | 33.84457 | 32.26321 | 35.42593 | 0.0354124 |
| 4 | Race | 0 | 11 | 32.66200 | 31.06497 | 34.25903 | NA |
| 3 | Race | 1 | 61 | 30.77880 | 29.75965 | 31.79794 | NA |
| 5 | Race | 2 | 3 | 34.23667 | 30.98763 | 37.48570 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 29.50295 | 26.30840 | 32.69750 | 0.3036006 |
| 6 | Smoking | Do not smoke | 62 | 31.54775 | 30.69258 | 32.40292 | 0.3036006 |
| 14 | Stress index | 0 | 57 | 30.58278 | 29.50512 | 31.66045 | 0.0377171 |
| 13 | Stress index | 1 | 18 | 33.12667 | 32.19467 | 34.05866 | 0.0377171 |
| 15 | Type of skins | 1 | 10 | 32.69770 | 30.88900 | 34.50640 | NA |
| 16 | Type of skins | 2 | 4 | 34.27000 | 31.95529 | 36.58471 | NA |
| 17 | Type of skins | 3 | 40 | 30.06021 | 28.72773 | 31.39268 | NA |
| 18 | Type of skins | 4 | 11 | 33.14848 | 32.09337 | 34.20360 | NA |
| 19 | Type of skins | 5 | 6 | 28.33500 | 24.94384 | 31.72616 | NA |
| 20 | Type of skins | 6 | 4 | 34.59750 | 32.54660 | 36.64840 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

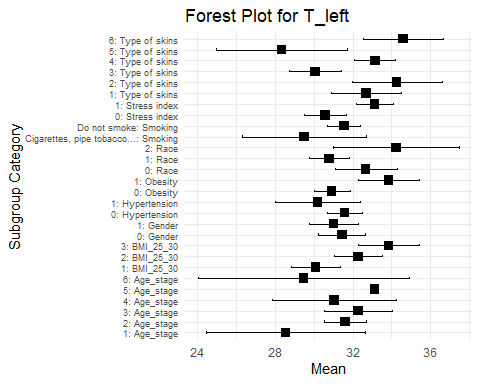
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.1543522 |
| Race | 1 | 2 | 0.0834427 |
| Race | 0 | 2 | 0.2252747 |
| BMI\_25\_30 | 3 | 1 | 0.0134551 |
| BMI\_25\_30 | 3 | 2 | 0.2147228 |
| BMI\_25\_30 | 1 | 2 | 0.0126866 |
| Type of skins | 1 | 2 | 0.4535465 |
| Type of skins | 1 | 3 | 0.0560509 |
| Type of skins | 1 | 4 | 0.9176902 |
| Type of skins | 1 | 5 | 0.0109890 |
| Type of skins | 1 | 6 | 0.1034961 |
| Type of skins | 2 | 3 | 0.0281103 |
| Type of skins | 2 | 4 | 0.2256410 |
| Type of skins | 2 | 5 | 0.0095238 |
| Type of skins | 2 | 6 | 0.8845494 |
| Type of skins | 3 | 4 | 0.0327598 |
| Type of skins | 3 | 5 | 0.2972969 |
| Type of skins | 3 | 6 | 0.0120453 |
| Type of skins | 4 | 5 | 0.0048481 |
| Type of skins | 4 | 6 | 0.1700363 |
| Type of skins | 5 | 6 | 0.0139219 |
| Age\_stage | 2 | 6 | 0.4503330 |
| Age\_stage | 2 | 3 | 0.5087832 |
| Age\_stage | 2 | 4 | 0.6132158 |
| Age\_stage | 2 | 1 | 0.0529179 |
| Age\_stage | 2 | 5 | 0.7027027 |
| Age\_stage | 6 | 3 | 0.3228660 |
| Age\_stage | 6 | 4 | 0.8200819 |
| Age\_stage | 6 | 1 | 0.7307692 |
| Age\_stage | 6 | 5 | 0.8571429 |
| Age\_stage | 3 | 4 | 0.9786974 |
| Age\_stage | 3 | 1 | 0.0236068 |
| Age\_stage | 3 | 5 | 0.7142857 |
| Age\_stage | 4 | 1 | 0.2614114 |
| Age\_stage | 4 | 5 | 0.9230769 |
| Age\_stage | 1 | 5 | 0.5000000 |

Forest plot 

## Tạo bảng và Forest plot với biến A365\_left

|  | Subgroup\_Category | Subgroup | n\_A365\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 97.000000 | 37.4592764 | 156.54072 | NA |
| 23 | Age\_stage | 2 | 36 | 87.395833 | 72.5408476 | 102.25082 | NA |
| 25 | Age\_stage | 3 | 13 | 96.323077 | 71.3364274 | 121.30973 | NA |
| 26 | Age\_stage | 4 | 12 | 85.875000 | 59.7621825 | 111.98782 | NA |
| 28 | Age\_stage | 5 | 1 | 10.000000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 83.750000 | 30.1776211 | 137.32238 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 86.075397 | 70.2186881 | 101.93211 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 87.397436 | 71.1182591 | 103.67661 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 104.707143 | 83.0221817 | 126.39210 | NA |
| 1 | Gender | 0 | 31 | 90.094086 | 73.1247431 | 107.06343 | 0.7755237 |
| 2 | Gender | 1 | 44 | 86.989394 | 73.2514661 | 100.72732 | 0.7755237 |
| 22 | Hypertension | 0 | 54 | 86.666667 | 73.4014904 | 99.93184 | 0.5670678 |
| 21 | Hypertension | 1 | 21 | 92.402381 | 75.8328143 | 108.97195 | 0.5670678 |
| 9 | Obesity | 0 | 68 | 86.580882 | 75.2509092 | 97.91086 | 0.2744234 |
| 8 | Obesity | 1 | 7 | 104.707143 | 83.0221817 | 126.39210 | 0.2744234 |
| 4 | Race | 0 | 11 | 103.957576 | 84.6615635 | 123.25359 | NA |
| 3 | Race | 1 | 61 | 89.408470 | 77.8771090 | 100.93983 | NA |
| 5 | Race | 2 | 3 | 7.666667 | -0.3187188 | 15.65205 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 77.269231 | 48.5100295 | 106.02843 | 0.5016329 |
| 6 | Smoking | Do not smoke | 62 | 90.579839 | 79.1717747 | 101.98790 | 0.5016329 |
| 14 | Stress index | 0 | 57 | 85.985965 | 74.6560165 | 97.31591 | 0.5188160 |
| 13 | Stress index | 1 | 18 | 95.513889 | 68.8613538 | 122.16642 | 0.5188160 |
| 15 | Type of skins | 1 | 10 | 108.395000 | 87.8189811 | 128.97102 | NA |
| 16 | Type of skins | 2 | 4 | 86.000000 | -33.9026505 | 205.90265 | NA |
| 17 | Type of skins | 3 | 40 | 96.495833 | 85.0333811 | 107.95829 | NA |
| 18 | Type of skins | 4 | 11 | 101.151515 | 70.7210636 | 131.58197 | NA |
| 19 | Type of skins | 5 | 6 | 32.333333 | 6.9429181 | 57.72375 | NA |
| 20 | Type of skins | 6 | 4 | 6.500000 | 0.9118079 | 12.08819 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

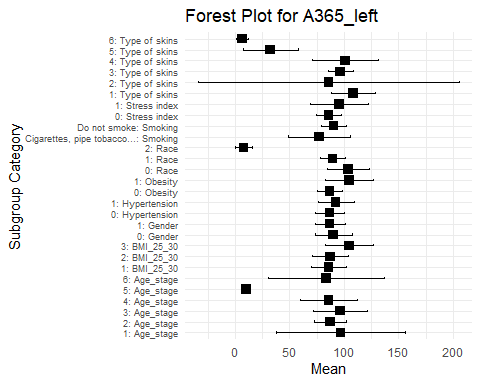
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.2630228 |
| Race | 1 | 2 | 0.0100790 |
| Race | 0 | 2 | 0.0126334 |
| BMI\_25\_30 | 3 | 1 | 0.3912693 |
| BMI\_25\_30 | 3 | 2 | 0.1938031 |
| BMI\_25\_30 | 1 | 2 | 0.9145603 |
| Type of skins | 1 | 2 | 0.4361720 |
| Type of skins | 1 | 3 | 0.1942759 |
| Type of skins | 1 | 4 | 0.4810365 |
| Type of skins | 1 | 5 | 0.0040218 |
| Type of skins | 1 | 6 | 0.0057668 |
| Type of skins | 2 | 3 | 0.6680712 |
| Type of skins | 2 | 4 | 0.5714286 |
| Type of skins | 2 | 5 | 0.2571429 |
| Type of skins | 2 | 6 | 0.1142857 |
| Type of skins | 3 | 4 | 0.9269948 |
| Type of skins | 3 | 5 | 0.0013108 |
| Type of skins | 3 | 6 | 0.0015500 |
| Type of skins | 4 | 5 | 0.0071105 |
| Type of skins | 4 | 6 | 0.0014652 |
| Type of skins | 5 | 6 | 0.0871184 |
| Age\_stage | 2 | 6 | 0.9856593 |
| Age\_stage | 2 | 3 | 0.6918487 |
| Age\_stage | 2 | 4 | 0.8769858 |
| Age\_stage | 2 | 1 | 0.6100723 |
| Age\_stage | 2 | 5 | 0.1465589 |
| Age\_stage | 6 | 3 | 0.7256055 |
| Age\_stage | 6 | 4 | 1.0000000 |
| Age\_stage | 6 | 1 | 0.9452214 |
| Age\_stage | 6 | 5 | 0.5714286 |
| Age\_stage | 3 | 4 | 0.7440593 |
| Age\_stage | 3 | 1 | 0.8772962 |
| Age\_stage | 3 | 5 | 0.2857143 |
| Age\_stage | 4 | 1 | 0.5825997 |
| Age\_stage | 4 | 5 | 0.3489119 |
| Age\_stage | 1 | 5 | 0.2723606 |

Forest plot 

## Tạo bảng và Forest plot với biến A460\_left

|  | Subgroup\_Category | Subgroup | n\_A460\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 67.28571 | 38.094586 | 96.47684 | NA |
| 23 | Age\_stage | 2 | 36 | 64.17361 | 54.499550 | 73.84767 | NA |
| 25 | Age\_stage | 3 | 13 | 75.46923 | 57.514608 | 93.42385 | NA |
| 26 | Age\_stage | 4 | 12 | 82.61111 | 57.983872 | 107.23835 | NA |
| 28 | Age\_stage | 5 | 1 | 12.00000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 67.22222 | 30.342913 | 104.10153 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 66.57143 | 55.279281 | 77.86358 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 68.38782 | 58.469163 | 78.30648 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 84.99048 | 61.660122 | 108.32083 | NA |
| 1 | Gender | 0 | 31 | 67.51344 | 57.681171 | 77.34571 | 0.7920273 |
| 2 | Gender | 1 | 44 | 69.91136 | 59.225793 | 80.59693 | 0.7920273 |
| 22 | Hypertension | 0 | 54 | 60.70216 | 53.460712 | 67.94361 | 0.0007848 |
| 21 | Hypertension | 1 | 21 | 90.05238 | 74.137569 | 105.96719 | 0.0007848 |
| 9 | Obesity | 0 | 68 | 67.26593 | 59.500113 | 75.03175 | 0.1088838 |
| 8 | Obesity | 1 | 7 | 84.99048 | 61.660122 | 108.32083 | 0.1088838 |
| 4 | Race | 0 | 11 | 69.75152 | 57.519294 | 81.98374 | NA |
| 3 | Race | 1 | 61 | 71.48770 | 63.262480 | 79.71293 | NA |
| 5 | Race | 2 | 3 | 13.66667 | 8.495522 | 18.83781 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 80.25641 | 52.354488 | 108.15833 | 0.2841460 |
| 6 | Smoking | Do not smoke | 62 | 66.54328 | 59.481114 | 73.60544 | 0.2841460 |
| 14 | Stress index | 0 | 57 | 70.66257 | 61.943552 | 79.38159 | 0.4528000 |
| 13 | Stress index | 1 | 18 | 63.40278 | 49.343603 | 77.46195 | 0.4528000 |
| 15 | Type of skins | 1 | 10 | 73.89333 | 62.858399 | 84.92827 | NA |
| 16 | Type of skins | 2 | 4 | 58.25000 | 8.753410 | 107.74659 | NA |
| 17 | Type of skins | 3 | 40 | 79.24167 | 69.632172 | 88.85116 | NA |
| 18 | Type of skins | 4 | 11 | 69.21970 | 48.530619 | 89.90877 | NA |
| 19 | Type of skins | 5 | 6 | 33.50000 | 16.182722 | 50.81728 | NA |
| 20 | Type of skins | 6 | 4 | 16.25000 | 7.595248 | 24.90475 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

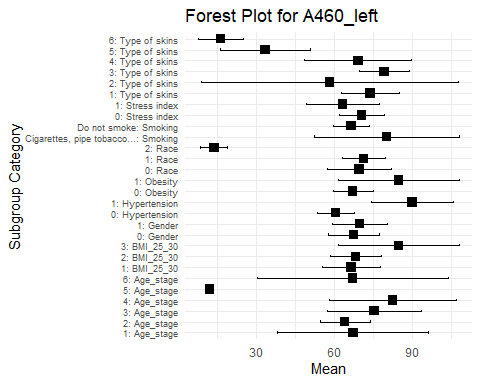
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.9687761 |
| Race | 1 | 2 | 0.0051818 |
| Race | 0 | 2 | 0.0126334 |
| BMI\_25\_30 | 3 | 1 | 0.1373246 |
| BMI\_25\_30 | 3 | 2 | 0.1176736 |
| BMI\_25\_30 | 1 | 2 | 0.5699523 |
| Type of skins | 1 | 2 | 0.2883139 |
| Type of skins | 1 | 3 | 0.5766112 |
| Type of skins | 1 | 4 | 0.2046745 |
| Type of skins | 1 | 5 | 0.0023540 |
| Type of skins | 1 | 6 | 0.0057668 |
| Type of skins | 2 | 3 | 0.2128804 |
| Type of skins | 2 | 4 | 0.4893773 |
| Type of skins | 2 | 5 | 0.1714286 |
| Type of skins | 2 | 6 | 0.0285714 |
| Type of skins | 3 | 4 | 0.2473178 |
| Type of skins | 3 | 5 | 0.0007327 |
| Type of skins | 3 | 6 | 0.0013454 |
| Type of skins | 4 | 5 | 0.0202004 |
| Type of skins | 4 | 6 | 0.0029304 |
| Type of skins | 5 | 6 | 0.1142857 |
| Age\_stage | 2 | 6 | 0.9141145 |
| Age\_stage | 2 | 3 | 0.3027984 |
| Age\_stage | 2 | 4 | 0.1709031 |
| Age\_stage | 2 | 1 | 0.7671532 |
| Age\_stage | 2 | 5 | 0.1222355 |
| Age\_stage | 6 | 3 | 0.7256055 |
| Age\_stage | 6 | 4 | 0.3016447 |
| Age\_stage | 6 | 1 | 0.8862477 |
| Age\_stage | 6 | 5 | 0.2857143 |
| Age\_stage | 3 | 4 | 0.6830825 |
| Age\_stage | 3 | 1 | 0.6063626 |
| Age\_stage | 3 | 5 | 0.1428571 |
| Age\_stage | 4 | 1 | 0.5821023 |
| Age\_stage | 4 | 5 | 0.1410316 |
| Age\_stage | 1 | 5 | 0.2500000 |

Forest plot 

## Tạo bảng và Forest plot với biến Anadn\_left

|  | Subgroup\_Category | Subgroup | n\_Anadn\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 1.2292857 | 0.1306755 | 2.3278959 | NA |
| 23 | Age\_stage | 2 | 36 | 1.0508102 | 0.6348179 | 1.4668025 | NA |
| 25 | Age\_stage | 3 | 13 | 1.0938462 | 0.5228468 | 1.6648455 | NA |
| 26 | Age\_stage | 4 | 12 | 2.0093056 | 0.2340472 | 3.7845640 | NA |
| 28 | Age\_stage | 5 | 1 | 1.2000000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 1.0005556 | 0.5365968 | 1.4645143 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 1.4094444 | 0.8327412 | 1.9861477 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 1.0366987 | 0.6423667 | 1.4310308 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 0.8311905 | 0.6415497 | 1.0208313 | NA |
| 1 | Gender | 0 | 31 | 1.2033065 | 0.7466920 | 1.6599209 | 0.2819188 |
| 2 | Gender | 1 | 44 | 1.2424242 | 0.7315361 | 1.7533123 | 0.2819188 |
| 22 | Hypertension | 0 | 54 | 1.1216512 | 0.7262694 | 1.5170331 | 0.0435934 |
| 21 | Hypertension | 1 | 21 | 1.4952381 | 0.7430226 | 2.2474536 | 0.0435934 |
| 9 | Obesity | 0 | 68 | 1.2669240 | 0.8853729 | 1.6484752 | 0.9274339 |
| 8 | Obesity | 1 | 7 | 0.8311905 | 0.6415497 | 1.0208313 | 0.9274339 |
| 4 | Race | 0 | 11 | 0.7127273 | 0.5585098 | 0.8669447 | NA |
| 3 | Race | 1 | 61 | 1.2680191 | 0.8528979 | 1.6831403 | NA |
| 5 | Race | 2 | 3 | 2.2600000 | -1.0576029 | 5.5776029 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 2.2370513 | 0.4995367 | 3.9745659 | 0.0106311 |
| 6 | Smoking | Do not smoke | 62 | 1.0143145 | 0.7783508 | 1.2502782 | 0.0106311 |
| 14 | Stress index | 0 | 57 | 1.2238012 | 0.8355584 | 1.6120440 | 0.1285586 |
| 13 | Stress index | 1 | 18 | 1.2340278 | 0.3980583 | 2.0699973 | 0.1285586 |
| 15 | Type of skins | 1 | 10 | 0.7318333 | 0.5650498 | 0.8986169 | NA |
| 16 | Type of skins | 2 | 4 | 1.7325000 | -0.9698128 | 4.4348128 | NA |
| 17 | Type of skins | 3 | 40 | 1.0428333 | 0.7524185 | 1.3332482 | NA |
| 18 | Type of skins | 4 | 11 | 0.6806818 | 0.5075490 | 0.8538146 | NA |
| 19 | Type of skins | 5 | 6 | 2.4283333 | -1.4164653 | 6.2731319 | NA |
| 20 | Type of skins | 6 | 4 | 3.4875000 | -0.7869684 | 7.7619684 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

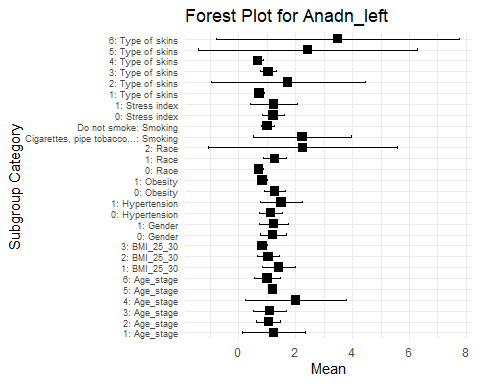
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.1707811 |
| Race | 1 | 2 | 0.0307771 |
| Race | 0 | 2 | 0.0054945 |
| BMI\_25\_30 | 3 | 1 | 0.9090021 |
| BMI\_25\_30 | 3 | 2 | 0.6756662 |
| BMI\_25\_30 | 1 | 2 | 0.6495614 |
| Type of skins | 1 | 2 | 0.7332667 |
| Type of skins | 1 | 3 | 0.2749886 |
| Type of skins | 1 | 4 | 0.6219523 |
| Type of skins | 1 | 5 | 0.1286037 |
| Type of skins | 1 | 6 | 0.0019980 |
| Type of skins | 2 | 3 | 0.9511651 |
| Type of skins | 2 | 4 | 0.6608059 |
| Type of skins | 2 | 5 | 0.9142857 |
| Type of skins | 2 | 6 | 0.4857143 |
| Type of skins | 3 | 4 | 0.0858399 |
| Type of skins | 3 | 5 | 0.1919551 |
| Type of skins | 3 | 6 | 0.0051612 |
| Type of skins | 4 | 5 | 0.0615708 |
| Type of skins | 4 | 6 | 0.0014652 |
| Type of skins | 5 | 6 | 0.1714286 |
| Age\_stage | 2 | 6 | 0.2148169 |
| Age\_stage | 2 | 3 | 0.3709208 |
| Age\_stage | 2 | 4 | 0.0371951 |
| Age\_stage | 2 | 1 | 0.2427726 |
| Age\_stage | 2 | 5 | 0.2059553 |
| Age\_stage | 6 | 3 | 0.8263691 |
| Age\_stage | 6 | 4 | 0.9635854 |
| Age\_stage | 6 | 1 | 0.9452214 |
| Age\_stage | 6 | 5 | 0.5714286 |
| Age\_stage | 3 | 4 | 0.4626779 |
| Age\_stage | 3 | 1 | 1.0000000 |
| Age\_stage | 3 | 5 | 0.3205296 |
| Age\_stage | 4 | 1 | 0.8657140 |
| Age\_stage | 4 | 5 | 0.6153846 |
| Age\_stage | 1 | 5 | 0.7500000 |

Forest plot 

## Tạo bảng và Forest plot với biến POM\_left

|  | Subgroup\_Category | Subgroup | n\_POM\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 8.204286 | -1.7628338 | 18.171405 | NA |
| 23 | Age\_stage | 2 | 36 | 8.193796 | 6.1406222 | 10.246970 | NA |
| 25 | Age\_stage | 3 | 13 | 7.907769 | 3.9363611 | 11.879177 | NA |
| 26 | Age\_stage | 4 | 12 | 5.502639 | 2.7895737 | 8.215704 | NA |
| 28 | Age\_stage | 5 | 1 | 3.850000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 5.017778 | 1.1882507 | 8.847305 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 6.835476 | 4.6985094 | 8.972443 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 8.227820 | 5.7925457 | 10.663095 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 7.740381 | 5.9441618 | 9.536600 | NA |
| 1 | Gender | 0 | 31 | 6.987204 | 4.8375234 | 9.136885 | 0.6189004 |
| 2 | Gender | 1 | 44 | 7.695288 | 5.7000238 | 9.690552 | 0.6189004 |
| 22 | Hypertension | 0 | 54 | 8.524167 | 6.6807058 | 10.367628 | 0.0089575 |
| 21 | Hypertension | 1 | 21 | 4.518619 | 2.9705490 | 6.066689 | 0.0089575 |
| 9 | Obesity | 0 | 68 | 7.367843 | 5.7841881 | 8.951498 | 0.3034647 |
| 8 | Obesity | 1 | 7 | 7.740381 | 5.9441618 | 9.536600 | 0.3034647 |
| 4 | Race | 0 | 11 | 10.184182 | 7.7589817 | 12.609382 | NA |
| 3 | Race | 1 | 61 | 7.122951 | 5.4342744 | 8.811627 | NA |
| 5 | Race | 2 | 3 | 2.890000 | 0.5533255 | 5.226674 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 4.190897 | 1.6490771 | 6.732718 | 0.0098134 |
| 6 | Smoking | Do not smoke | 62 | 8.076038 | 6.4447572 | 9.707318 | 0.0098134 |
| 14 | Stress index | 0 | 57 | 6.501772 | 5.0790775 | 7.924466 | 0.0636527 |
| 13 | Stress index | 1 | 18 | 10.255278 | 6.2754950 | 14.235061 | 0.0636527 |
| 15 | Type of skins | 1 | 10 | 8.465267 | 7.3706194 | 9.559914 | NA |
| 16 | Type of skins | 2 | 4 | 13.200000 | -6.4560098 | 32.856010 | NA |
| 17 | Type of skins | 3 | 40 | 6.378125 | 4.5519149 | 8.204335 | NA |
| 18 | Type of skins | 4 | 11 | 12.213030 | 7.6916724 | 16.734388 | NA |
| 19 | Type of skins | 5 | 6 | 3.107500 | 0.5041978 | 5.710802 | NA |
| 20 | Type of skins | 6 | 4 | 2.407500 | 0.4450040 | 4.369996 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

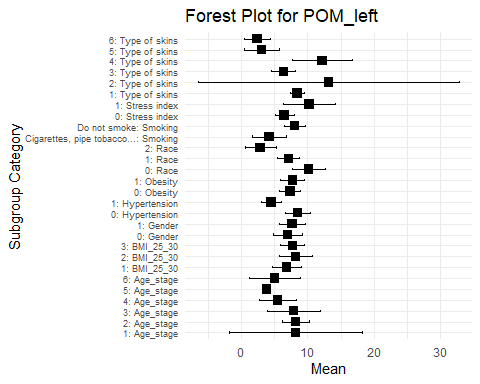
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.0085504 |
| Race | 1 | 2 | 0.2039131 |
| Race | 0 | 2 | 0.0054945 |
| BMI\_25\_30 | 3 | 1 | 0.1694581 |
| BMI\_25\_30 | 3 | 2 | 0.7467346 |
| BMI\_25\_30 | 1 | 2 | 0.1196194 |
| Type of skins | 1 | 2 | 1.0000000 |
| Type of skins | 1 | 3 | 0.0265356 |
| Type of skins | 1 | 4 | 0.1971161 |
| Type of skins | 1 | 5 | 0.0009990 |
| Type of skins | 1 | 6 | 0.0019980 |
| Type of skins | 2 | 3 | 0.3726823 |
| Type of skins | 2 | 4 | 0.7531136 |
| Type of skins | 2 | 5 | 0.2571429 |
| Type of skins | 2 | 6 | 0.2000000 |
| Type of skins | 3 | 4 | 0.0009438 |
| Type of skins | 3 | 5 | 0.1407712 |
| Type of skins | 3 | 6 | 0.0827250 |
| Type of skins | 4 | 5 | 0.0011312 |
| Type of skins | 4 | 6 | 0.0014652 |
| Type of skins | 5 | 6 | 0.9142857 |
| Age\_stage | 2 | 6 | 0.1947838 |
| Age\_stage | 2 | 3 | 0.9021319 |
| Age\_stage | 2 | 4 | 0.1381952 |
| Age\_stage | 2 | 1 | 0.3915004 |
| Age\_stage | 2 | 5 | 0.6486486 |
| Age\_stage | 6 | 3 | 0.3676102 |
| Age\_stage | 6 | 4 | 0.9635854 |
| Age\_stage | 6 | 1 | 0.9452214 |
| Age\_stage | 6 | 5 | 1.0000000 |
| Age\_stage | 3 | 4 | 0.2945372 |
| Age\_stage | 3 | 1 | 0.6991744 |
| Age\_stage | 3 | 5 | 0.5714286 |
| Age\_stage | 4 | 1 | 0.9671350 |
| Age\_stage | 4 | 5 | 0.9230769 |
| Age\_stage | 1 | 5 | 1.0000000 |

Forest plot 

## Tạo bảng và Forest plot với biến Ae\_left

|  | Subgroup\_Category | Subgroup | n\_Ae\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 1.2700000 | 0.6841021 | 1.8558979 | NA |
| 23 | Age\_stage | 2 | 36 | 1.7899537 | 1.4679672 | 2.1119402 | NA |
| 25 | Age\_stage | 3 | 13 | 1.4853077 | 1.0410686 | 1.9295468 | NA |
| 26 | Age\_stage | 4 | 12 | 0.9473611 | 0.4738669 | 1.4208554 | NA |
| 28 | Age\_stage | 5 | 1 | 1.2600000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 2.1430556 | -0.0911293 | 4.3772404 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 1.4693254 | 1.1607314 | 1.7779194 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 1.6093269 | 1.1756881 | 2.0429658 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 2.0814048 | 1.0665804 | 3.0962292 | NA |
| 1 | Gender | 0 | 31 | 1.6583333 | 1.4315523 | 1.8851144 | 0.0665806 |
| 2 | Gender | 1 | 44 | 1.5162652 | 1.1375909 | 1.8949395 | 0.0665806 |
| 22 | Hypertension | 0 | 54 | 1.7141204 | 1.4368769 | 1.9913639 | 0.0165996 |
| 21 | Hypertension | 1 | 21 | 1.2172143 | 0.7605763 | 1.6738522 | 0.0165996 |
| 9 | Obesity | 0 | 68 | 1.5228554 | 1.2766175 | 1.7690933 | 0.1662869 |
| 8 | Obesity | 1 | 7 | 2.0814048 | 1.0665804 | 3.0962292 | 0.1662869 |
| 4 | Race | 0 | 11 | 2.4702121 | 1.5565933 | 3.3838309 | NA |
| 3 | Race | 1 | 61 | 1.4242896 | 1.1968082 | 1.6517710 | NA |
| 5 | Race | 2 | 3 | 1.3566667 | -1.3466337 | 4.0599671 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 0.6860256 | 0.3750638 | 0.9969875 | 0.0000644 |
| 6 | Smoking | Do not smoke | 62 | 1.7613817 | 1.5034288 | 2.0193346 | 0.0000644 |
| 14 | Stress index | 0 | 57 | 1.5716491 | 1.2797408 | 1.8635574 | 0.5391570 |
| 13 | Stress index | 1 | 18 | 1.5855556 | 1.1899036 | 1.9812075 | 0.5391570 |
| 15 | Type of skins | 1 | 10 | 2.4479833 | 1.5112565 | 3.3847102 | NA |
| 16 | Type of skins | 2 | 4 | 2.0050000 | -0.1020543 | 4.1120543 | NA |
| 17 | Type of skins | 3 | 40 | 1.2607083 | 1.0006721 | 1.5207445 | NA |
| 18 | Type of skins | 4 | 11 | 2.0141667 | 1.5172802 | 2.5110531 | NA |
| 19 | Type of skins | 5 | 6 | 1.4283333 | 0.0891874 | 2.7674793 | NA |
| 20 | Type of skins | 6 | 4 | 1.1175000 | -0.4882103 | 2.7232103 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

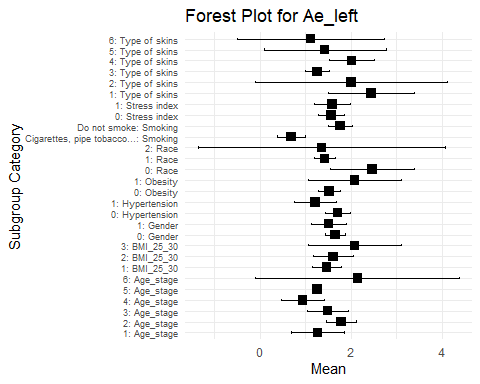
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.0069326 |
| Race | 1 | 2 | 0.8738127 |
| Race | 0 | 2 | 0.2912088 |
| BMI\_25\_30 | 3 | 1 | 0.1411448 |
| BMI\_25\_30 | 3 | 2 | 0.2905249 |
| BMI\_25\_30 | 1 | 2 | 0.6863222 |
| Type of skins | 1 | 2 | 0.5394605 |
| Type of skins | 1 | 3 | 0.0018277 |
| Type of skins | 1 | 4 | 0.6047302 |
| Type of skins | 1 | 5 | 0.0559441 |
| Type of skins | 1 | 6 | 0.1058941 |
| Type of skins | 2 | 3 | 0.2283955 |
| Type of skins | 2 | 4 | 0.8960324 |
| Type of skins | 2 | 5 | 0.4761905 |
| Type of skins | 2 | 6 | 0.4857143 |
| Type of skins | 3 | 4 | 0.0099765 |
| Type of skins | 3 | 5 | 0.9869869 |
| Type of skins | 3 | 6 | 0.5814877 |
| Type of skins | 4 | 5 | 0.0982547 |
| Type of skins | 4 | 6 | 0.1377289 |
| Type of skins | 5 | 6 | 0.6095238 |
| Age\_stage | 2 | 6 | 0.9283922 |
| Age\_stage | 2 | 3 | 0.3832641 |
| Age\_stage | 2 | 4 | 0.0051444 |
| Age\_stage | 2 | 1 | 0.1670162 |
| Age\_stage | 2 | 5 | 0.4259203 |
| Age\_stage | 6 | 3 | 0.9660917 |
| Age\_stage | 6 | 4 | 0.6732577 |
| Age\_stage | 6 | 1 | 0.9452214 |
| Age\_stage | 6 | 5 | 1.0000000 |
| Age\_stage | 3 | 4 | 0.0440821 |
| Age\_stage | 3 | 1 | 0.6426471 |
| Age\_stage | 3 | 5 | 1.0000000 |
| Age\_stage | 4 | 1 | 0.2536790 |
| Age\_stage | 4 | 5 | 0.3489119 |
| Age\_stage | 1 | 5 | 1.0000000 |

Forest plot 

## Tạo bảng và Forest plot với biến An\_left

|  | Subgroup\_Category | Subgroup | n\_An\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 1.1614286 | 0.6711025 | 1.651755 | NA |
| 23 | Age\_stage | 2 | 36 | 1.7425463 | 1.4006618 | 2.084431 | NA |
| 25 | Age\_stage | 3 | 13 | 1.3886923 | 1.0280921 | 1.749292 | NA |
| 26 | Age\_stage | 4 | 12 | 1.1309722 | 0.5013519 | 1.760593 | NA |
| 28 | Age\_stage | 5 | 1 | 1.1400000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 1.8386111 | 0.1504006 | 3.526822 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 1.4198016 | 1.1378092 | 1.701794 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 1.6146795 | 1.1713221 | 2.058037 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 1.8635238 | 0.9592873 | 2.767760 | NA |
| 1 | Gender | 0 | 31 | 1.5940323 | 1.3346191 | 1.853445 | 0.1137277 |
| 2 | Gender | 1 | 44 | 1.4827955 | 1.1368449 | 1.828746 | 0.1137277 |
| 22 | Hypertension | 0 | 54 | 1.6598148 | 1.4094490 | 1.910181 | 0.0113679 |
| 21 | Hypertension | 1 | 21 | 1.1918095 | 0.7036511 | 1.679968 | 0.0113679 |
| 9 | Obesity | 0 | 68 | 1.4943137 | 1.2571790 | 1.731448 | 0.2474473 |
| 8 | Obesity | 1 | 7 | 1.8635238 | 0.9592873 | 2.767760 | 0.2474473 |
| 4 | Race | 0 | 11 | 2.3337576 | 1.6190242 | 3.048491 | NA |
| 3 | Race | 1 | 61 | 1.3666667 | 1.1485985 | 1.584735 | NA |
| 5 | Race | 2 | 3 | 1.8733333 | -2.7746824 | 6.521349 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 0.8708974 | 0.4240299 | 1.317765 | 0.0016761 |
| 6 | Smoking | Do not smoke | 62 | 1.6667151 | 1.4200739 | 1.913356 | 0.0016761 |
| 14 | Stress index | 0 | 57 | 1.5111930 | 1.2464168 | 1.775969 | 0.6641382 |
| 13 | Stress index | 1 | 18 | 1.5844444 | 1.1162511 | 2.052638 | 0.6641382 |
| 15 | Type of skins | 1 | 10 | 2.2774667 | 1.6228782 | 2.932055 | NA |
| 16 | Type of skins | 2 | 4 | 2.1725000 | -0.1330125 | 4.478013 | NA |
| 17 | Type of skins | 3 | 40 | 1.2505833 | 0.9995253 | 1.501641 | NA |
| 18 | Type of skins | 4 | 11 | 1.7468182 | 1.1608841 | 2.332752 | NA |
| 19 | Type of skins | 5 | 6 | 1.3291667 | 0.2197568 | 2.438577 | NA |
| 20 | Type of skins | 6 | 4 | 1.4950000 | -1.2177905 | 4.207790 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

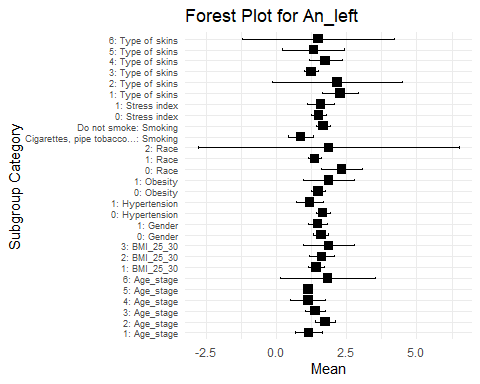
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.0035981 |
| Race | 1 | 2 | 0.8738127 |
| Race | 0 | 2 | 0.6593407 |
| BMI\_25\_30 | 3 | 1 | 0.1572463 |
| BMI\_25\_30 | 3 | 2 | 0.5521137 |
| BMI\_25\_30 | 1 | 2 | 0.6678504 |
| Type of skins | 1 | 2 | 0.6353646 |
| Type of skins | 1 | 3 | 0.0017544 |
| Type of skins | 1 | 4 | 0.1321176 |
| Type of skins | 1 | 5 | 0.0726773 |
| Type of skins | 1 | 6 | 0.2397602 |
| Type of skins | 2 | 3 | 0.1361687 |
| Type of skins | 2 | 4 | 0.7531136 |
| Type of skins | 2 | 5 | 0.2849576 |
| Type of skins | 2 | 6 | 0.3428571 |
| Type of skins | 3 | 4 | 0.0635760 |
| Type of skins | 3 | 5 | 0.9739781 |
| Type of skins | 3 | 6 | 0.6681482 |
| Type of skins | 4 | 5 | 0.4043310 |
| Type of skins | 4 | 6 | 0.3428571 |
| Type of skins | 5 | 6 | 0.9142857 |
| Age\_stage | 2 | 6 | 0.7327390 |
| Age\_stage | 2 | 3 | 0.3894725 |
| Age\_stage | 2 | 4 | 0.0350903 |
| Age\_stage | 2 | 1 | 0.1477281 |
| Age\_stage | 2 | 5 | 0.6064463 |
| Age\_stage | 6 | 3 | 0.8982751 |
| Age\_stage | 6 | 4 | 0.6164620 |
| Age\_stage | 6 | 1 | 0.7307692 |
| Age\_stage | 6 | 5 | 1.0000000 |
| Age\_stage | 3 | 4 | 0.1738039 |
| Age\_stage | 3 | 1 | 0.5355521 |
| Age\_stage | 3 | 5 | 1.0000000 |
| Age\_stage | 4 | 1 | 0.5358419 |
| Age\_stage | 4 | 5 | 0.6153846 |
| Age\_stage | 1 | 5 | 1.0000000 |

Forest plot 

## Tạo bảng và Forest plot với biến Am\_left

|  | Subgroup\_Category | Subgroup | n\_Am\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 0.9300000 | 0.4769908 | 1.383009 | NA |
| 23 | Age\_stage | 2 | 36 | 1.4704167 | 1.2063558 | 1.734477 | NA |
| 25 | Age\_stage | 3 | 13 | 1.0065385 | 0.7103281 | 1.302749 | NA |
| 26 | Age\_stage | 4 | 12 | 0.8662500 | 0.4326086 | 1.299891 | NA |
| 28 | Age\_stage | 5 | 1 | 0.8200000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 1.2811111 | 0.1904817 | 2.371741 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 1.1743254 | 0.9497501 | 1.398901 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 1.2771474 | 0.9337151 | 1.620580 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 1.2720238 | 0.7756951 | 1.768352 | NA |
| 1 | Gender | 0 | 31 | 1.2763441 | 1.0671664 | 1.485522 | 0.1555073 |
| 2 | Gender | 1 | 44 | 1.1787500 | 0.9191222 | 1.438378 | 0.1555073 |
| 22 | Hypertension | 0 | 54 | 1.3532253 | 1.1573389 | 1.549112 | 0.0023755 |
| 21 | Hypertension | 1 | 21 | 0.8741667 | 0.5440405 | 1.204293 | 0.0023755 |
| 9 | Obesity | 0 | 68 | 1.2136397 | 1.0276986 | 1.399581 | 0.5477819 |
| 8 | Obesity | 1 | 7 | 1.2720238 | 0.7756951 | 1.768352 | 0.5477819 |
| 4 | Race | 0 | 11 | 1.6918182 | 1.2022701 | 2.181366 | NA |
| 3 | Race | 1 | 61 | 1.1311749 | 0.9481261 | 1.314224 | NA |
| 5 | Race | 2 | 3 | 1.2733333 | -1.4416977 | 3.988364 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 0.7265385 | 0.3678555 | 1.085221 | 0.0026166 |
| 6 | Smoking | Do not smoke | 62 | 1.3223656 | 1.1348893 | 1.509842 | 0.0026166 |
| 14 | Stress index | 0 | 57 | 1.1838889 | 0.9777065 | 1.390071 | 0.2695112 |
| 13 | Stress index | 1 | 18 | 1.3305556 | 1.0074035 | 1.653708 | 0.2695112 |
| 15 | Type of skins | 1 | 10 | 1.5849167 | 1.1011458 | 2.068687 | NA |
| 16 | Type of skins | 2 | 4 | 1.6800000 | 0.1835169 | 3.176483 | NA |
| 17 | Type of skins | 3 | 40 | 1.0115833 | 0.7939967 | 1.229170 | NA |
| 18 | Type of skins | 4 | 11 | 1.5476515 | 1.1602515 | 1.935051 | NA |
| 19 | Type of skins | 5 | 6 | 1.1908333 | 0.1429551 | 2.238712 | NA |
| 20 | Type of skins | 6 | 4 | 1.0575000 | -0.5198923 | 2.634892 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

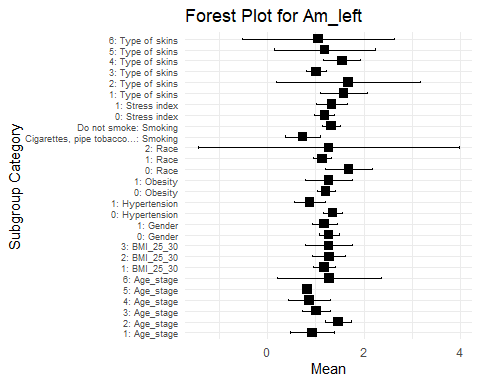
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.0159258 |
| Race | 1 | 2 | 1.0000000 |
| Race | 0 | 2 | 0.3496713 |
| BMI\_25\_30 | 3 | 1 | 0.5389955 |
| BMI\_25\_30 | 3 | 2 | 0.6280126 |
| BMI\_25\_30 | 1 | 2 | 0.8895810 |
| Type of skins | 1 | 2 | 0.9435661 |
| Type of skins | 1 | 3 | 0.0129148 |
| Type of skins | 1 | 4 | 0.9718674 |
| Type of skins | 1 | 5 | 0.2119328 |
| Type of skins | 1 | 6 | 0.1786311 |
| Type of skins | 2 | 3 | 0.0603710 |
| Type of skins | 2 | 4 | 0.9479053 |
| Type of skins | 2 | 5 | 0.2571429 |
| Type of skins | 2 | 6 | 0.2000000 |
| Type of skins | 3 | 4 | 0.0106573 |
| Type of skins | 3 | 5 | 0.8320866 |
| Type of skins | 3 | 6 | 0.7132839 |
| Type of skins | 4 | 5 | 0.1745801 |
| Type of skins | 4 | 6 | 0.2144535 |
| Type of skins | 5 | 6 | 0.5211659 |
| Age\_stage | 2 | 6 | 0.4832509 |
| Age\_stage | 2 | 3 | 0.0586051 |
| Age\_stage | 2 | 4 | 0.0104753 |
| Age\_stage | 2 | 1 | 0.1069130 |
| Age\_stage | 2 | 5 | 0.3252311 |
| Age\_stage | 6 | 3 | 0.8982751 |
| Age\_stage | 6 | 4 | 0.5532213 |
| Age\_stage | 6 | 1 | 0.5337995 |
| Age\_stage | 6 | 5 | 1.0000000 |
| Age\_stage | 3 | 4 | 0.2945372 |
| Age\_stage | 3 | 1 | 0.6628369 |
| Age\_stage | 3 | 5 | 1.0000000 |
| Age\_stage | 4 | 1 | 0.6724685 |
| Age\_stage | 4 | 5 | 0.7692308 |
| Age\_stage | 1 | 5 | 1.0000000 |

Forest plot 

## Tạo bảng và Forest plot với biến Ar\_left

|  | Subgroup\_Category | Subgroup | n\_Ar\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 0.5964286 | 0.2735184 | 0.9193388 | NA |
| 23 | Age\_stage | 2 | 36 | 0.7642361 | 0.6498784 | 0.8785939 | NA |
| 25 | Age\_stage | 3 | 13 | 0.5864615 | 0.4385130 | 0.7344101 | NA |
| 26 | Age\_stage | 4 | 12 | 0.5497222 | 0.3442886 | 0.7551559 | NA |
| 28 | Age\_stage | 5 | 1 | 0.6100000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 0.8477778 | 0.2103838 | 1.4851718 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 0.6694048 | 0.5481182 | 0.7906913 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 0.7308333 | 0.5975189 | 0.8641477 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 0.6411667 | 0.4632435 | 0.8190899 | NA |
| 1 | Gender | 0 | 31 | 0.7418011 | 0.6200445 | 0.8635577 | 0.2700724 |
| 2 | Gender | 1 | 44 | 0.6502045 | 0.5387778 | 0.7616313 | 0.2700724 |
| 22 | Hypertension | 0 | 54 | 0.7584877 | 0.6671240 | 0.8498513 | 0.0012747 |
| 21 | Hypertension | 1 | 21 | 0.5069762 | 0.3513011 | 0.6626512 | 0.0012747 |
| 9 | Obesity | 0 | 68 | 0.6928922 | 0.6042030 | 0.7815813 | 0.8412005 |
| 8 | Obesity | 1 | 7 | 0.6411667 | 0.4632435 | 0.8190899 | 0.8412005 |
| 4 | Race | 0 | 11 | 0.8856667 | 0.6192570 | 1.1520763 | NA |
| 3 | Race | 1 | 61 | 0.6497131 | 0.5622893 | 0.7371370 | NA |
| 5 | Race | 2 | 3 | 0.7433333 | 0.0817252 | 1.4049415 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 0.4666667 | 0.3056397 | 0.6276937 | 0.0170062 |
| 6 | Smoking | Do not smoke | 62 | 0.7344866 | 0.6447826 | 0.8241905 | 0.0170062 |
| 14 | Stress index | 0 | 57 | 0.6624971 | 0.5630593 | 0.7619348 | 0.1518768 |
| 13 | Stress index | 1 | 18 | 0.7690278 | 0.6361504 | 0.9019051 | 0.1518768 |
| 15 | Type of skins | 1 | 10 | 0.8713167 | 0.5612302 | 1.1814032 | NA |
| 16 | Type of skins | 2 | 4 | 0.9050000 | 0.1755206 | 1.6344794 | NA |
| 17 | Type of skins | 3 | 40 | 0.5815833 | 0.4789180 | 0.6842487 | NA |
| 18 | Type of skins | 4 | 11 | 0.8739394 | 0.6808416 | 1.0670371 | NA |
| 19 | Type of skins | 5 | 6 | 0.6108333 | 0.2831402 | 0.9385265 | NA |
| 20 | Type of skins | 6 | 4 | 0.6825000 | 0.2859958 | 1.0790042 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

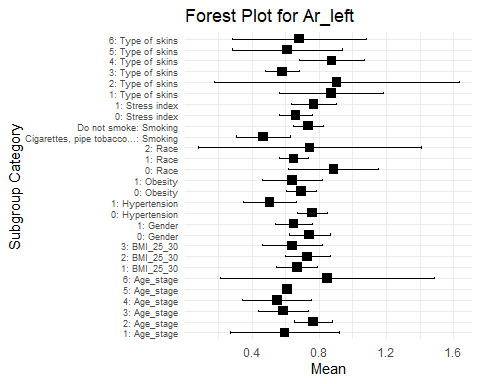
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.0582182 |
| Race | 1 | 2 | 0.5047167 |
| Race | 0 | 2 | 0.5549451 |
| BMI\_25\_30 | 3 | 1 | 0.9772041 |
| BMI\_25\_30 | 3 | 2 | 0.5819411 |
| BMI\_25\_30 | 1 | 2 | 0.3803973 |
| Type of skins | 1 | 2 | 0.9450549 |
| Type of skins | 1 | 3 | 0.0428297 |
| Type of skins | 1 | 4 | 0.5493420 |
| Type of skins | 1 | 5 | 0.3676324 |
| Type of skins | 1 | 6 | 0.5394605 |
| Type of skins | 2 | 3 | 0.1159558 |
| Type of skins | 2 | 4 | 1.0000000 |
| Type of skins | 2 | 5 | 0.5211659 |
| Type of skins | 2 | 6 | 0.4857143 |
| Type of skins | 3 | 4 | 0.0110093 |
| Type of skins | 3 | 5 | 0.6362159 |
| Type of skins | 3 | 6 | 0.4258690 |
| Type of skins | 4 | 5 | 0.1447858 |
| Type of skins | 4 | 6 | 0.3956658 |
| Type of skins | 5 | 6 | 0.9142857 |
| Age\_stage | 2 | 6 | 0.8714827 |
| Age\_stage | 2 | 3 | 0.0717666 |
| Age\_stage | 2 | 4 | 0.0615597 |
| Age\_stage | 2 | 1 | 0.2849196 |
| Age\_stage | 2 | 5 | 0.7430003 |
| Age\_stage | 6 | 3 | 0.3228660 |
| Age\_stage | 6 | 4 | 0.2414634 |
| Age\_stage | 6 | 1 | 0.4452214 |
| Age\_stage | 6 | 5 | 0.8571429 |
| Age\_stage | 3 | 4 | 0.6243293 |
| Age\_stage | 3 | 1 | 1.0000000 |
| Age\_stage | 3 | 5 | 0.8571429 |
| Age\_stage | 4 | 1 | 0.7035844 |
| Age\_stage | 4 | 5 | 0.6880935 |
| Age\_stage | 1 | 5 | 0.7500000 |

Forest plot 

## Tạo bảng và Forest plot với biến Ac\_left

|  | Subgroup\_Category | Subgroup | n\_Ac\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 0.6371429 | 0.4087875 | 0.8654983 | NA |
| 23 | Age\_stage | 2 | 36 | 1.0688426 | 0.9112004 | 1.2264848 | NA |
| 25 | Age\_stage | 3 | 13 | 0.8313846 | 0.6732056 | 0.9895636 | NA |
| 26 | Age\_stage | 4 | 12 | 0.7450000 | 0.4963520 | 0.9936480 | NA |
| 28 | Age\_stage | 5 | 1 | 1.2600000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 1.0672222 | 0.7061295 | 1.4283150 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 0.8861111 | 0.7566779 | 1.0155444 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 1.0225641 | 0.8426076 | 1.2025206 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 0.9351905 | 0.6026177 | 1.2677633 | NA |
| 1 | Gender | 0 | 31 | 0.9726344 | 0.8061489 | 1.1391200 | 0.9100448 |
| 2 | Gender | 1 | 44 | 0.9135909 | 0.7920939 | 1.0350879 | 0.9100448 |
| 22 | Hypertension | 0 | 54 | 1.0301235 | 0.9177723 | 1.1424746 | 0.0020695 |
| 21 | Hypertension | 1 | 21 | 0.7010952 | 0.5403541 | 0.8618364 | 0.0020695 |
| 9 | Obesity | 0 | 68 | 0.9382843 | 0.8344269 | 1.0421417 | 0.8841439 |
| 8 | Obesity | 1 | 7 | 0.9351905 | 0.6026177 | 1.2677633 | 0.8841439 |
| 4 | Race | 0 | 11 | 1.2507273 | 0.9895660 | 1.5118886 | NA |
| 3 | Race | 1 | 61 | 0.8621585 | 0.7643889 | 0.9599281 | NA |
| 5 | Race | 2 | 3 | 1.3333333 | -0.3879668 | 3.0546334 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 0.7207692 | 0.5337436 | 0.9077949 | 0.0587978 |
| 6 | Smoking | Do not smoke | 62 | 0.9835430 | 0.8746324 | 1.0924536 | 0.0587978 |
| 14 | Stress index | 0 | 57 | 0.9168363 | 0.8049418 | 1.0287307 | 0.4528932 |
| 13 | Stress index | 1 | 18 | 1.0050000 | 0.7945189 | 1.2154811 | 0.4528932 |
| 15 | Type of skins | 1 | 10 | 1.1916333 | 1.0099500 | 1.3733167 | NA |
| 16 | Type of skins | 2 | 4 | 0.8525000 | 0.5214198 | 1.1835802 | NA |
| 17 | Type of skins | 3 | 40 | 0.8237917 | 0.6895109 | 0.9580725 | NA |
| 18 | Type of skins | 4 | 11 | 1.1083333 | 0.8234985 | 1.3931682 | NA |
| 19 | Type of skins | 5 | 6 | 0.8816667 | 0.5048233 | 1.2585100 | NA |
| 20 | Type of skins | 6 | 4 | 1.1475000 | 0.0703642 | 2.2246358 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

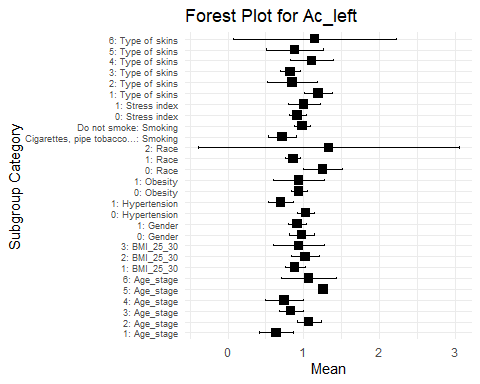
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.0030133 |
| Race | 1 | 2 | 0.1622014 |
| Race | 0 | 2 | 1.0000000 |
| BMI\_25\_30 | 3 | 1 | 0.6578118 |
| BMI\_25\_30 | 3 | 2 | 0.7578277 |
| BMI\_25\_30 | 1 | 2 | 0.2184764 |
| Type of skins | 1 | 2 | 0.0656947 |
| Type of skins | 1 | 3 | 0.0017522 |
| Type of skins | 1 | 4 | 0.6539029 |
| Type of skins | 1 | 5 | 0.0559441 |
| Type of skins | 1 | 6 | 0.7332667 |
| Type of skins | 2 | 3 | 0.4378136 |
| Type of skins | 2 | 4 | 0.4893773 |
| Type of skins | 2 | 5 | 1.0000000 |
| Type of skins | 2 | 6 | 0.8857143 |
| Type of skins | 3 | 4 | 0.0341062 |
| Type of skins | 3 | 5 | 0.5680366 |
| Type of skins | 3 | 6 | 0.3582079 |
| Type of skins | 4 | 5 | 0.3010666 |
| Type of skins | 4 | 6 | 0.9494505 |
| Type of skins | 5 | 6 | 0.7619048 |
| Age\_stage | 2 | 6 | 0.6531867 |
| Age\_stage | 2 | 3 | 0.0772763 |
| Age\_stage | 2 | 4 | 0.0236767 |
| Age\_stage | 2 | 1 | 0.0194916 |
| Age\_stage | 2 | 5 | 0.4259203 |
| Age\_stage | 6 | 3 | 0.2440660 |
| Age\_stage | 6 | 4 | 0.0675150 |
| Age\_stage | 6 | 1 | 0.0349650 |
| Age\_stage | 6 | 5 | 0.8571429 |
| Age\_stage | 3 | 4 | 0.7235716 |
| Age\_stage | 3 | 1 | 0.1146285 |
| Age\_stage | 3 | 5 | 0.2857143 |
| Age\_stage | 4 | 1 | 0.7034604 |
| Age\_stage | 4 | 5 | 0.2278201 |
| Age\_stage | 1 | 5 | 0.2500000 |

Forest plot 

## Tạo bảng và Forest plot với biến F\_Ae\_left

|  | Subgroup\_Category | Subgroup | n\_F\_Ae\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 0.0143571 | 0.0105936 | 0.0181207 | NA |
| 23 | Age\_stage | 2 | 36 | 0.0158171 | 0.0146071 | 0.0170272 | NA |
| 25 | Age\_stage | 3 | 13 | 0.0142000 | 0.0119427 | 0.0164573 | NA |
| 26 | Age\_stage | 4 | 12 | 0.0155556 | 0.0138828 | 0.0172283 | NA |
| 28 | Age\_stage | 5 | 1 | 0.0170000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 0.0143611 | 0.0115097 | 0.0172125 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 0.0154484 | 0.0143885 | 0.0165084 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 0.0152115 | 0.0137055 | 0.0167176 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 0.0142881 | 0.0119641 | 0.0166121 | NA |
| 1 | Gender | 0 | 31 | 0.0151586 | 0.0139010 | 0.0164162 | 0.8369627 |
| 2 | Gender | 1 | 44 | 0.0153280 | 0.0142760 | 0.0163800 | 0.8369627 |
| 22 | Hypertension | 0 | 54 | 0.0153519 | 0.0143916 | 0.0163121 | 0.7529347 |
| 21 | Hypertension | 1 | 21 | 0.0150167 | 0.0135406 | 0.0164928 | 0.7529347 |
| 9 | Obesity | 0 | 68 | 0.0153578 | 0.0145096 | 0.0162061 | 0.4859994 |
| 8 | Obesity | 1 | 7 | 0.0142881 | 0.0119641 | 0.0166121 | 0.4859994 |
| 4 | Race | 0 | 11 | 0.0145697 | 0.0124101 | 0.0167293 | NA |
| 3 | Race | 1 | 61 | 0.0153784 | 0.0144730 | 0.0162838 | NA |
| 5 | Race | 2 | 3 | 0.0153333 | 0.0101622 | 0.0205045 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 0.0165128 | 0.0146900 | 0.0183357 | 0.1298739 |
| 6 | Smoking | Do not smoke | 62 | 0.0149949 | 0.0141139 | 0.0158758 | 0.1298739 |
| 14 | Stress index | 0 | 57 | 0.0152474 | 0.0143353 | 0.0161594 | 0.9950182 |
| 13 | Stress index | 1 | 18 | 0.0152917 | 0.0135594 | 0.0170239 | 0.9950182 |
| 15 | Type of skins | 1 | 10 | 0.0138017 | 0.0117287 | 0.0158746 | NA |
| 16 | Type of skins | 2 | 4 | 0.0190000 | 0.0158176 | 0.0221824 | NA |
| 17 | Type of skins | 3 | 40 | 0.0153792 | 0.0141625 | 0.0165959 | NA |
| 18 | Type of skins | 4 | 11 | 0.0142879 | 0.0124385 | 0.0161373 | NA |
| 19 | Type of skins | 5 | 6 | 0.0156667 | 0.0128967 | 0.0184366 | NA |
| 20 | Type of skins | 6 | 4 | 0.0160000 | 0.0125626 | 0.0194374 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

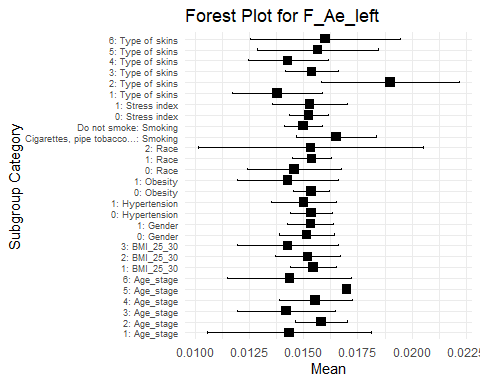
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.4731842 |
| Race | 1 | 2 | 1.0000000 |
| Race | 0 | 2 | 0.7549750 |
| BMI\_25\_30 | 3 | 1 | 0.4634097 |
| BMI\_25\_30 | 3 | 2 | 0.5954042 |
| BMI\_25\_30 | 1 | 2 | 0.7407243 |
| Type of skins | 1 | 2 | 0.0188243 |
| Type of skins | 1 | 3 | 0.2499188 |
| Type of skins | 1 | 4 | 0.4797484 |
| Type of skins | 1 | 5 | 0.3268283 |
| Type of skins | 1 | 6 | 0.1781525 |
| Type of skins | 2 | 3 | 0.0760220 |
| Type of skins | 2 | 4 | 0.0177249 |
| Type of skins | 2 | 5 | 0.0978986 |
| Type of skins | 2 | 6 | 0.1366582 |
| Type of skins | 3 | 4 | 0.4456957 |
| Type of skins | 3 | 5 | 0.8947919 |
| Type of skins | 3 | 6 | 0.8040442 |
| Type of skins | 4 | 5 | 0.3361075 |
| Type of skins | 4 | 6 | 0.3231289 |
| Type of skins | 5 | 6 | 0.6688699 |
| Age\_stage | 2 | 6 | 0.3450266 |
| Age\_stage | 2 | 3 | 0.1557000 |
| Age\_stage | 2 | 4 | 0.8007573 |
| Age\_stage | 2 | 1 | 0.4320899 |
| Age\_stage | 2 | 5 | 0.8491960 |
| Age\_stage | 6 | 3 | 0.8591575 |
| Age\_stage | 6 | 4 | 0.3221355 |
| Age\_stage | 6 | 1 | 0.6651944 |
| Age\_stage | 6 | 5 | 0.4491772 |
| Age\_stage | 3 | 4 | 0.2860473 |
| Age\_stage | 3 | 1 | 0.9679089 |
| Age\_stage | 3 | 5 | 0.5296652 |
| Age\_stage | 4 | 1 | 0.3280986 |
| Age\_stage | 4 | 5 | 0.6860382 |
| Age\_stage | 1 | 5 | 0.6526851 |

Forest plot 

## Tạo bảng và Forest plot với biến F\_An\_left

|  | Subgroup\_Category | Subgroup | n\_F\_An\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 0.0393571 | 0.0261728 | 0.0525415 | NA |
| 23 | Age\_stage | 2 | 36 | 0.0363356 | 0.0321206 | 0.0405507 | NA |
| 25 | Age\_stage | 3 | 13 | 0.0311769 | 0.0249701 | 0.0373838 | NA |
| 26 | Age\_stage | 4 | 12 | 0.0351806 | 0.0275018 | 0.0428593 | NA |
| 28 | Age\_stage | 5 | 1 | 0.0410000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 0.0395000 | 0.0241230 | 0.0548770 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 0.0352976 | 0.0315155 | 0.0390798 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 0.0371538 | 0.0319311 | 0.0423765 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 0.0343643 | 0.0237153 | 0.0450132 | NA |
| 1 | Gender | 0 | 31 | 0.0336478 | 0.0297469 | 0.0375488 | 0.2485496 |
| 2 | Gender | 1 | 44 | 0.0374083 | 0.0334100 | 0.0414067 | 0.2485496 |
| 22 | Hypertension | 0 | 54 | 0.0364630 | 0.0333042 | 0.0396218 | 0.3176069 |
| 21 | Hypertension | 1 | 21 | 0.0342881 | 0.0279175 | 0.0406587 | 0.3176069 |
| 9 | Obesity | 0 | 68 | 0.0360074 | 0.0330099 | 0.0390048 | 0.8623198 |
| 8 | Obesity | 1 | 7 | 0.0343643 | 0.0237153 | 0.0450132 | 0.8623198 |
| 4 | Race | 0 | 11 | 0.0303000 | 0.0260911 | 0.0345089 | NA |
| 3 | Race | 1 | 61 | 0.0364713 | 0.0331981 | 0.0397446 | NA |
| 5 | Race | 2 | 3 | 0.0436667 | 0.0108673 | 0.0764661 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 0.0393974 | 0.0313113 | 0.0474835 | 0.2677476 |
| 6 | Smoking | Do not smoke | 62 | 0.0351110 | 0.0320710 | 0.0381510 | 0.2677476 |
| 14 | Stress index | 0 | 57 | 0.0351193 | 0.0319958 | 0.0382428 | 0.3575129 |
| 13 | Stress index | 1 | 18 | 0.0381806 | 0.0313592 | 0.0450019 | 0.3575129 |
| 15 | Type of skins | 1 | 10 | 0.0306050 | 0.0264687 | 0.0347413 | NA |
| 16 | Type of skins | 2 | 4 | 0.0282500 | 0.0072855 | 0.0492145 | NA |
| 17 | Type of skins | 3 | 40 | 0.0350667 | 0.0309930 | 0.0391403 | NA |
| 18 | Type of skins | 4 | 11 | 0.0375758 | 0.0309429 | 0.0442087 | NA |
| 19 | Type of skins | 5 | 6 | 0.0441667 | 0.0296076 | 0.0587257 | NA |
| 20 | Type of skins | 6 | 4 | 0.0472500 | 0.0266510 | 0.0678490 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

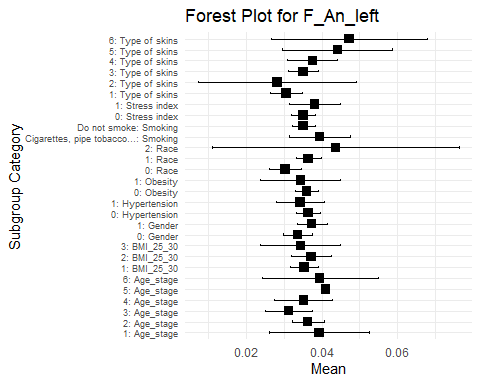
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.2122912 |
| Race | 1 | 2 | 0.2931407 |
| Race | 0 | 2 | 0.0864217 |
| BMI\_25\_30 | 3 | 1 | 0.9087607 |
| BMI\_25\_30 | 3 | 2 | 0.8254407 |
| BMI\_25\_30 | 1 | 2 | 0.5647132 |
| Type of skins | 1 | 2 | 0.3205982 |
| Type of skins | 1 | 3 | 0.5674285 |
| Type of skins | 1 | 4 | 0.0908124 |
| Type of skins | 1 | 5 | 0.0296972 |
| Type of skins | 1 | 6 | 0.0280301 |
| Type of skins | 2 | 3 | 0.2769502 |
| Type of skins | 2 | 4 | 0.1165305 |
| Type of skins | 2 | 5 | 0.2820039 |
| Type of skins | 2 | 6 | 0.1080634 |
| Type of skins | 3 | 4 | 0.3644775 |
| Type of skins | 3 | 5 | 0.1360820 |
| Type of skins | 3 | 6 | 0.0651329 |
| Type of skins | 4 | 5 | 0.2263720 |
| Type of skins | 4 | 6 | 0.2132212 |
| Type of skins | 5 | 6 | 0.8253387 |
| Age\_stage | 2 | 6 | 0.7185533 |
| Age\_stage | 2 | 3 | 0.2031000 |
| Age\_stage | 2 | 4 | 0.9619372 |
| Age\_stage | 2 | 1 | 0.5415626 |
| Age\_stage | 2 | 5 | 0.5730556 |
| Age\_stage | 6 | 3 | 0.2714611 |
| Age\_stage | 6 | 4 | 0.4238145 |
| Age\_stage | 6 | 1 | 1.0000000 |
| Age\_stage | 6 | 5 | 0.7990417 |
| Age\_stage | 3 | 4 | 0.3680767 |
| Age\_stage | 3 | 1 | 0.2324615 |
| Age\_stage | 3 | 5 | 0.3183883 |
| Age\_stage | 4 | 1 | 0.7348686 |
| Age\_stage | 4 | 5 | 0.5034490 |
| Age\_stage | 1 | 5 | 1.0000000 |

Forest plot 

## Tạo bảng và Forest plot với biến F\_Am\_left

|  | Subgroup\_Category | Subgroup | n\_F\_Am\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 0.0741429 | 0.0630649 | 0.0852208 | NA |
| 23 | Age\_stage | 2 | 36 | 0.0781875 | 0.0687941 | 0.0875809 | NA |
| 25 | Age\_stage | 3 | 13 | 0.0740923 | 0.0518068 | 0.0963779 | NA |
| 26 | Age\_stage | 4 | 12 | 0.0811806 | 0.0621006 | 0.1002605 | NA |
| 28 | Age\_stage | 5 | 1 | 0.0640000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 0.0805000 | 0.0512699 | 0.1097301 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 0.0814802 | 0.0707465 | 0.0922138 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 0.0727019 | 0.0658174 | 0.0795864 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 0.0722429 | 0.0589598 | 0.0855259 | NA |
| 1 | Gender | 0 | 31 | 0.0809919 | 0.0679802 | 0.0940037 | 0.5472485 |
| 2 | Gender | 1 | 44 | 0.0751674 | 0.0685725 | 0.0817623 | 0.5472485 |
| 22 | Hypertension | 0 | 54 | 0.0778781 | 0.0699857 | 0.0857704 | 0.5932798 |
| 21 | Hypertension | 1 | 21 | 0.0767952 | 0.0646363 | 0.0889542 | 0.5932798 |
| 9 | Obesity | 0 | 68 | 0.0781238 | 0.0710548 | 0.0851927 | 0.9704452 |
| 8 | Obesity | 1 | 7 | 0.0722429 | 0.0589598 | 0.0855259 | 0.9704452 |
| 4 | Race | 0 | 11 | 0.0691091 | 0.0614011 | 0.0768171 | NA |
| 3 | Race | 1 | 61 | 0.0798675 | 0.0720822 | 0.0876527 | NA |
| 5 | Race | 2 | 3 | 0.0620000 | 0.0576973 | 0.0663027 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 0.0810897 | 0.0630932 | 0.0990862 | 0.8087688 |
| 6 | Smoking | Do not smoke | 62 | 0.0768379 | 0.0697317 | 0.0839441 | 0.8087688 |
| 14 | Stress index | 0 | 57 | 0.0802784 | 0.0719210 | 0.0886357 | 0.3537112 |
| 13 | Stress index | 1 | 18 | 0.0690139 | 0.0646505 | 0.0733773 | 0.3537112 |
| 15 | Type of skins | 1 | 10 | 0.0695200 | 0.0610631 | 0.0779769 | NA |
| 16 | Type of skins | 2 | 4 | 0.0632500 | 0.0560895 | 0.0704105 | NA |
| 17 | Type of skins | 3 | 40 | 0.0820917 | 0.0709470 | 0.0932364 | NA |
| 18 | Type of skins | 4 | 11 | 0.0737500 | 0.0617593 | 0.0857407 | NA |
| 19 | Type of skins | 5 | 6 | 0.0831667 | 0.0565543 | 0.1097791 | NA |
| 20 | Type of skins | 6 | 4 | 0.0690000 | 0.0466095 | 0.0913905 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

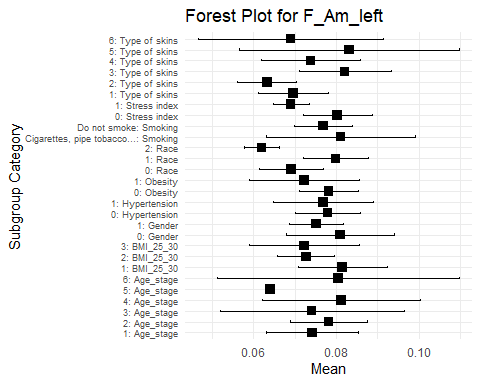
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.3953931 |
| Race | 1 | 2 | 0.0957373 |
| Race | 0 | 2 | 0.2307492 |
| BMI\_25\_30 | 3 | 1 | 0.9070377 |
| BMI\_25\_30 | 3 | 2 | 0.9467214 |
| BMI\_25\_30 | 1 | 2 | 0.8121762 |
| Type of skins | 1 | 2 | 0.1471435 |
| Type of skins | 1 | 3 | 0.5305075 |
| Type of skins | 1 | 4 | 0.6195528 |
| Type of skins | 1 | 5 | 0.2759469 |
| Type of skins | 1 | 6 | 0.5664444 |
| Type of skins | 2 | 3 | 0.0861277 |
| Type of skins | 2 | 4 | 0.1380107 |
| Type of skins | 2 | 5 | 0.0784476 |
| Type of skins | 2 | 6 | 0.6198391 |
| Type of skins | 3 | 4 | 0.7533972 |
| Type of skins | 3 | 5 | 0.4974551 |
| Type of skins | 3 | 6 | 0.4164466 |
| Type of skins | 4 | 5 | 0.4179354 |
| Type of skins | 4 | 6 | 0.4646283 |
| Type of skins | 5 | 6 | 0.2351956 |
| Age\_stage | 2 | 6 | 0.9854394 |
| Age\_stage | 2 | 3 | 0.0847261 |
| Age\_stage | 2 | 4 | 0.6554137 |
| Age\_stage | 2 | 1 | 0.7639017 |
| Age\_stage | 2 | 5 | 0.5371668 |
| Age\_stage | 6 | 3 | 0.4934996 |
| Age\_stage | 6 | 4 | 0.8128696 |
| Age\_stage | 6 | 1 | 1.0000000 |
| Age\_stage | 6 | 5 | 1.0000000 |
| Age\_stage | 3 | 4 | 0.1001190 |
| Age\_stage | 3 | 1 | 0.1762182 |
| Age\_stage | 3 | 5 | 0.6978504 |
| Age\_stage | 4 | 1 | 0.8310483 |
| Age\_stage | 4 | 5 | 0.5898985 |
| Age\_stage | 1 | 5 | 0.6586874 |

Forest plot 

## Tạo bảng và Forest plot với biến F\_Ar\_left

|  | Subgroup\_Category | Subgroup | n\_F\_Ar\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 0.3210000 | 0.2003440 | 0.4416560 | NA |
| 23 | Age\_stage | 2 | 36 | 0.2730139 | 0.2285258 | 0.3175020 | NA |
| 25 | Age\_stage | 3 | 13 | 0.3925692 | 0.2919463 | 0.4931922 | NA |
| 26 | Age\_stage | 4 | 12 | 0.4532778 | 0.3681042 | 0.5384514 | NA |
| 28 | Age\_stage | 5 | 1 | 0.2060000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 0.3838333 | 0.2519528 | 0.5157139 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 0.3156508 | 0.2693425 | 0.3619591 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 0.3570769 | 0.2934044 | 0.4207494 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 0.3694143 | 0.2307862 | 0.5080424 | NA |
| 1 | Gender | 0 | 31 | 0.3135484 | 0.2620218 | 0.3650750 | 0.3431165 |
| 2 | Gender | 1 | 44 | 0.3501644 | 0.3019418 | 0.3983870 | 0.3431165 |
| 22 | Hypertension | 0 | 54 | 0.3091451 | 0.2705596 | 0.3477305 | 0.0207091 |
| 21 | Hypertension | 1 | 21 | 0.4015905 | 0.3289172 | 0.4742638 | 0.0207091 |
| 9 | Obesity | 0 | 68 | 0.3314902 | 0.2946240 | 0.3683564 | 0.2832536 |
| 8 | Obesity | 1 | 7 | 0.3694143 | 0.2307862 | 0.5080424 | 0.2832536 |
| 4 | Race | 0 | 11 | 0.3169909 | 0.2204679 | 0.4135139 | NA |
| 3 | Race | 1 | 61 | 0.3402678 | 0.3006679 | 0.3798676 | NA |
| 5 | Race | 2 | 3 | 0.2946667 | -0.0868352 | 0.6761685 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 0.4454872 | 0.3545136 | 0.5364607 | 0.0058077 |
| 6 | Smoking | Do not smoke | 62 | 0.3118694 | 0.2757447 | 0.3479940 | 0.0058077 |
| 14 | Stress index | 0 | 57 | 0.3281532 | 0.2882497 | 0.3680567 | 0.2947269 |
| 13 | Stress index | 1 | 18 | 0.3568056 | 0.2786042 | 0.4350069 | 0.2947269 |
| 15 | Type of skins | 1 | 10 | 0.3029400 | 0.2182602 | 0.3876198 | NA |
| 16 | Type of skins | 2 | 4 | 0.3980000 | 0.0739526 | 0.7220474 | NA |
| 17 | Type of skins | 3 | 40 | 0.3421583 | 0.2907498 | 0.3935669 | NA |
| 18 | Type of skins | 4 | 11 | 0.3397273 | 0.2339998 | 0.4454548 | NA |
| 19 | Type of skins | 5 | 6 | 0.2707500 | 0.1896457 | 0.3518543 | NA |
| 20 | Type of skins | 6 | 4 | 0.3645000 | 0.0658315 | 0.6631685 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

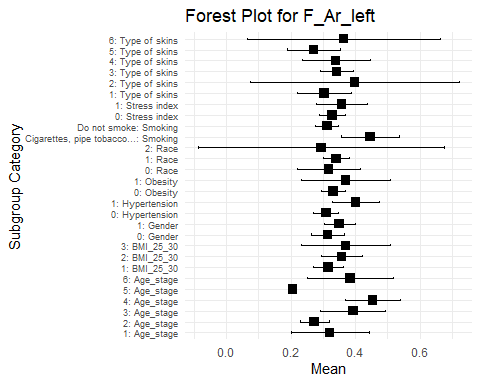
## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.8834720 |
| Race | 1 | 2 | 0.4649379 |
| Race | 0 | 2 | 0.6264339 |
| BMI\_25\_30 | 3 | 1 | 0.1741814 |
| BMI\_25\_30 | 3 | 2 | 0.6339962 |
| BMI\_25\_30 | 1 | 2 | 0.3296446 |
| Type of skins | 1 | 2 | 0.4726075 |
| Type of skins | 1 | 3 | 0.9293032 |
| Type of skins | 1 | 4 | 0.8014981 |
| Type of skins | 1 | 5 | 0.5039962 |
| Type of skins | 1 | 6 | 0.8848669 |
| Type of skins | 2 | 3 | 0.4012396 |
| Type of skins | 2 | 4 | 0.5018090 |
| Type of skins | 2 | 5 | 0.3773796 |
| Type of skins | 2 | 6 | 0.6489418 |
| Type of skins | 3 | 4 | 0.8663062 |
| Type of skins | 3 | 5 | 0.4177701 |
| Type of skins | 3 | 6 | 0.9654951 |
| Type of skins | 4 | 5 | 0.4344673 |
| Type of skins | 4 | 6 | 1.0000000 |
| Type of skins | 5 | 6 | 0.5696456 |
| Age\_stage | 2 | 6 | 0.0062854 |
| Age\_stage | 2 | 3 | 0.0046977 |
| Age\_stage | 2 | 4 | 0.0002905 |
| Age\_stage | 2 | 1 | 0.0763762 |
| Age\_stage | 2 | 5 | 0.5353152 |
| Age\_stage | 6 | 3 | 1.0000000 |
| Age\_stage | 6 | 4 | 0.2720974 |
| Age\_stage | 6 | 1 | 0.3159773 |
| Age\_stage | 6 | 5 | 0.2857143 |
| Age\_stage | 3 | 4 | 0.4302154 |
| Age\_stage | 3 | 1 | 0.4914912 |
| Age\_stage | 3 | 5 | 0.2480740 |
| Age\_stage | 4 | 1 | 0.0478293 |
| Age\_stage | 4 | 5 | 0.1680129 |
| Age\_stage | 1 | 5 | 0.3710934 |

Forest plot 

## Tạo bảng và Forest plot với biến F\_Ac\_left

|  | Subgroup\_Category | Subgroup | n\_F\_Ac\_left | Mean | CI\_lower | CI\_upper | P\_Value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | Age\_stage | 1 | 7 | 1.0878571 | 0.7509302 | 1.424784 | NA |
| 23 | Age\_stage | 2 | 36 | 1.1491505 | 1.0970871 | 1.201214 | NA |
| 25 | Age\_stage | 3 | 13 | 1.2159154 | 1.1371398 | 1.294691 | NA |
| 26 | Age\_stage | 4 | 12 | 1.1355833 | 1.0077404 | 1.263426 | NA |
| 28 | Age\_stage | 5 | 1 | 1.2520000 | NaN | NaN | NA |
| 24 | Age\_stage | 6 | 6 | 0.9933333 | 0.7144379 | 1.272229 | NA |
| 11 | BMI\_25\_30 | 1 | 42 | 1.1333611 | 1.0684624 | 1.198260 | NA |
| 12 | BMI\_25\_30 | 2 | 26 | 1.1211538 | 1.0480037 | 1.194304 | NA |
| 10 | BMI\_25\_30 | 3 | 7 | 1.2684500 | 1.1264818 | 1.410418 | NA |
| 1 | Gender | 0 | 31 | 1.1403199 | 1.0684054 | 1.212234 | 0.7340252 |
| 2 | Gender | 1 | 44 | 1.1427364 | 1.0820594 | 1.203413 | 0.7340252 |
| 22 | Hypertension | 0 | 54 | 1.1251605 | 1.0747404 | 1.175581 | 0.1472905 |
| 21 | Hypertension | 1 | 21 | 1.1843643 | 1.0823524 | 1.286376 | 0.1472905 |
| 9 | Obesity | 0 | 68 | 1.1286936 | 1.0810053 | 1.176382 | 0.0638356 |
| 8 | Obesity | 1 | 7 | 1.2684500 | 1.1264818 | 1.410418 | 0.0638356 |
| 4 | Race | 0 | 11 | 1.0876273 | 0.9599040 | 1.215351 | NA |
| 3 | Race | 1 | 61 | 1.1524986 | 1.1008822 | 1.204115 | NA |
| 5 | Race | 2 | 3 | 1.1213333 | 0.8329022 | 1.409764 | NA |
| 7 | Smoking | Cigarettes, pipe tobacco… | 13 | 1.2103846 | 1.1022543 | 1.318515 | 0.3959144 |
| 6 | Smoking | Do not smoke | 62 | 1.1273438 | 1.0768909 | 1.177797 | 0.3959144 |
| 14 | Stress index | 0 | 57 | 1.1385450 | 1.0829420 | 1.194148 | 0.9059476 |
| 13 | Stress index | 1 | 18 | 1.1518472 | 1.0751502 | 1.228544 | 0.9059476 |
| 15 | Type of skins | 1 | 10 | 1.1106650 | 0.9637789 | 1.257551 | NA |
| 16 | Type of skins | 2 | 4 | 1.1940000 | 1.0874316 | 1.300568 | NA |
| 17 | Type of skins | 3 | 40 | 1.1384750 | 1.0743541 | 1.202596 | NA |
| 18 | Type of skins | 4 | 11 | 1.1198788 | 1.0068995 | 1.232858 | NA |
| 19 | Type of skins | 5 | 6 | 1.2123333 | 0.8719430 | 1.552724 | NA |
| 20 | Type of skins | 6 | 4 | 1.1540000 | 0.9707950 | 1.337205 | NA |

###Wilcox pairwise test cho các sub group có >2 level

## Group Gender does not have more than 2 unique levels. Skipping.

## Group Smoking does not have more than 2 unique levels. Skipping.

## Group Obesity does not have more than 2 unique levels. Skipping.

## Group Stress index does not have more than 2 unique levels. Skipping.

## Group Hypertension does not have more than 2 unique levels. Skipping.

| Group | Group1 | Group2 | P\_Value |
| --- | --- | --- | --- |
| Race | 1 | 0 | 0.1722625 |
| Race | 1 | 2 | 0.5239811 |
| Race | 0 | 2 | 0.7549750 |
| BMI\_25\_30 | 3 | 1 | 0.0884538 |
| BMI\_25\_30 | 3 | 2 | 0.0667038 |
| BMI\_25\_30 | 1 | 2 | 0.9042653 |
| Type of skins | 1 | 2 | 0.3553137 |
| Type of skins | 1 | 3 | 0.5844374 |
| Type of skins | 1 | 4 | 0.7245996 |
| Type of skins | 1 | 5 | 0.2777221 |
| Type of skins | 1 | 6 | 0.7768193 |
| Type of skins | 2 | 3 | 0.6665980 |
| Type of skins | 2 | 4 | 0.3935419 |
| Type of skins | 2 | 5 | 0.3299182 |
| Type of skins | 2 | 6 | 0.6422948 |
| Type of skins | 3 | 4 | 0.5974739 |
| Type of skins | 3 | 5 | 0.1594848 |
| Type of skins | 3 | 6 | 0.9836375 |
| Type of skins | 4 | 5 | 0.1740509 |
| Type of skins | 4 | 6 | 0.7430156 |
| Type of skins | 5 | 6 | 0.2395255 |
| Age\_stage | 2 | 6 | 0.1440426 |
| Age\_stage | 2 | 3 | 0.2193374 |
| Age\_stage | 2 | 4 | 0.5908535 |
| Age\_stage | 2 | 1 | 0.9473480 |
| Age\_stage | 2 | 5 | 0.5716769 |
| Age\_stage | 6 | 3 | 0.0349755 |
| Age\_stage | 6 | 4 | 0.1877206 |
| Age\_stage | 6 | 1 | 0.5180082 |
| Age\_stage | 6 | 5 | 0.5714286 |
| Age\_stage | 3 | 4 | 0.2072139 |
| Age\_stage | 3 | 1 | 0.8118137 |
| Age\_stage | 3 | 5 | 0.8028028 |
| Age\_stage | 4 | 1 | 0.9661595 |
| Age\_stage | 4 | 5 | 0.3442168 |
| Age\_stage | 1 | 5 | 1.0000000 |

Forest plot 