## one\_way\_anova

(4.82574790276262, 0.008115810254152204)

## t\_test

t\_statistic p\_value  
pre\_diabetes vs no\_diabetes 2.022218 0.043314  
diabetes vs no\_diabetes 2.725927 0.006473

## tukey\_hsd

Multiple Comparison of Means - Tukey HSD, FWER=0.05   
===============================================================  
 group1 group2 meandiff p-adj lower upper reject  
---------------------------------------------------------------  
 diabetes no\_diabetes -0.0323 0.0214 -0.0608 -0.0038 True  
 diabetes pre\_diabetes 0.0007 0.9993 -0.046 0.0474 False  
no\_diabetes pre\_diabetes 0.033 0.1371 -0.0076 0.0736 False  
---------------------------------------------------------------

## covariance\_analysis

sum\_sq df F PR(>F)  
C(no\_diabetes) 0.271295 1.0 7.245741 7.167223e-03  
C(pre\_diabetes) 0.000031 1.0 0.000830 9.770127e-01  
C(diabetes) 0.000456 1.0 0.012181 9.121306e-01  
Age 0.970519 1.0 25.920568 3.897258e-07  
Residual 73.573635 1965.0 NaN NaN

## interaction\_analysis

sum\_sq df F PR(>F)  
C(no\_diabetes) 0.008189 1.0 0.218635 6.401336e-01  
C(pre\_diabetes) 0.007906 1.0 0.211072 6.459795e-01  
C(diabetes) 0.000456 1.0 0.012176 9.121458e-01  
Age 0.970519 1.0 25.911570 3.915407e-07  
C(diabetes):Age 0.011907 1.0 0.317913 5.729287e-01  
Residual 73.561727 1964.0 NaN NaN

## interaction\_analysis2

dfn dfd F PR(>F)  
diabetes 1.0 1827.0 1.318136 0.251077  
pre\_diabetes 1.0 1837.0 1.336032 0.247885

## chi\_square\_test

condition chi2 p\_value dof  
0 no\_diabetes 8.782065 0.003042 1  
1 pre\_diabetes 1.884536 0.169819 1  
2 diabetes 5.245366 0.022005 1

## relative\_risk\_analysis

condition relative\_risk ci p\_value  
0 no\_diabetes 0.033288 0.025043 1.030113e-121  
1 pre\_diabetes 0.069767 0.035497 5.685542e-15  
2 diabetes 0.068966 0.043837 3.030091e-31

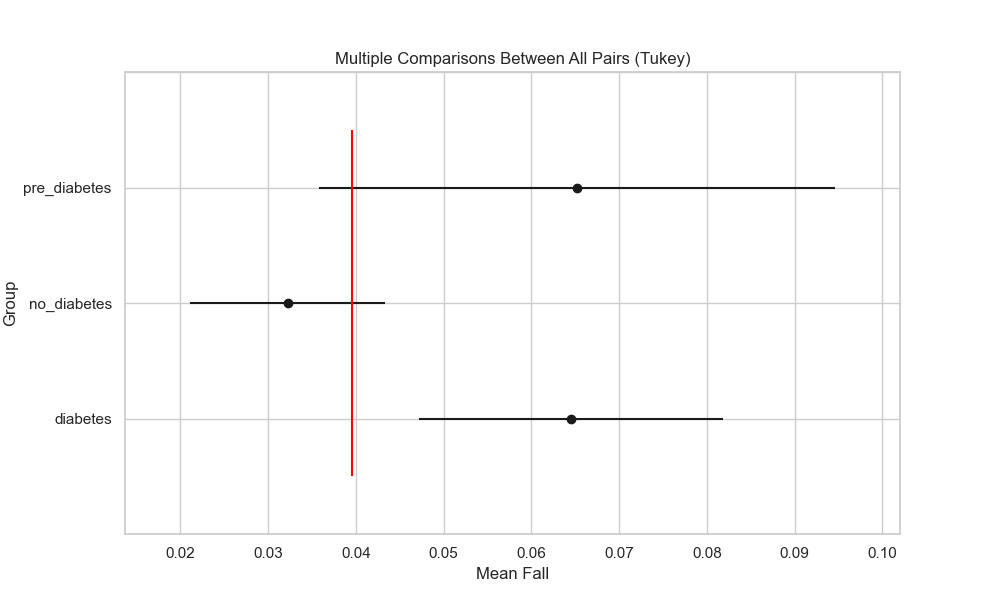
## odds\_ratio\_analysis

condition odds\_ratio ci p\_value  
0 no\_diabetes 2.079197 1.564185 0.003453  
1 pre\_diabetes 0.561294 0.285579 0.112728  
2 diabetes 0.525297 0.333900 0.024722

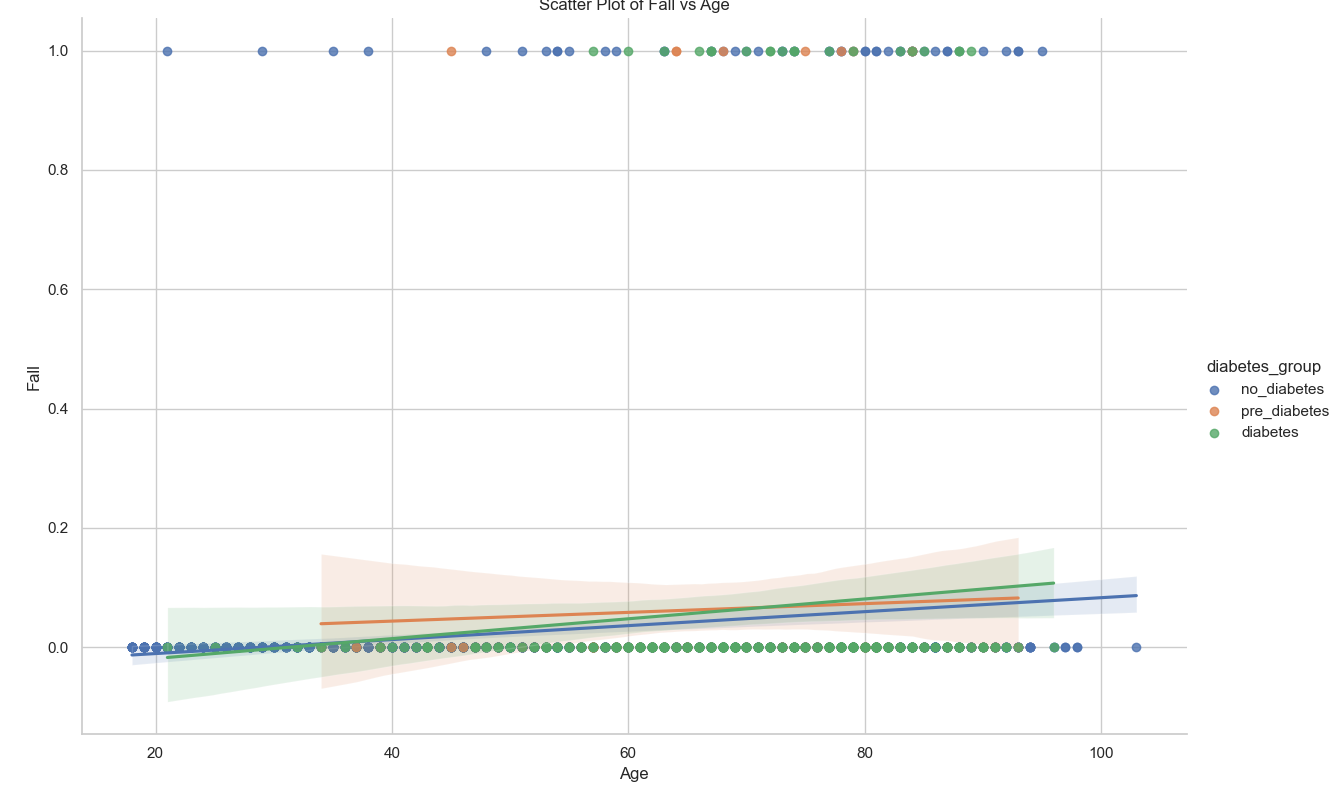
## relative\_risk\_by\_age

age\_group condition relative\_risk p\_value confidence\_interval  
6 18-40 No Diabetes 0.000000 1.000000 0.000000  
7 18-40 Pre-Diabetes inf 1.000000 NaN  
8 18-40 Diabetes inf 1.000000 NaN  
3 40-60 No Diabetes 2.108232 0.387517 1.048029  
4 40-60 Pre-Diabetes 0.564202 0.461066 0.076857  
5 40-60 Diabetes 0.486735 0.299528 0.118618  
0 60+ No Diabetes 1.398959 0.217526 1.004492  
1 60+ Pre-Diabetes 0.756952 0.514446 0.368094  
2 60+ Diabetes 0.768717 0.361797 0.475810

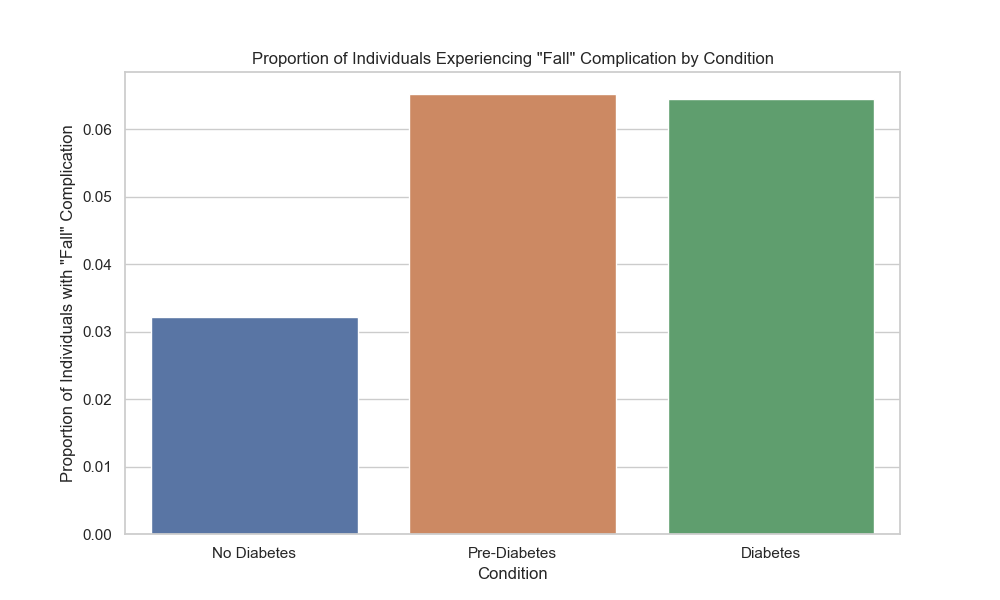
## visualize\_tukey\_results



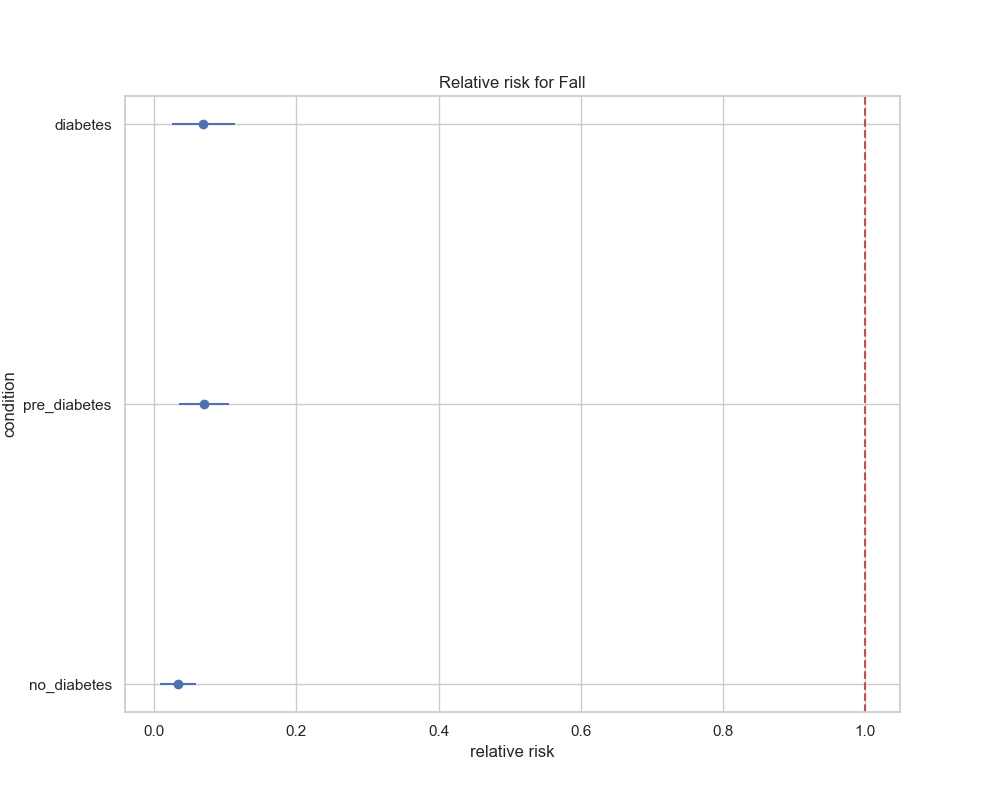
## plot\_interaction\_analysis



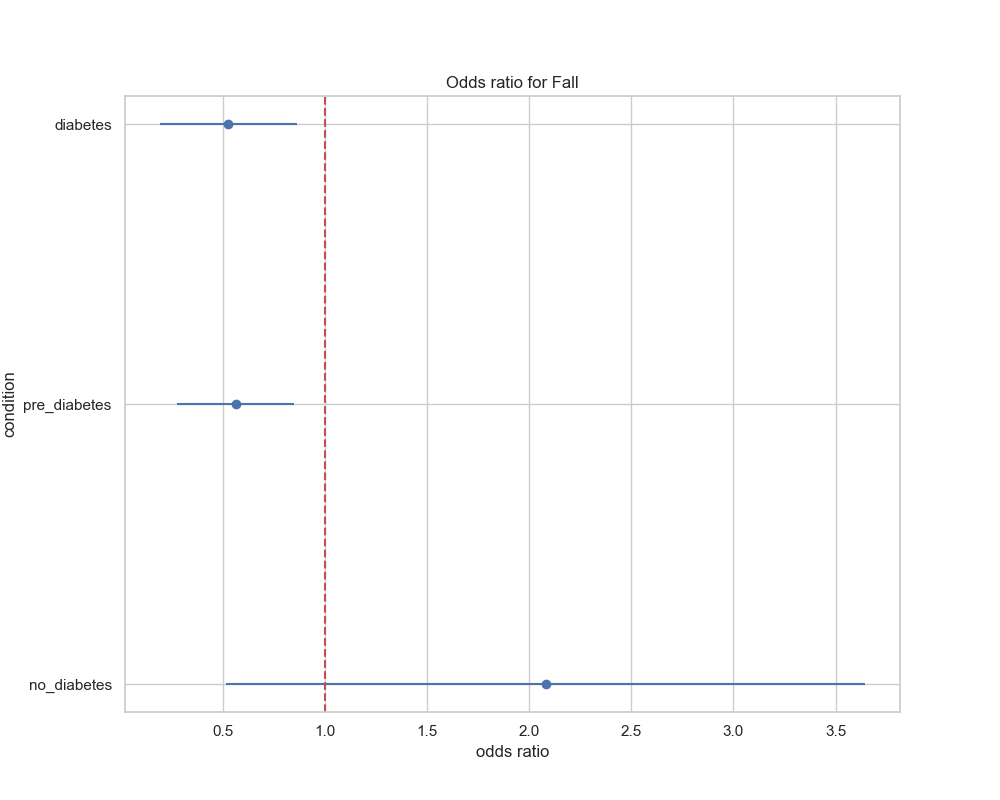
## visualize\_chi\_square\_results



## visualize\_relative\_risk\_results



## visualize\_odds\_ratio\_results



## visualize\_relative\_risk\_by\_age\_results

