## one\_way\_anova

(1.7575940709061484, 0.1727301617005915)

## t\_test

t\_statistic p\_value  
pre\_diabetes vs no\_diabetes 1.784491 0.074527  
diabetes vs no\_diabetes 1.009346 0.312942

## tukey\_hsd

Multiple Comparison of Means - Tukey HSD, FWER=0.05   
==============================================================  
 group1 group2 meandiff p-adj lower upper reject  
--------------------------------------------------------------  
 diabetes no\_diabetes -0.0057 0.6046 -0.0196 0.0082 False  
 diabetes pre\_diabetes 0.0088 0.6357 -0.014 0.0317 False  
no\_diabetes pre\_diabetes 0.0145 0.1999 -0.0053 0.0344 False  
--------------------------------------------------------------

## covariance\_analysis

sum\_sq df F PR(>F)  
C(no\_diabetes) 0.023100 1.0 2.555158 0.110096  
C(pre\_diabetes) 0.008246 1.0 0.912129 0.339668  
C(diabetes) 0.002338 1.0 0.258664 0.611096  
Age 0.039259 1.0 4.342621 0.037299  
Residual 17.764358 1965.0 NaN NaN

## interaction\_analysis

sum\_sq df F PR(>F)  
C(no\_diabetes) 0.013502 1.0 1.493071 0.221887  
C(pre\_diabetes) 0.000033 1.0 0.003697 0.951525  
C(diabetes) 0.002338 1.0 0.258594 0.611145  
Age 0.039259 1.0 4.341436 0.037325  
C(diabetes):Age 0.004192 1.0 0.463583 0.496035  
Residual 17.760166 1964.0 NaN NaN

## interaction\_analysis2

dfn dfd F PR(>F)  
diabetes 1.0 1827.0 0.698833 0.403285  
pre\_diabetes 1.0 1837.0 0.037865 0.845735

## chi\_square\_test

condition chi2 p\_value dof  
0 no\_diabetes 1.844408 0.174435 1  
1 pre\_diabetes 1.319453 0.250690 1  
2 diabetes 0.187519 0.664990 1

## relative\_risk\_analysis

condition relative\_risk ci p\_value  
0 no\_diabetes 0.007285 0.004026 8.716274e-60  
1 pre\_diabetes 0.022222 0.007078 3.485672e-11  
2 diabetes 0.013072 0.004875 3.393778e-18

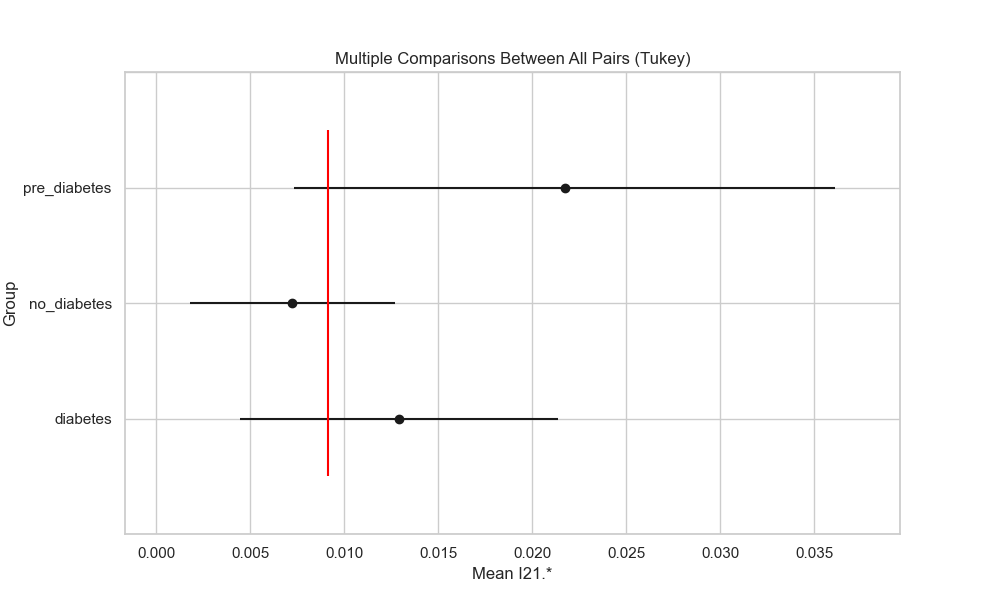
## odds\_ratio\_analysis

condition odds\_ratio ci p\_value  
0 no\_diabetes 2.178932 1.204103 0.151507  
1 pre\_diabetes 0.371696 0.118390 0.127001  
2 diabetes 0.651064 0.242801 0.509860

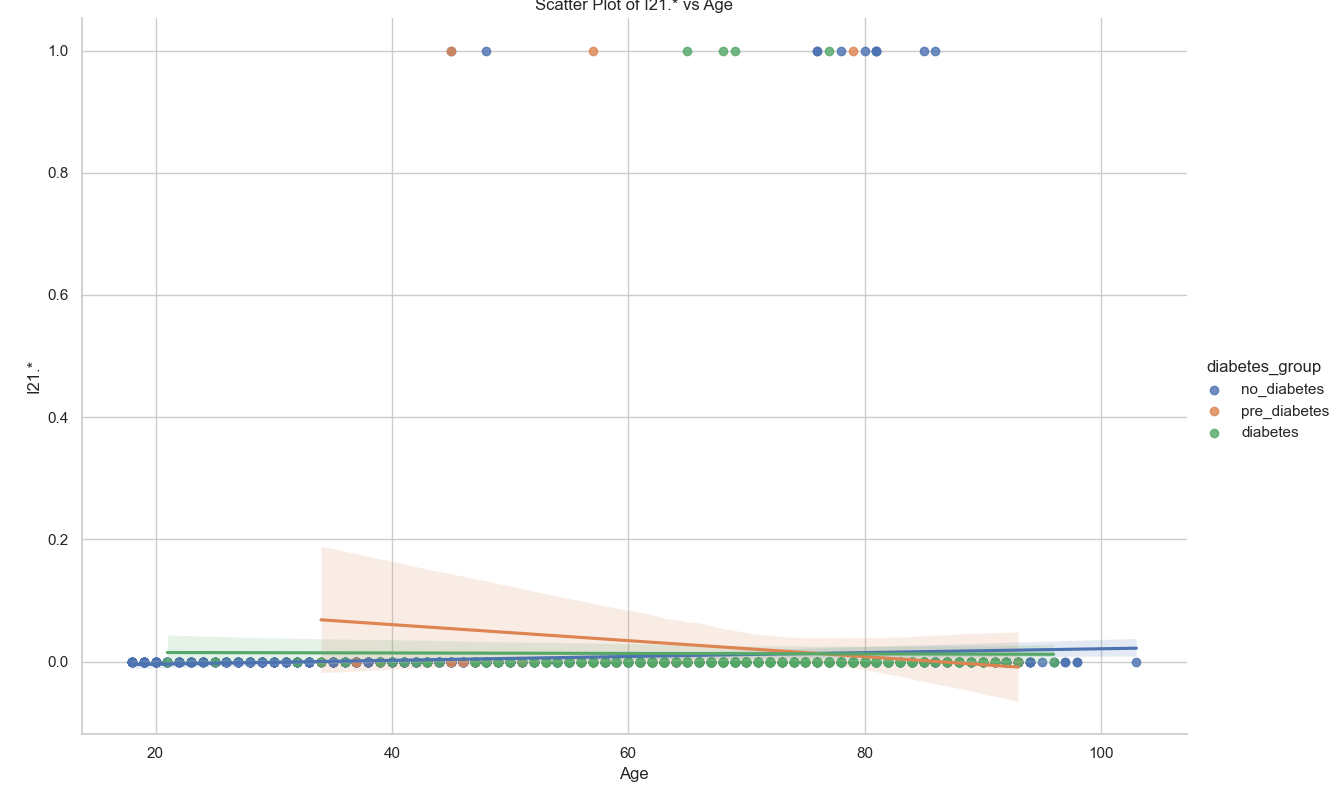
## relative\_risk\_by\_age

age\_group condition relative\_risk p\_value confidence\_interval  
3 40-60 No Diabetes 5.626506 0.113365 1.403011  
4 40-60 Pre-Diabetes 0.053640 0.015907 0.012778  
5 40-60 Diabetes inf 1.000000 NaN  
0 60+ No Diabetes 1.083972 1.000000 0.561578  
1 60+ Pre-Diabetes 1.464789 1.000000 0.204405  
2 60+ Diabetes 0.779055 0.751827 0.290063

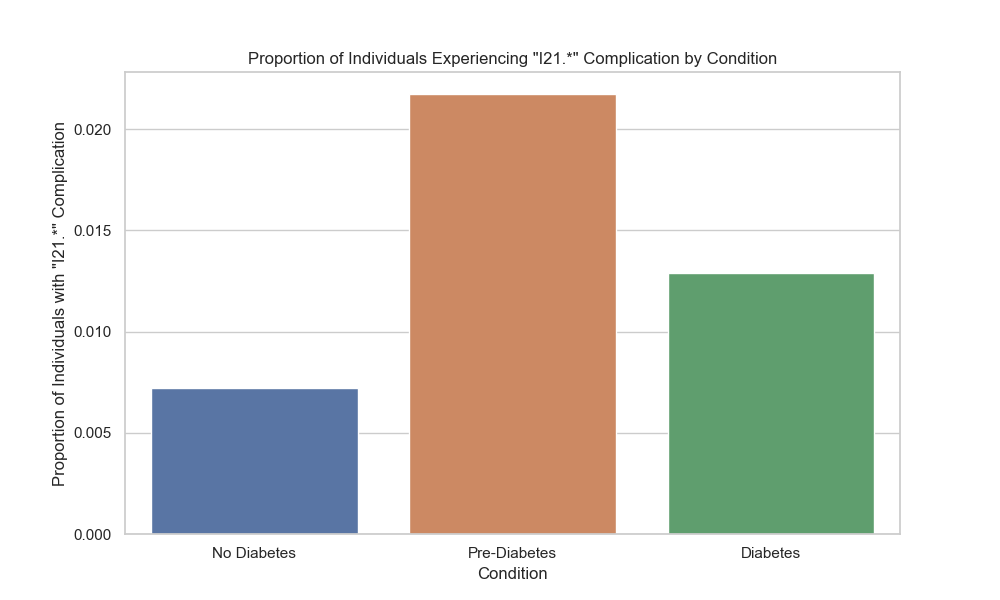
## visualize\_tukey\_results



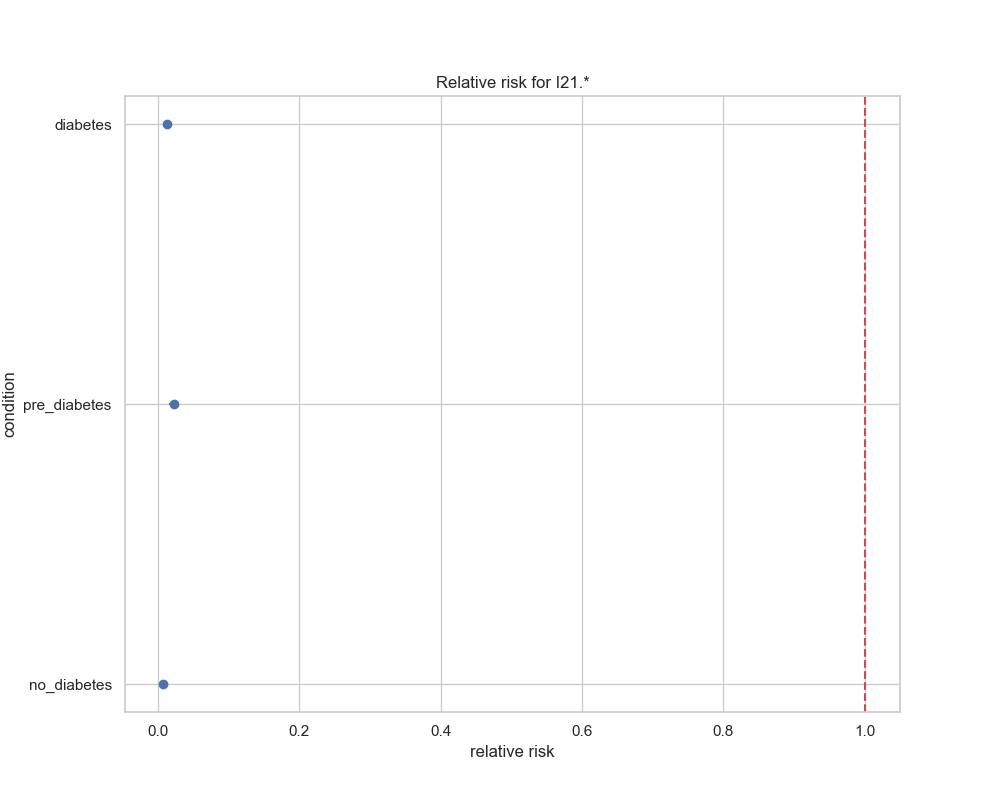
## plot\_interaction\_analysis



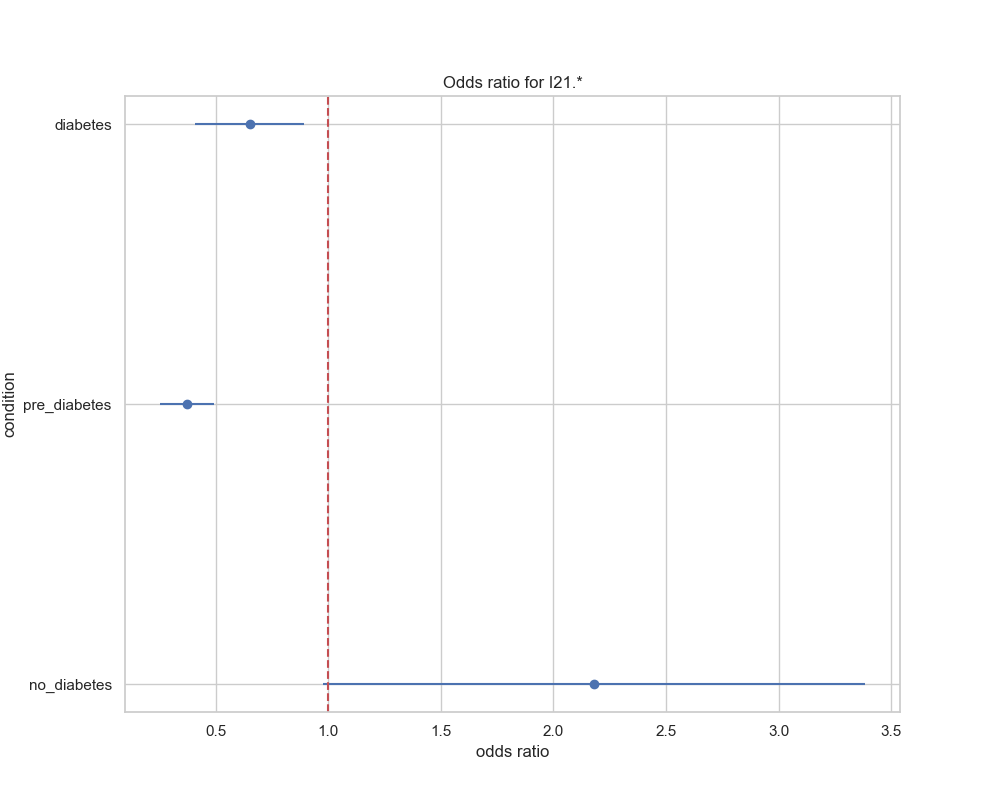
## visualize\_chi\_square\_results



## visualize\_relative\_risk\_results



## visualize\_odds\_ratio\_results



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

