PHQ9 MDD prediction with log transformation
and scale by samples :(x-median(x))/mad(x) log transformed phq9
Use candidate gene list.
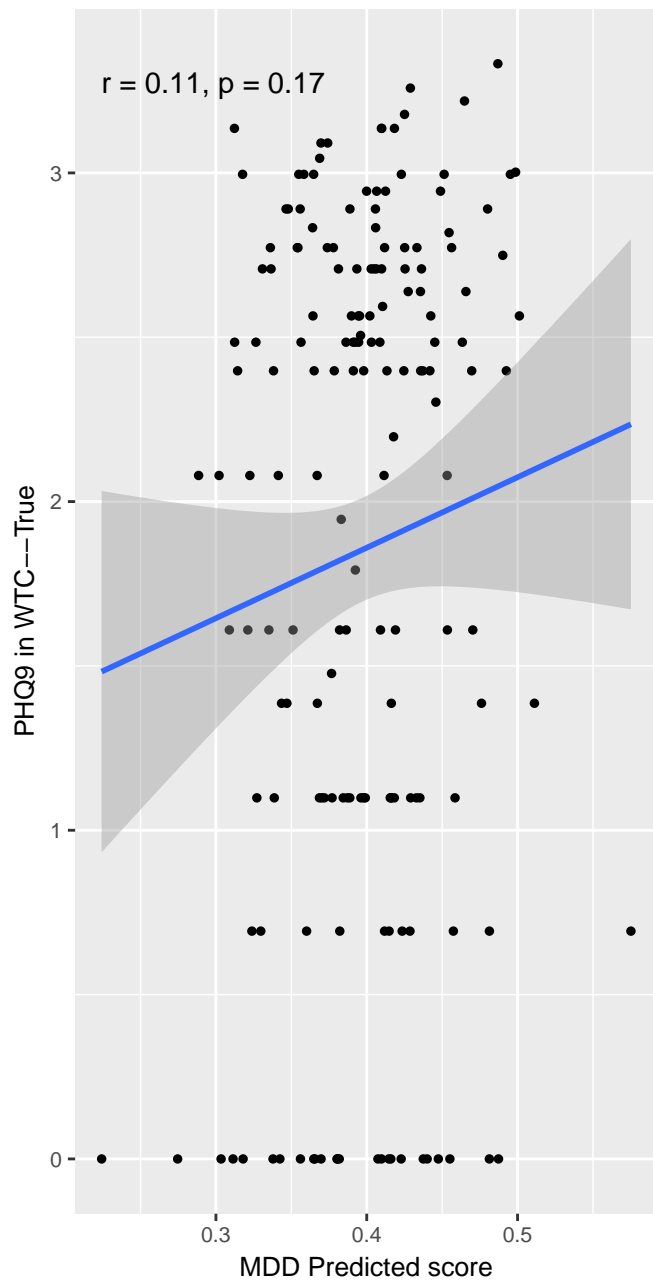Male are tested for Mostafavi.

```
Train on MDD of batch 3
 Test on batch 4 and Mostafavi
 Prediction Model on MDD of Batch 4 and Mostafavi:
 AUC are 0.56610824742268 0.48975188781014 respectively
```
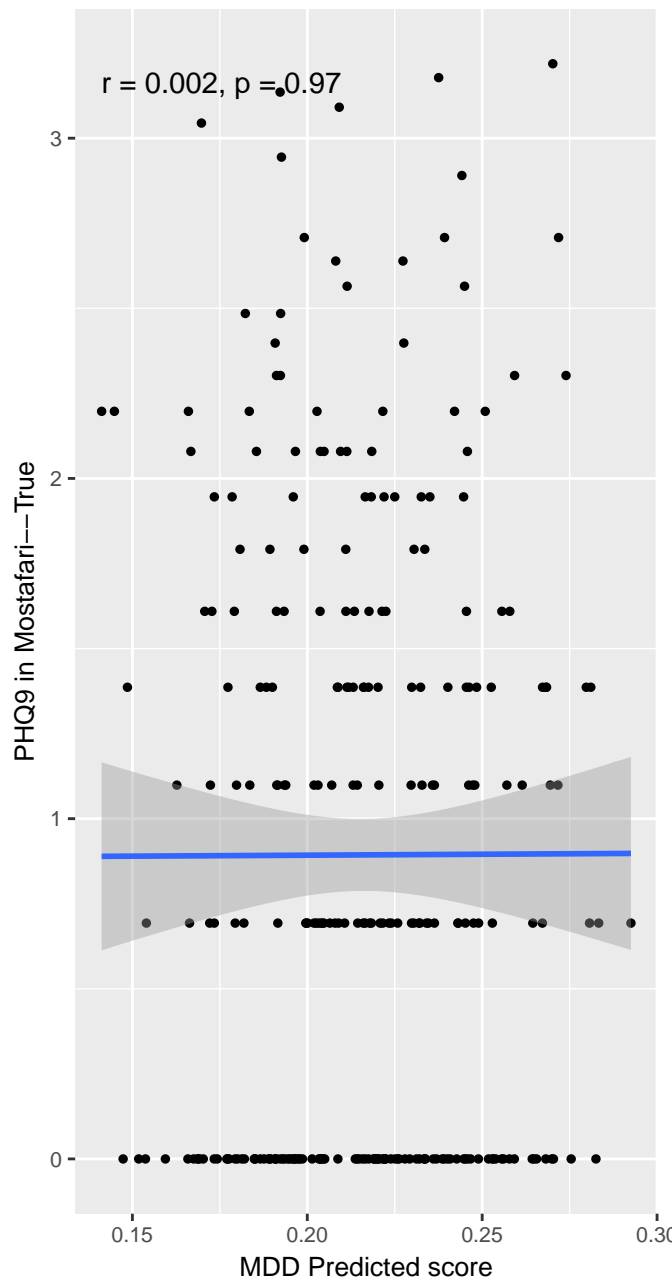
MDD Predicted score vs PHQ9 by ElasticNe   MDD Predicted score vs PHQ9 by ElasticNe
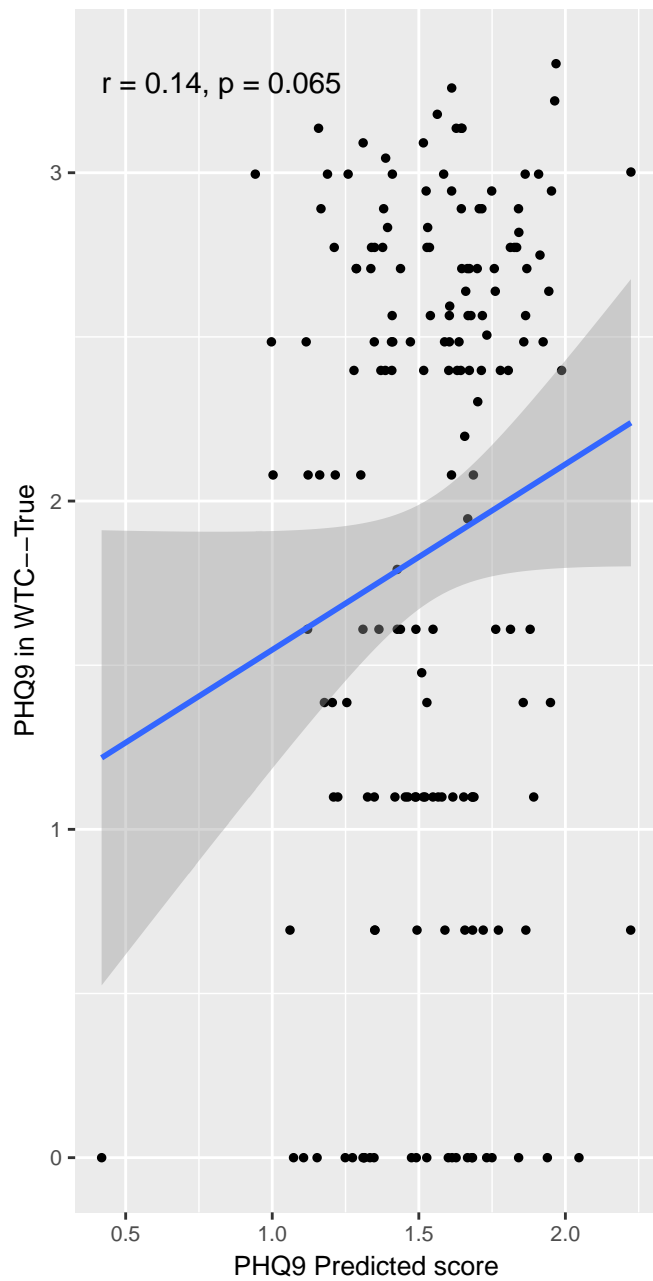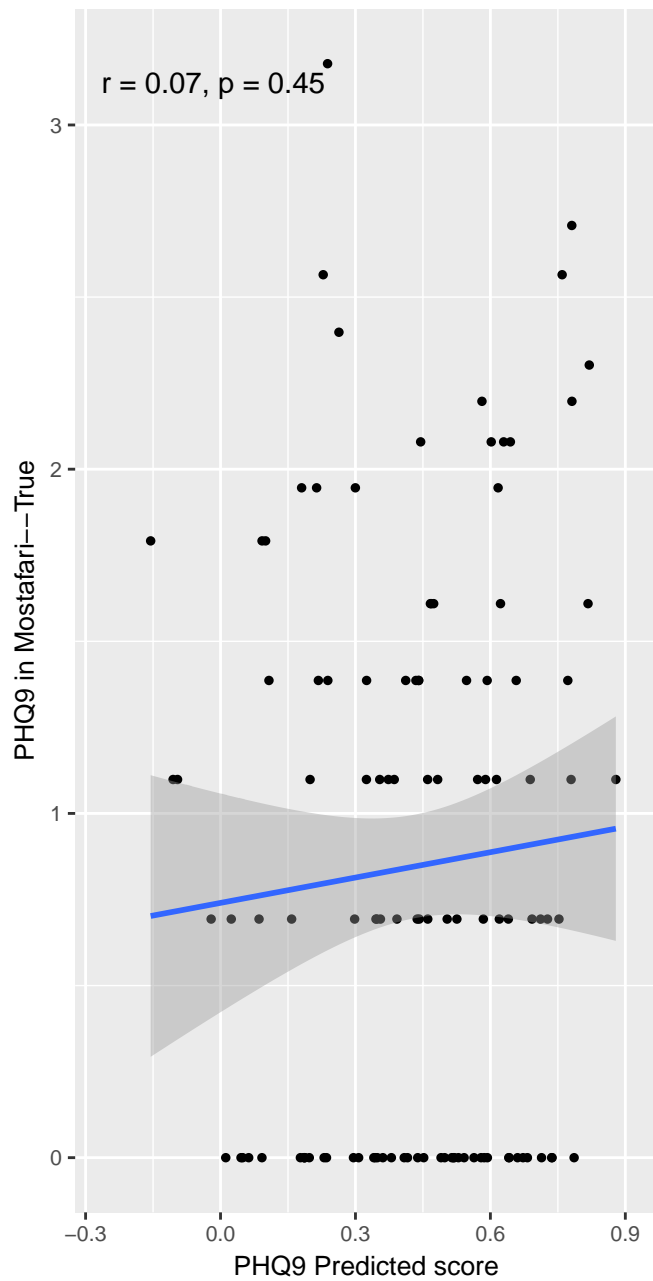
Train on PHQ9 of batch 3
 Test on batch 4 and Mostafavi
 Prediction Model on MDD of Batch 4 and Mostafavi:
 AUC are 0.607186606778277 0.585365853658537 respectively

PHQ9 Predicted score vs PHQ9 by ElasticNe   PHQ9 Predicted score vs PHQ9 by ElasticNe

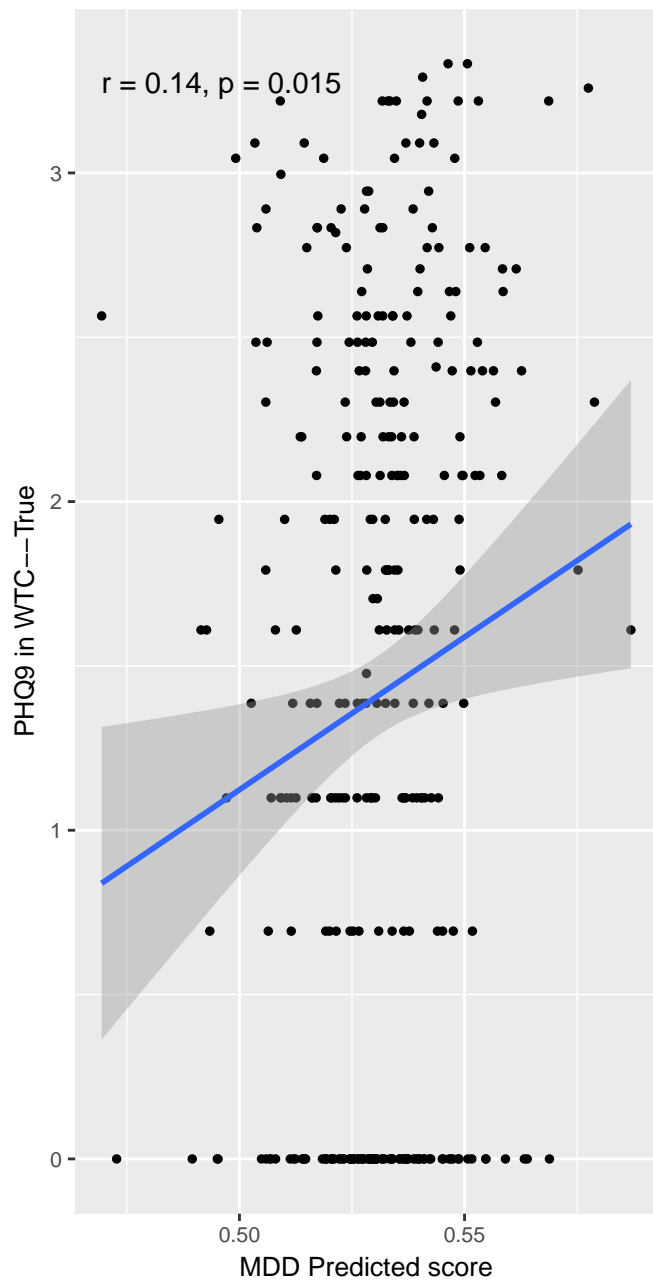r = 0.14, p = 0.065   r = 0.07, p = 0.45

```
Train on MDD of batch 4
 Test on batch 3 and Mostafavi
 Prediction Model on MDD of Batch 3 and Mostafavi:
 AUC are 0.53929450369155 0.587890625 respectively
```
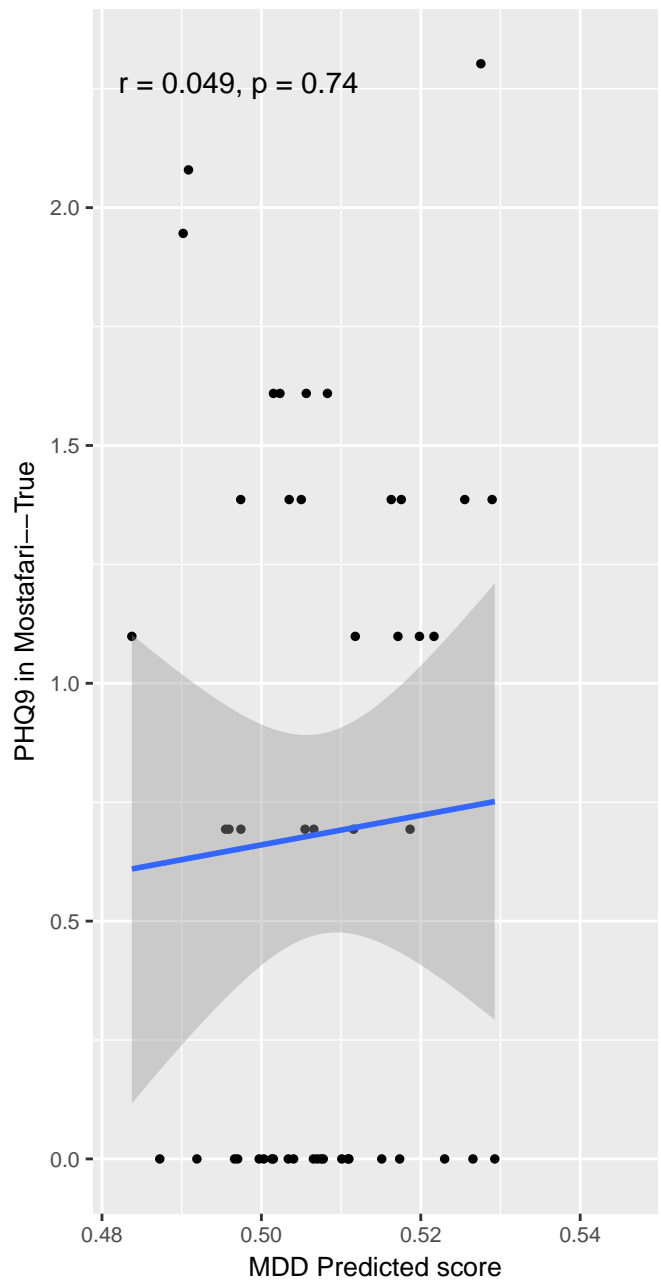
MDD Predicted score vs PHQ9 by ElasticNe   MDD Predicted score vs PHQ9 by ElasticNe

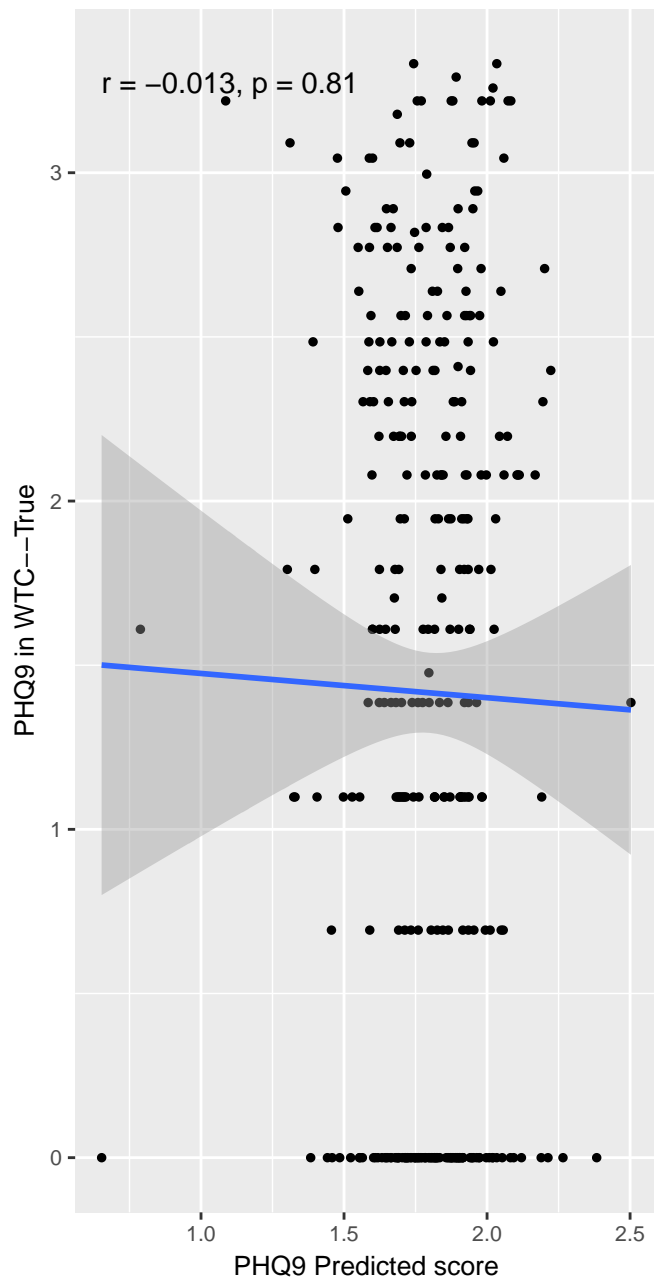r = 0.14, p = 0.015   r = 0.049, p = 0.74

Train on PHQ9 of batch 4
 Test on batch 3 and Mostafavi
 Prediction Model on MDD of Batch 3 and Mostafavi:
 AUC are 0.460623302728566 0.431372549019608 respectively

PHQ9 Predicted score vs PHQ9 by ElasticN...   PHQ9 Predicted score vs PHQ9 by ElasticN...

r = −0.013, p = 0.81   r = −0.11, p = 0.6