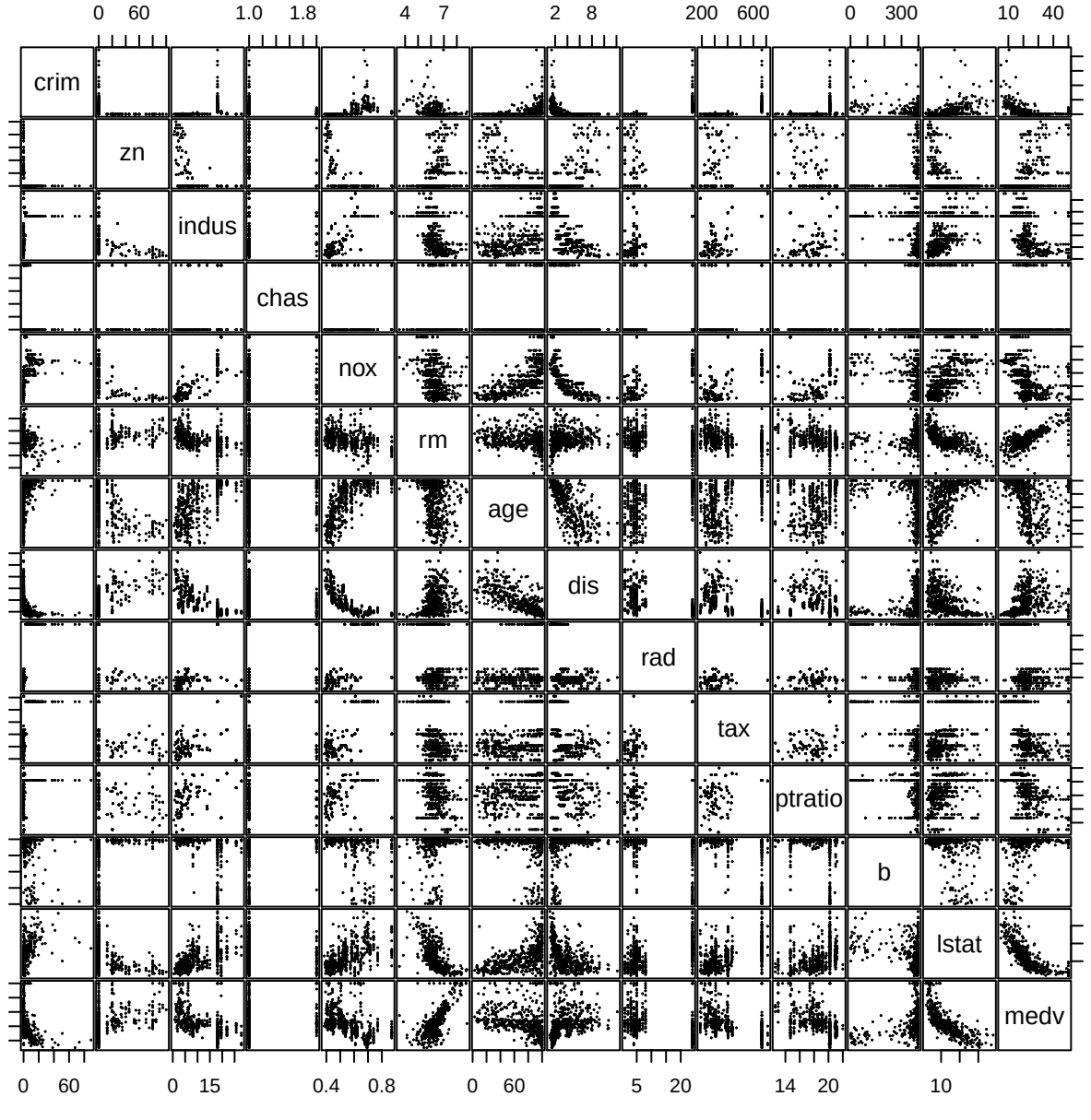
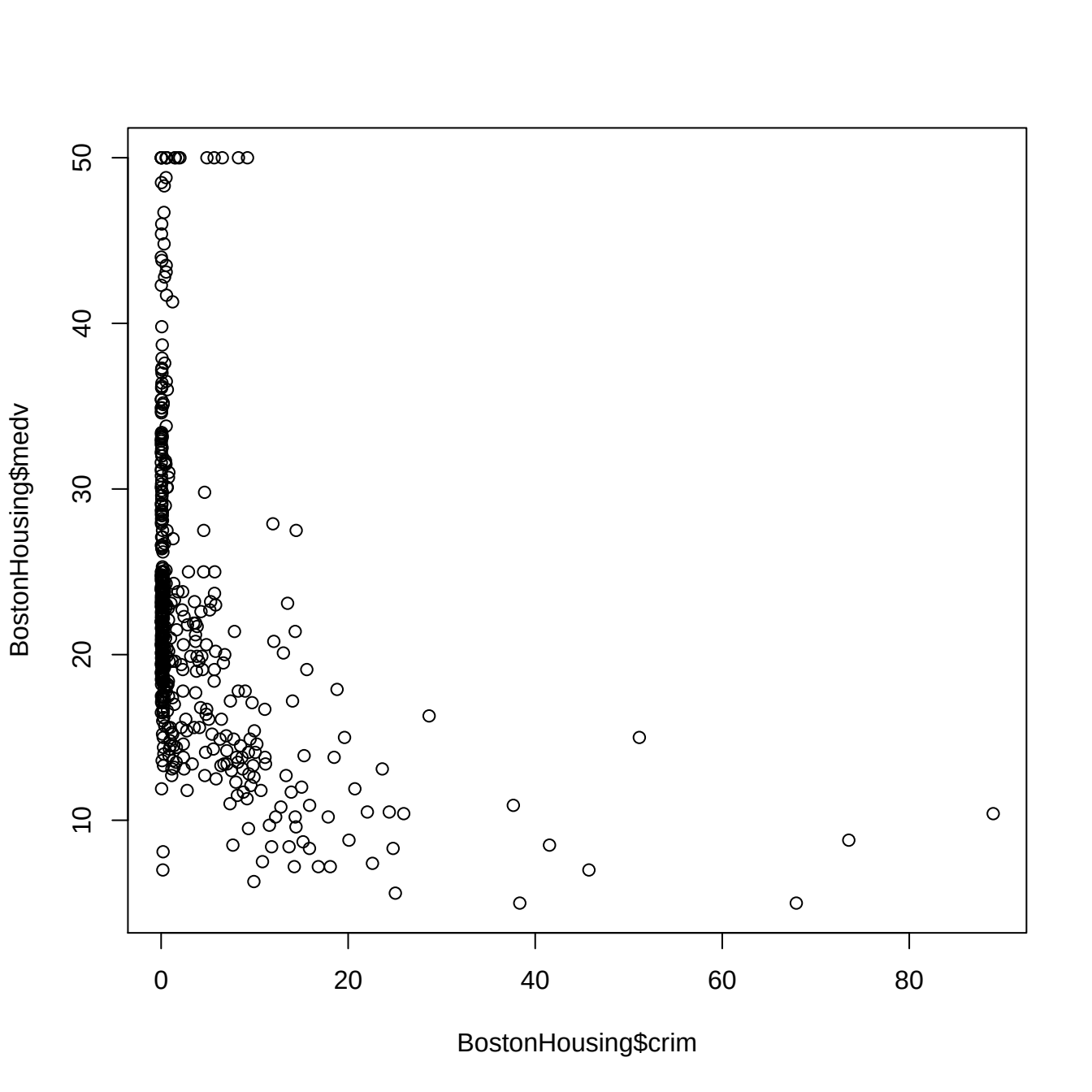
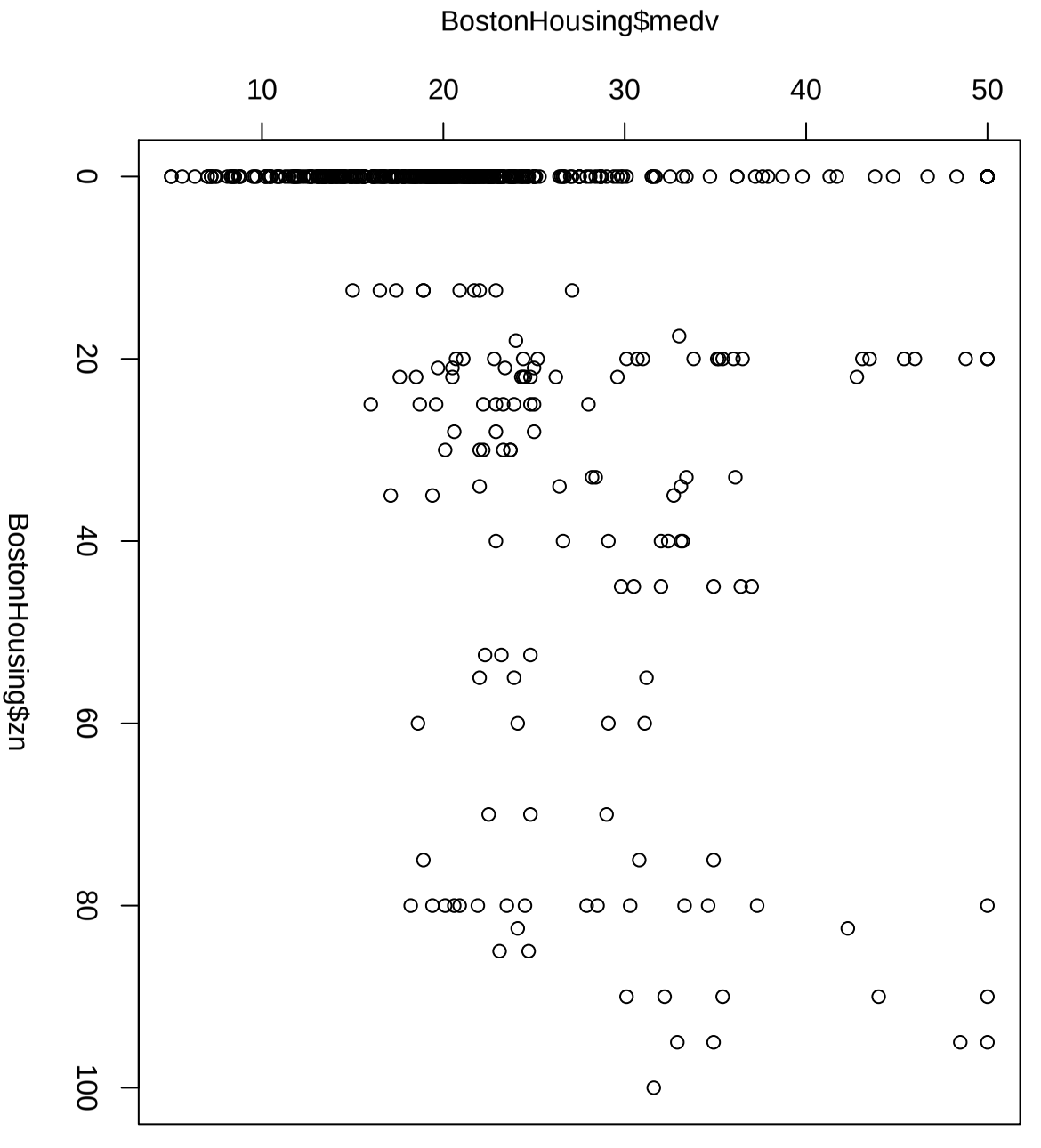
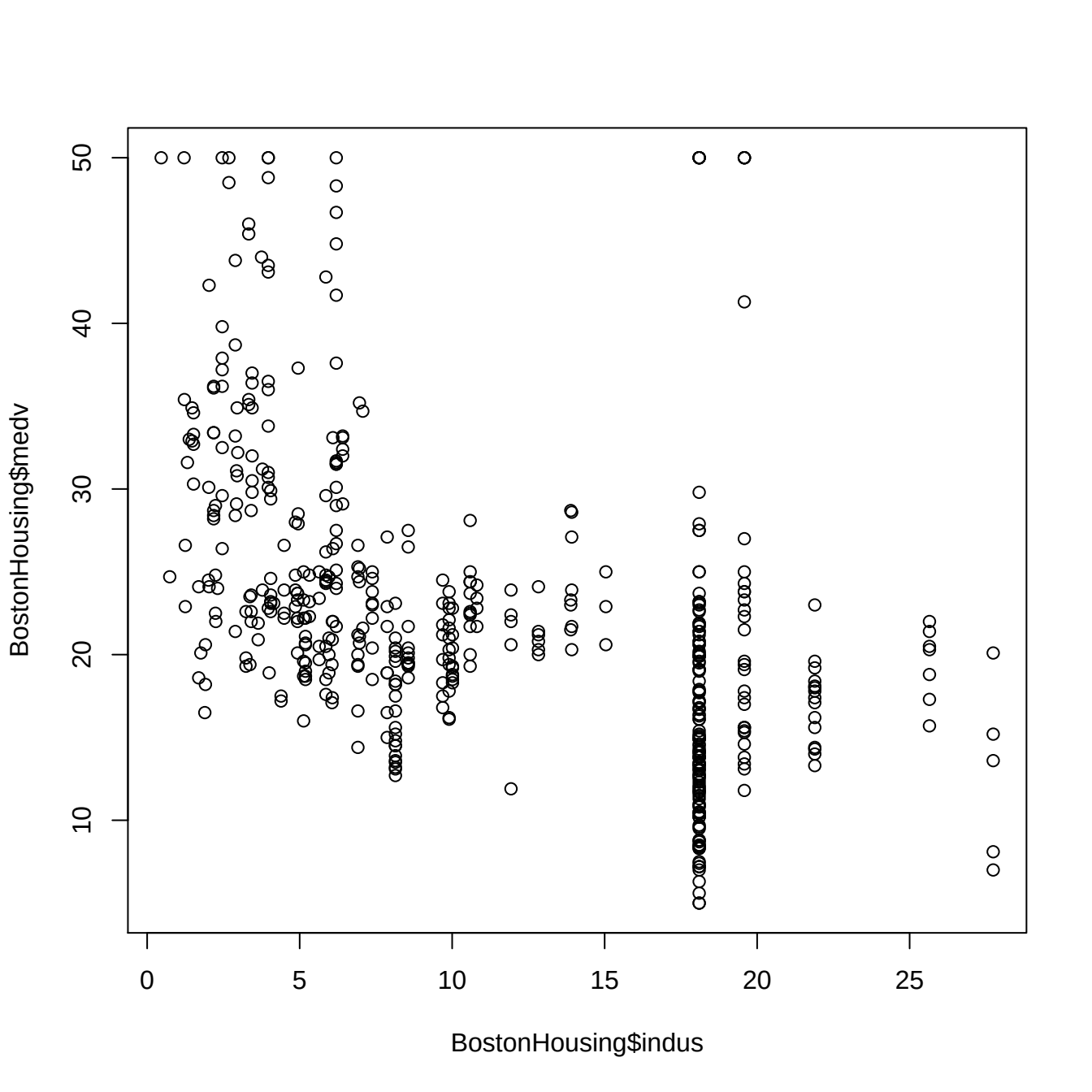
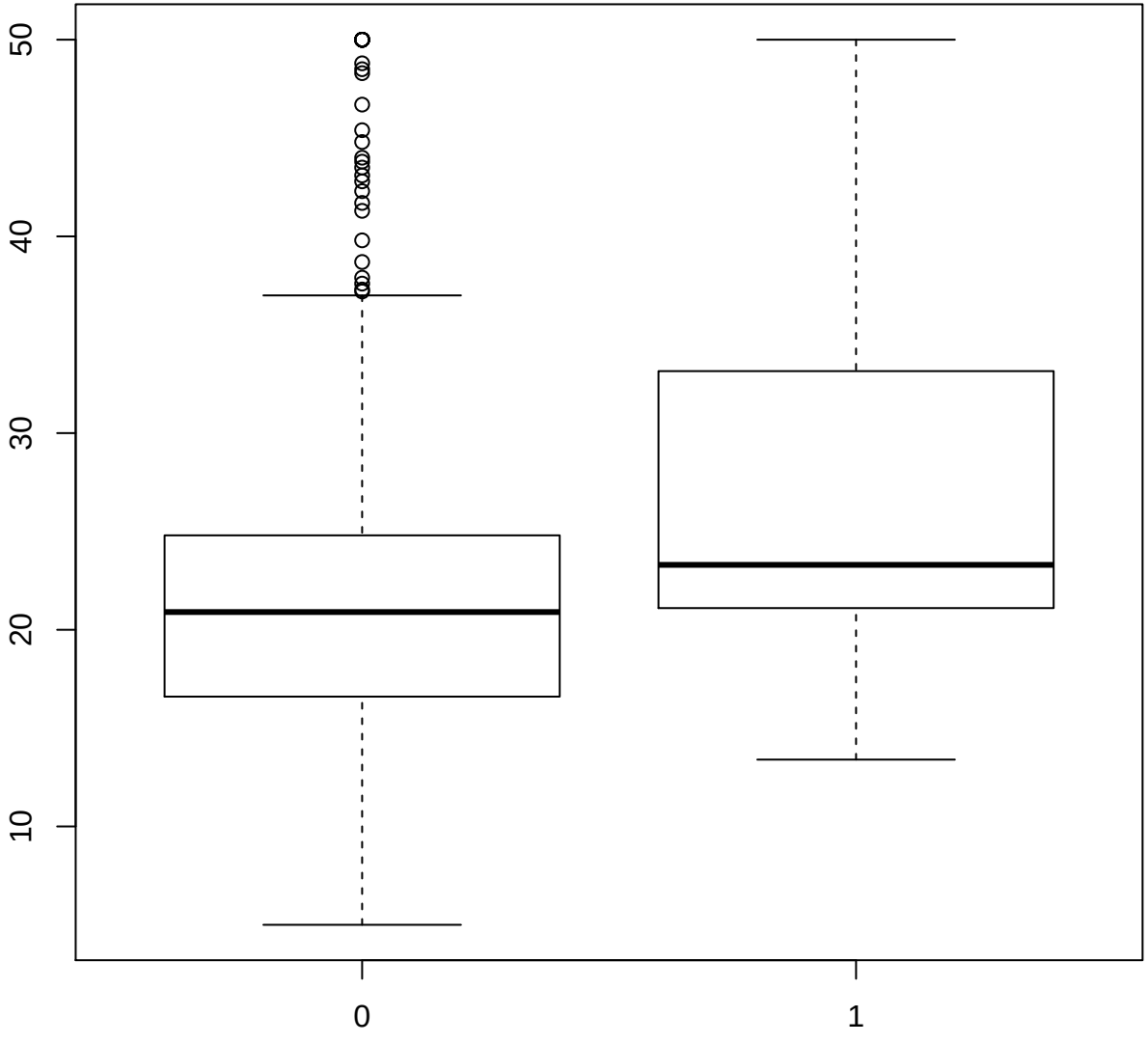
Boston Matrix




BostonHousing$medv
50
40
30
20
10
0
20
40
60
80
BostonHousing$crim

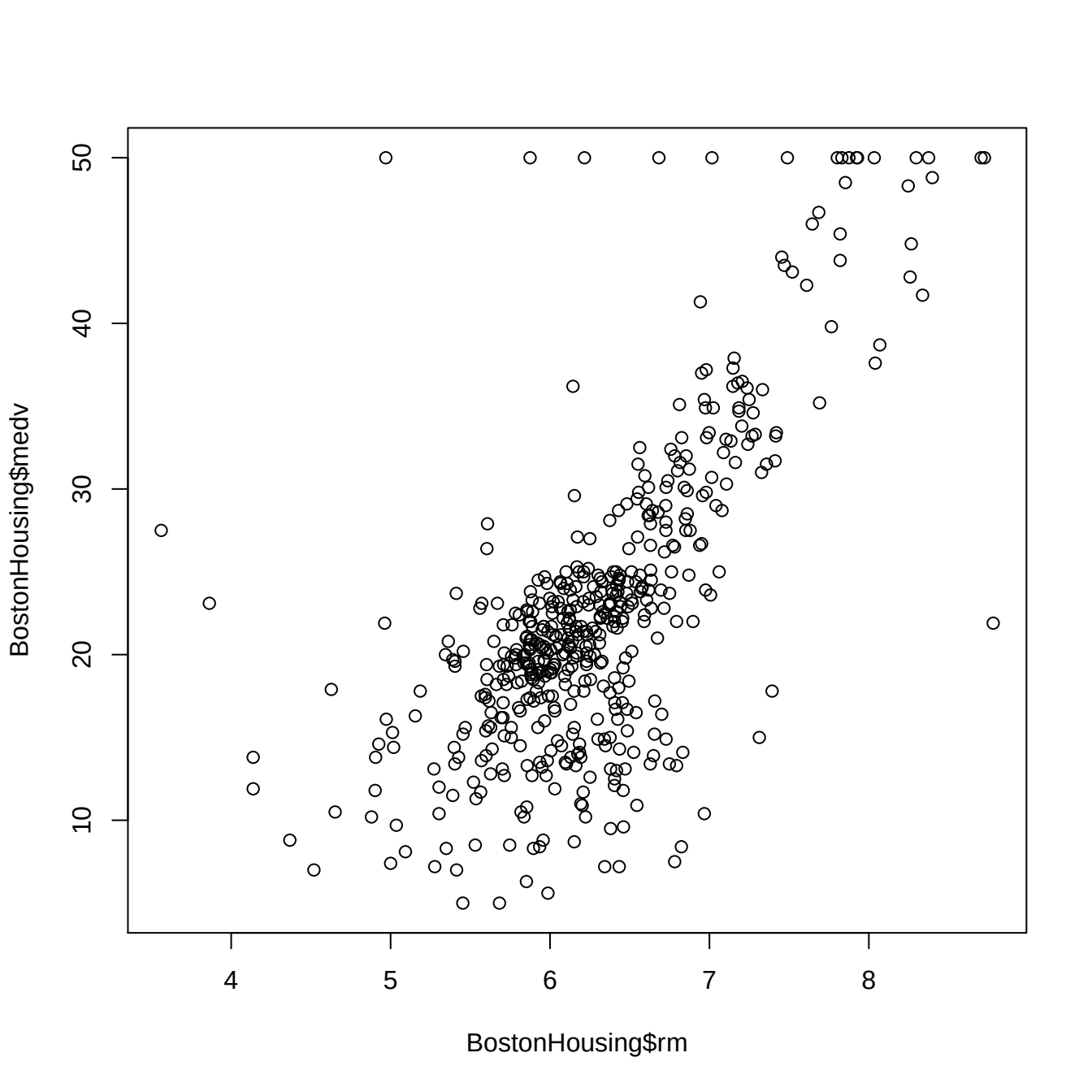

BostonHousing$medv
10
20
30
40
50
BostonHousing$zn
0
20
40
60
80
100

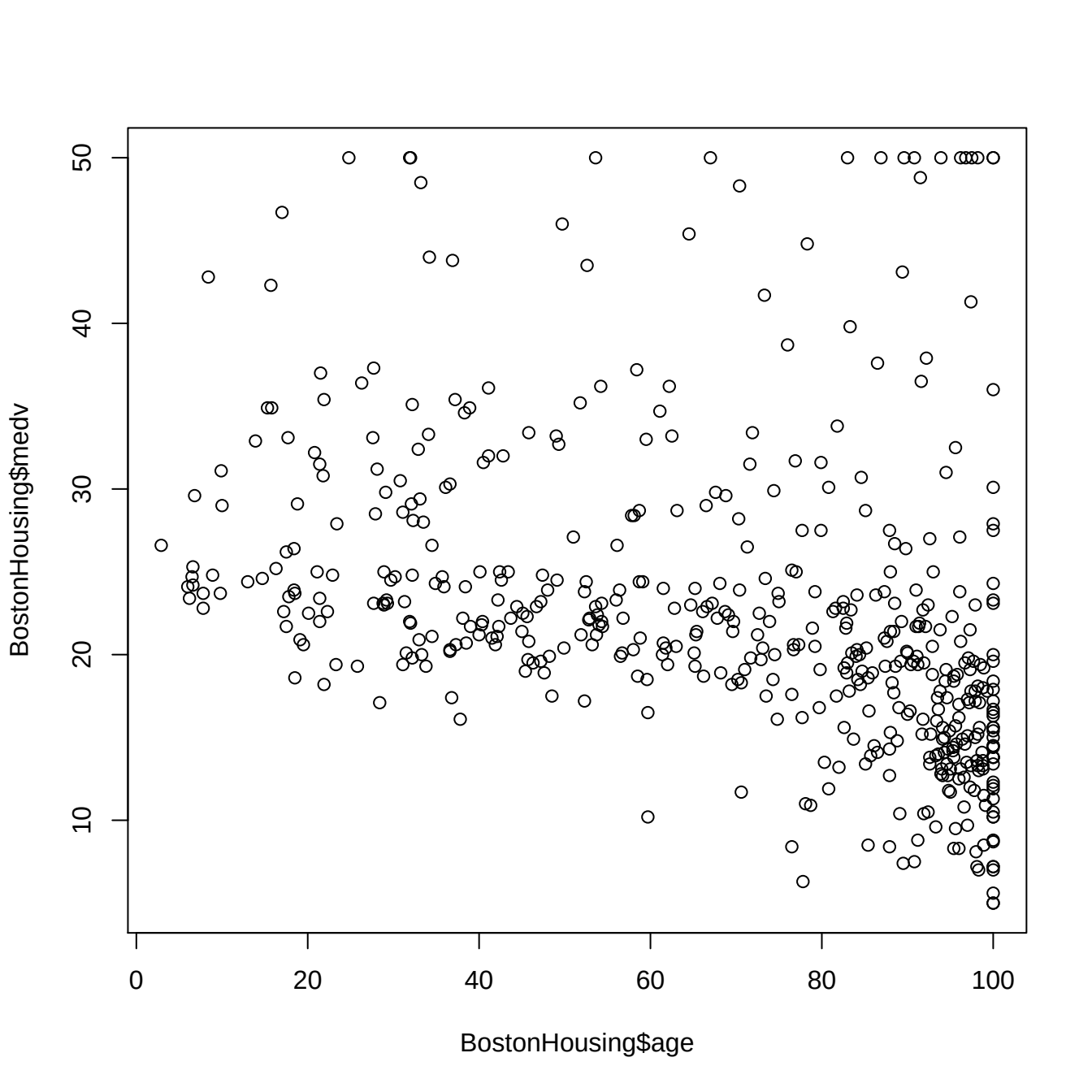

BostonHousing$medv
BostonHousing$indus
10
20
30
40
50
0
5
10
15
20
25

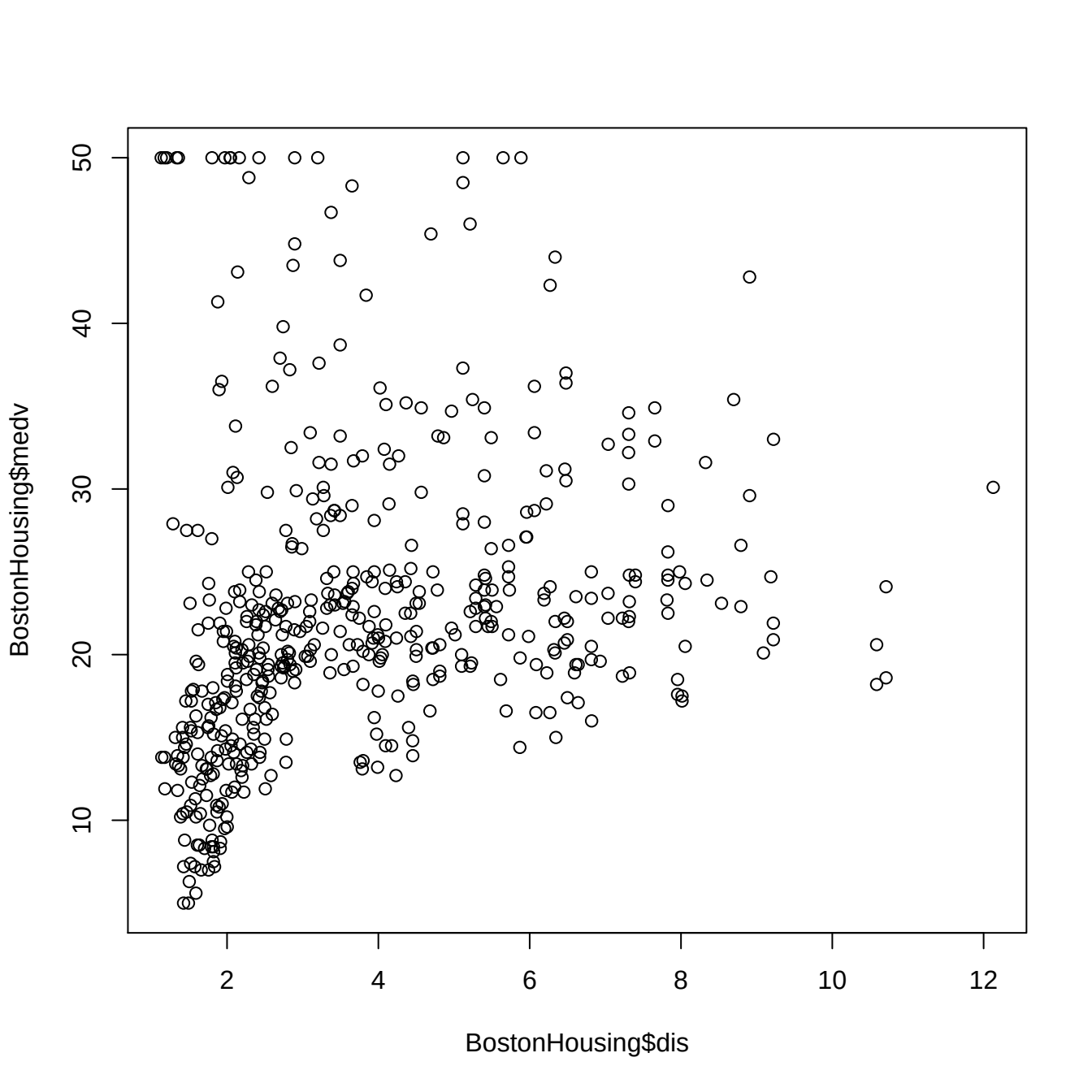

50
40
30
20
10
0
1

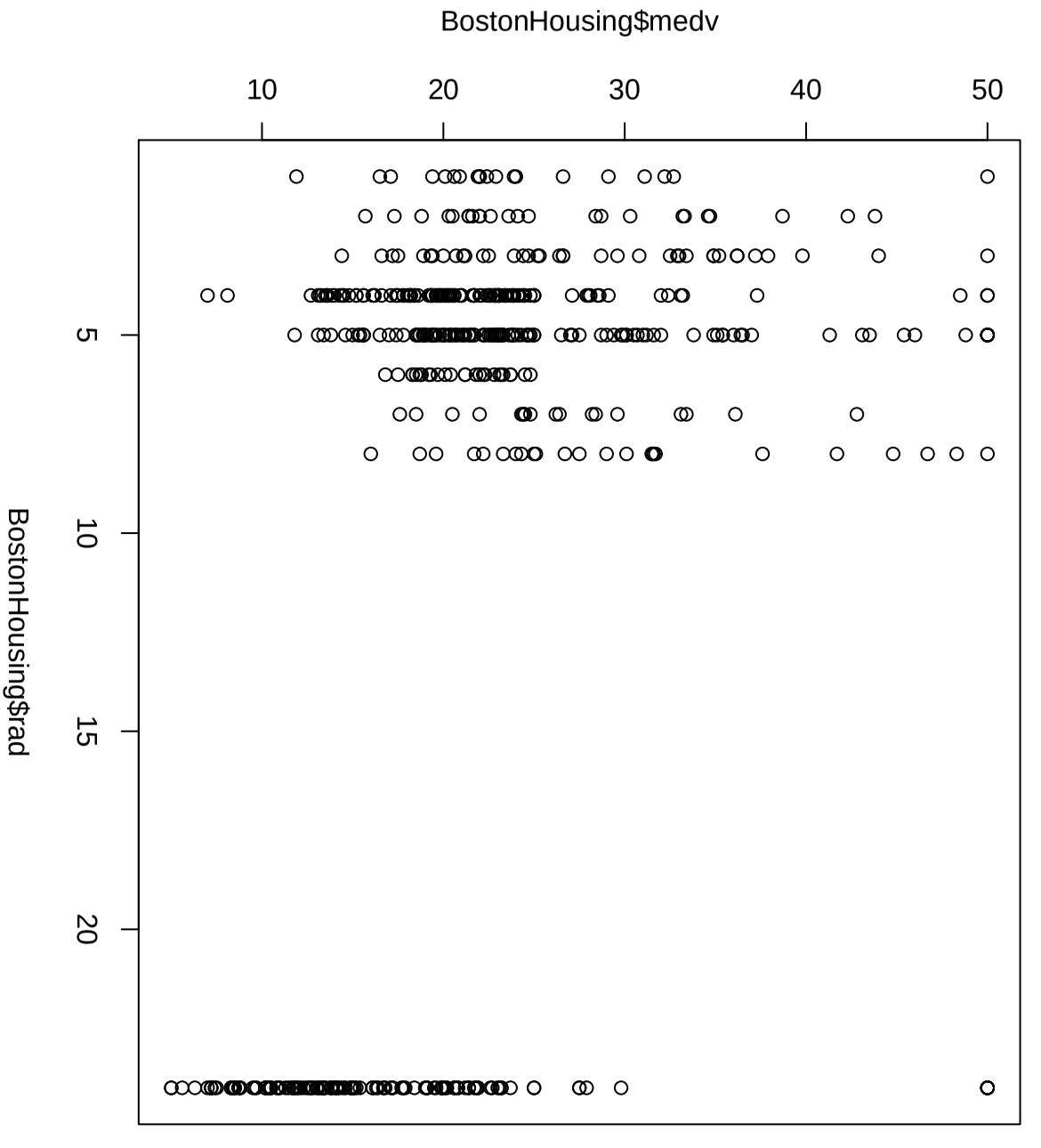
BostonHousing$medv
BostonHousing$nox
10
20
30
40
50
0.4
0.5
0.6
0.7
0.8

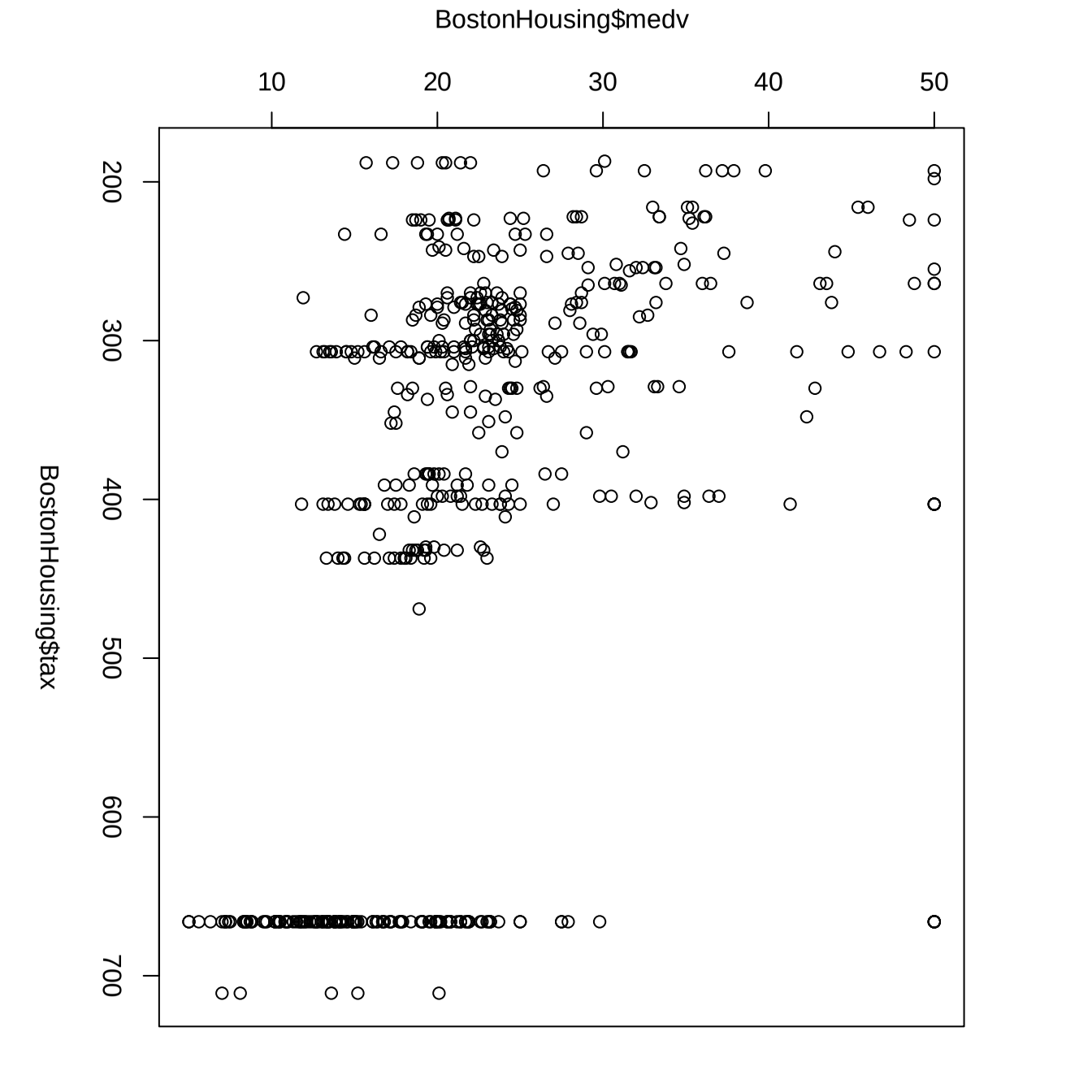
BostonHousing$medv
BostonHousing$nox
10
20
30
40
50
0.4
0.5
0.6
0.7
0.8


BostonHousing$medv
BostonHousing$rm
10
20
30
40
50
4
5
6
7
8

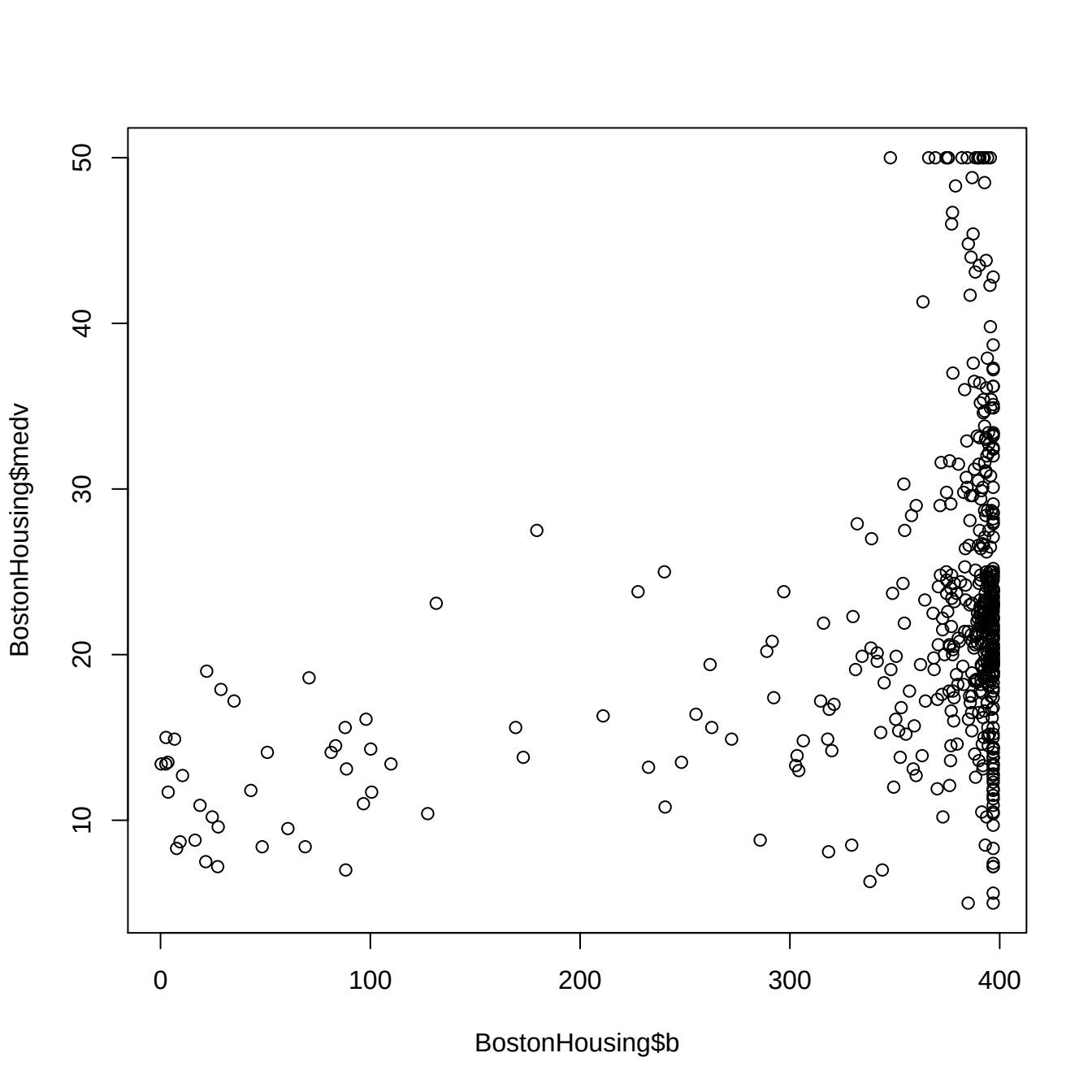

BostonHousing$medv
BostonHousing$age
10
20
30
40
50
0
20
40
60
80
100

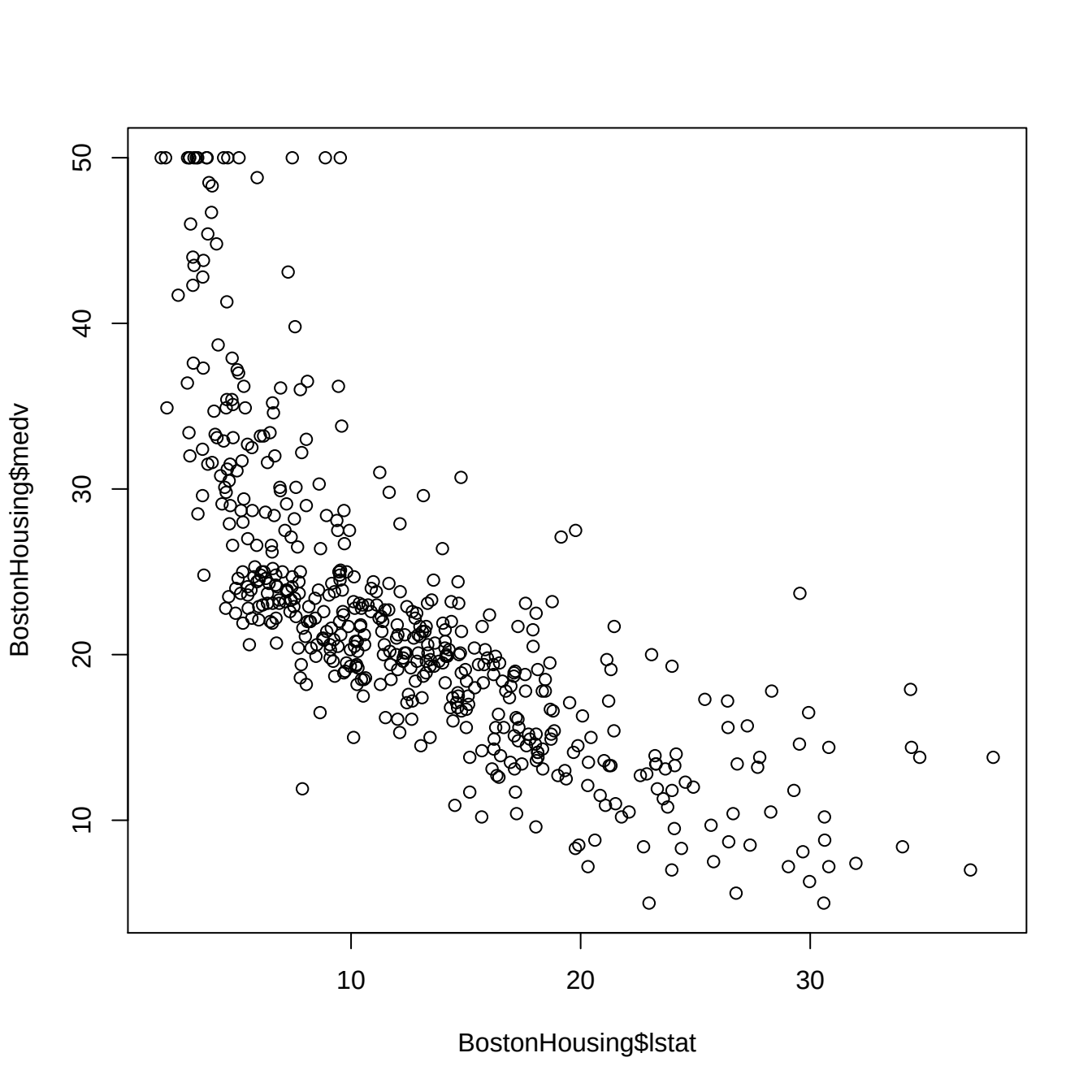

BostonHousing$medv
50
40
30
20
10
2
4
6
8
10
12
BostonHousing$dis

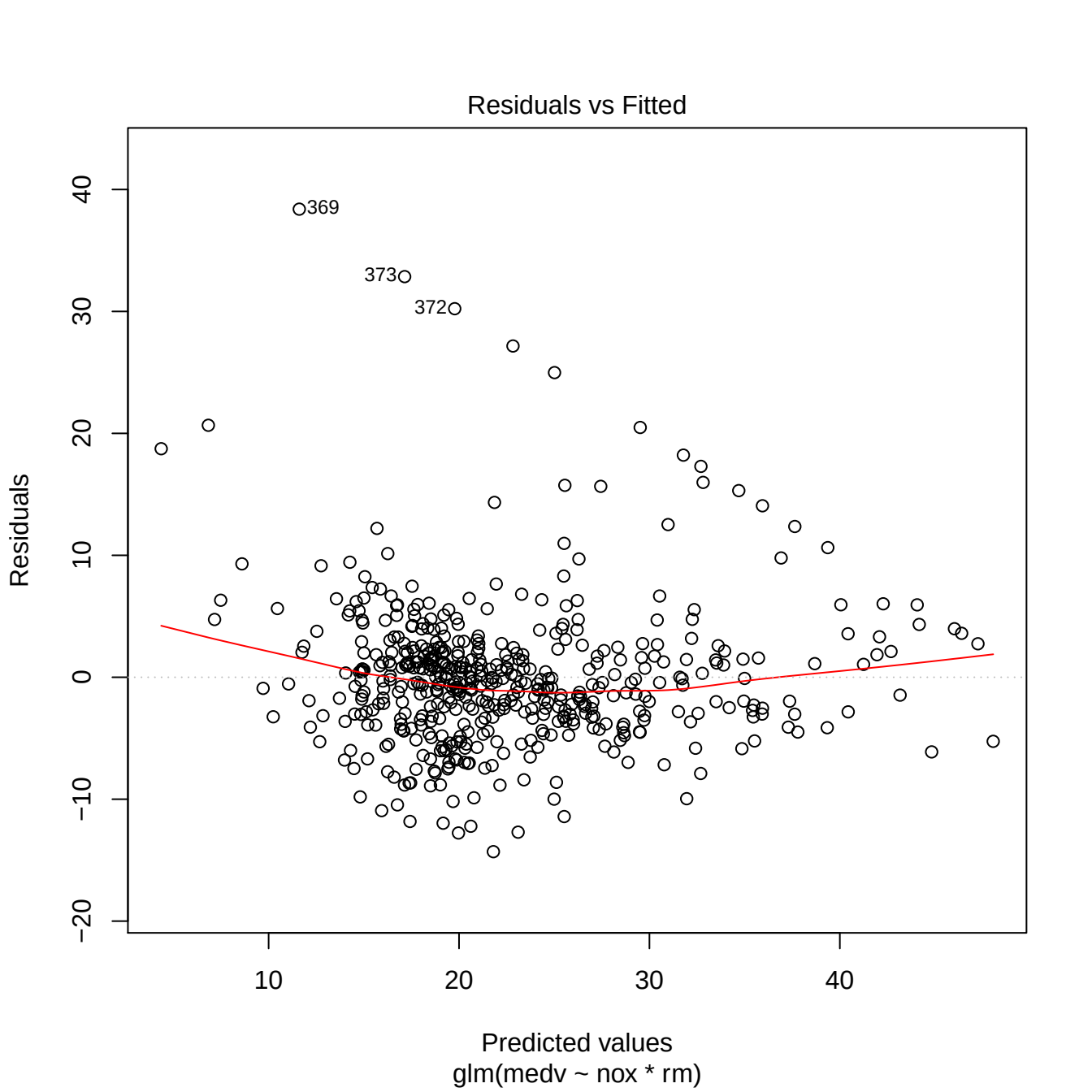

BostonHousing$medv
10
20
30
40
50
BostonHousing$rad
5
10
15
20

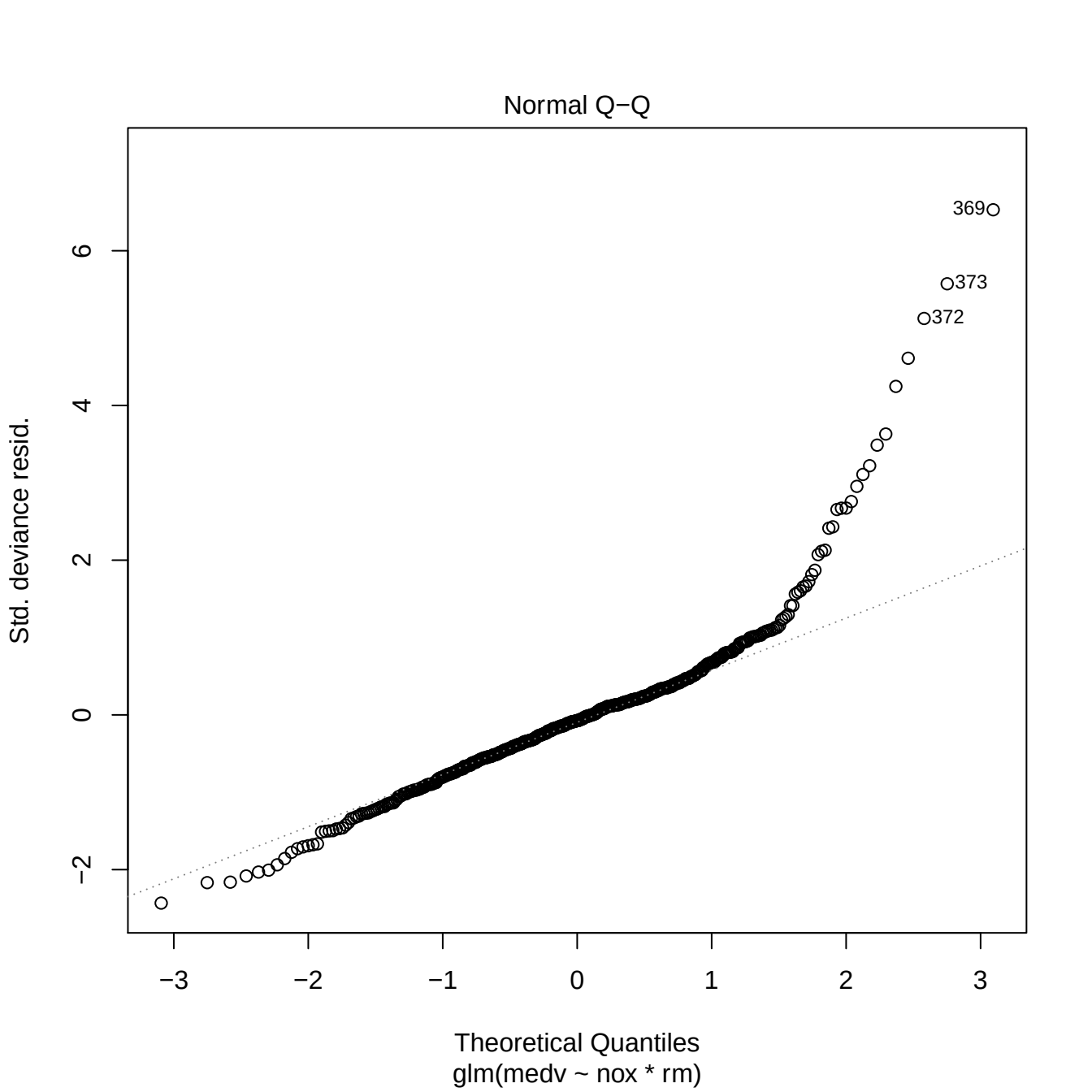

BostonHousing$medv
10
20
30
40
50
BostonHousing$tax
200
300
400
500
600
700

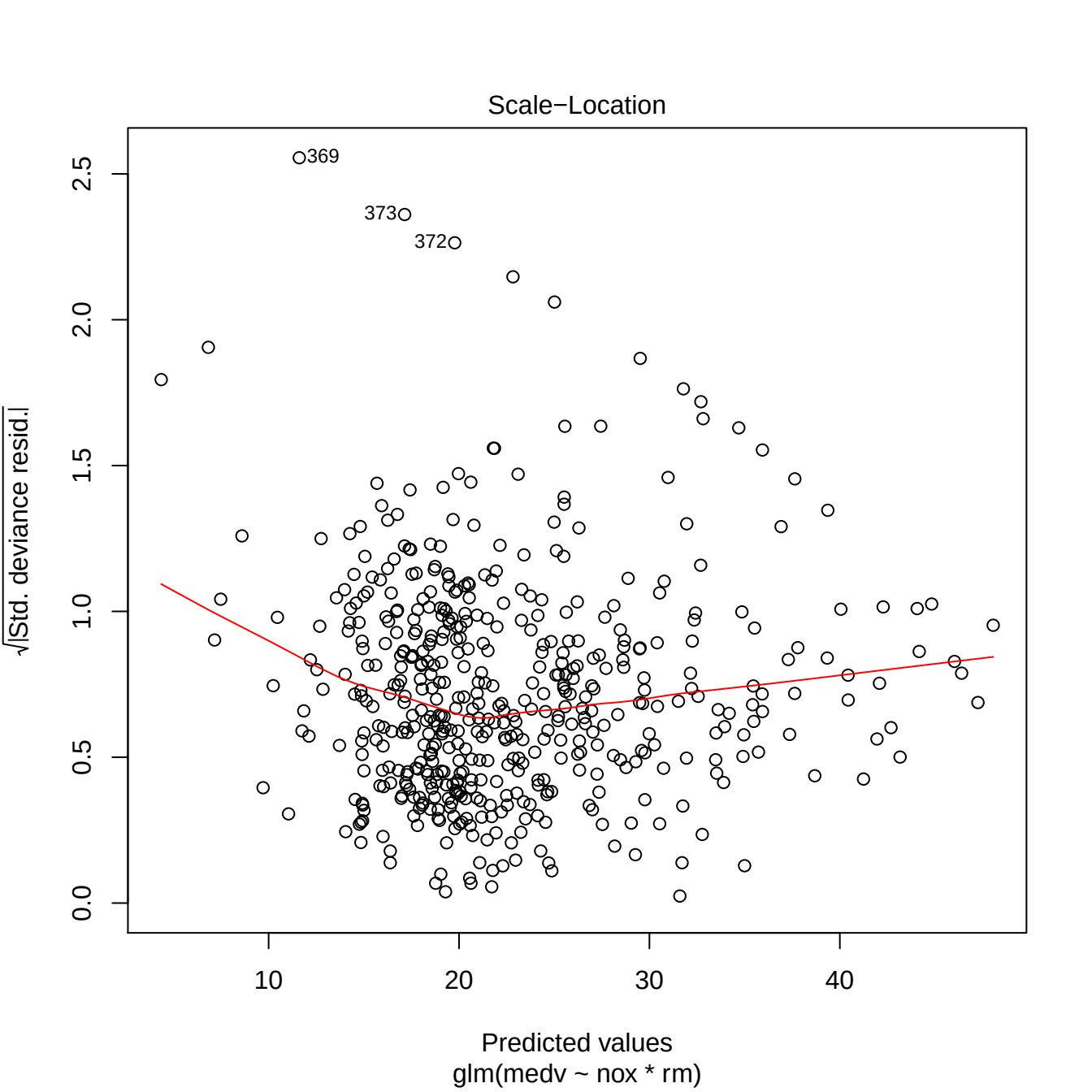
BostonHousing$medv
BostonHousing$ptratio
10
20
30
40
50
14
16
18
20
22

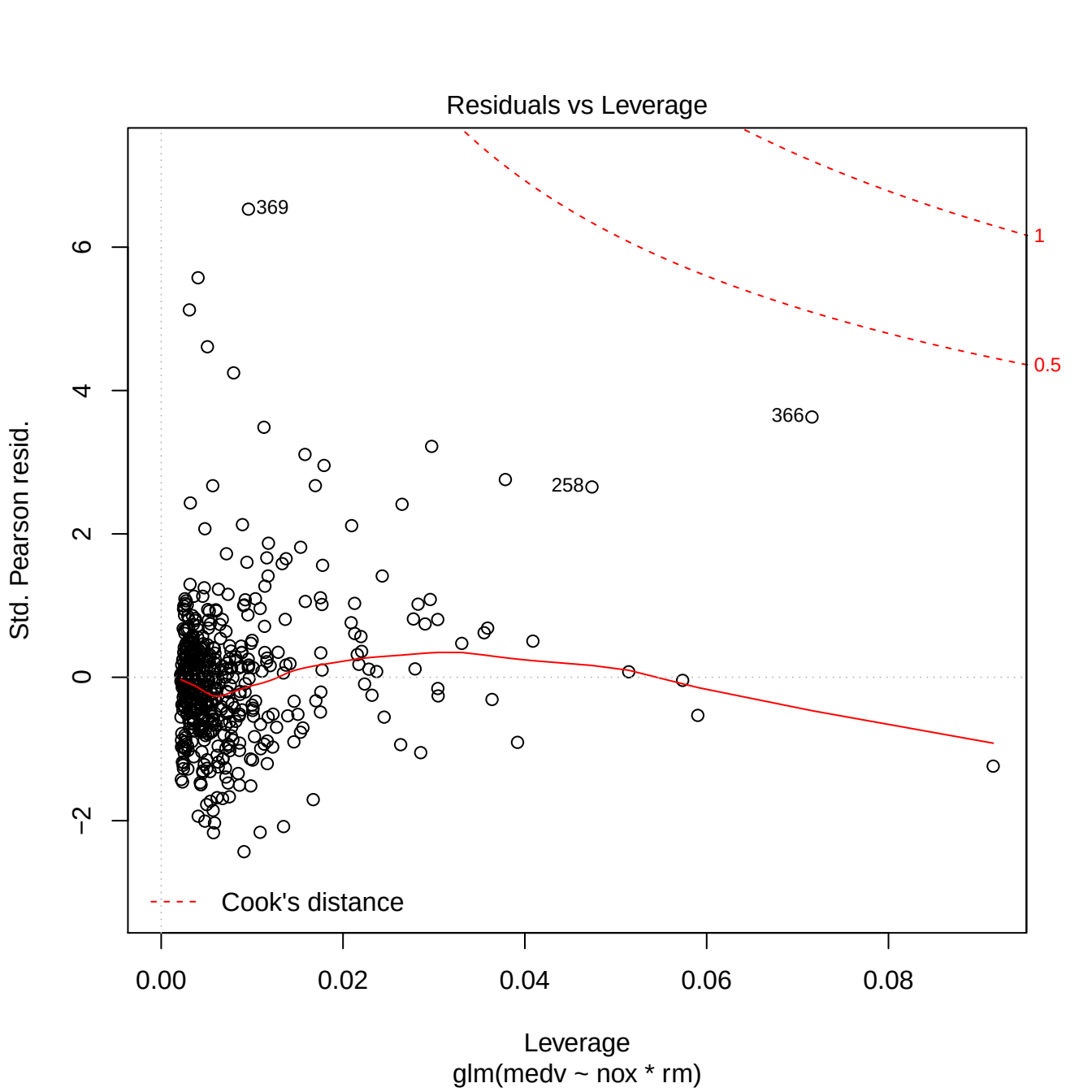

BostonHousing$medv
10
20
30
40
50
0
100
200
300
400
BostonHousing$b

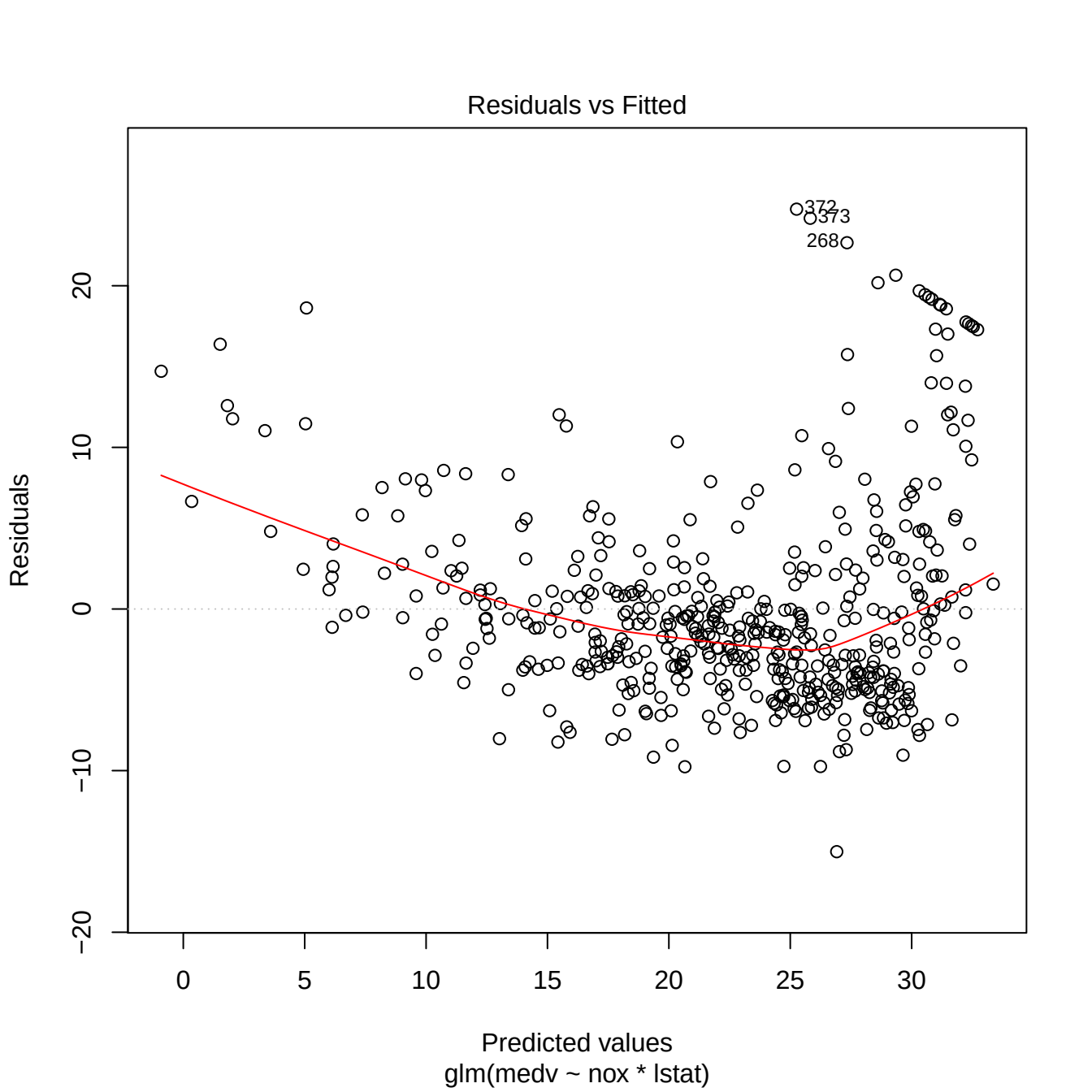

BostonHousing$medv
50
40
30
20
10
10
20
30
BostonHousing$lstat

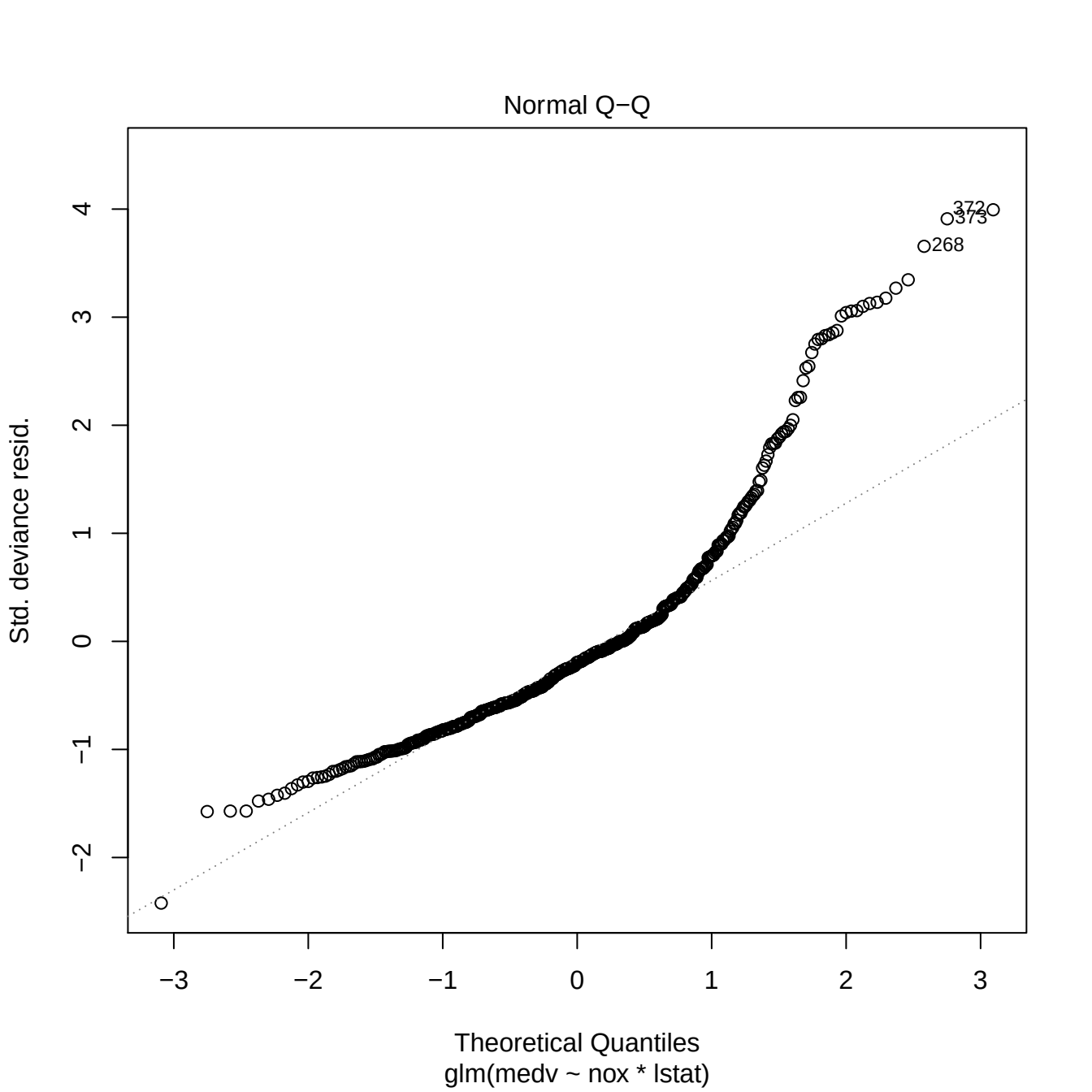

Residuals vs Fitted
369
373
372
Residuals
40
30
20
10
0
−10
−20
10
20
30
40
Predicted values
glm(medv ~ nox * rm)

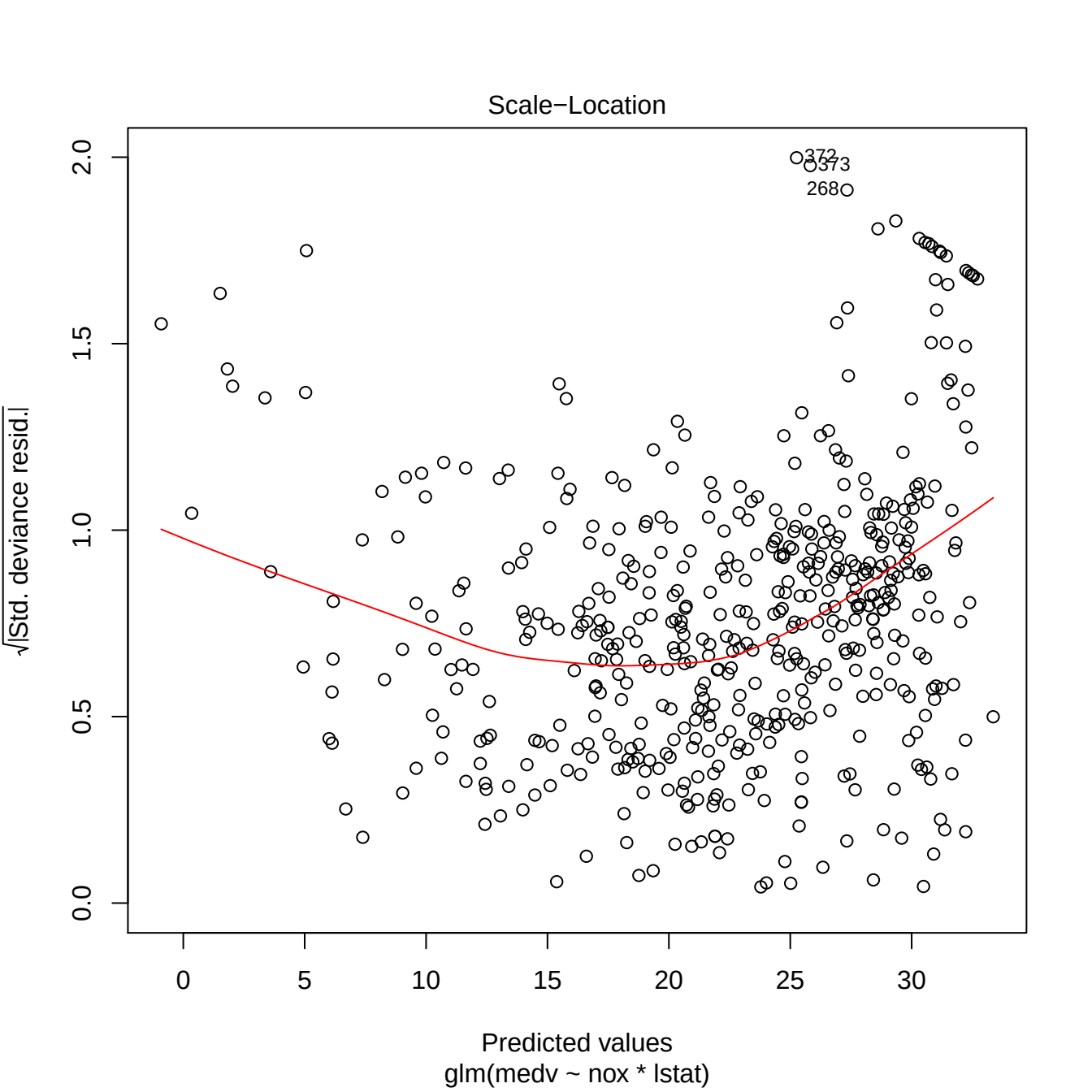

Normal Q−Q
Std. deviance resid.
6
4
2
0
−2
369
373
372
−3
−2
−1
0
1
2
3
Theoretical Quantiles
glm(medv ~ nox * rm)

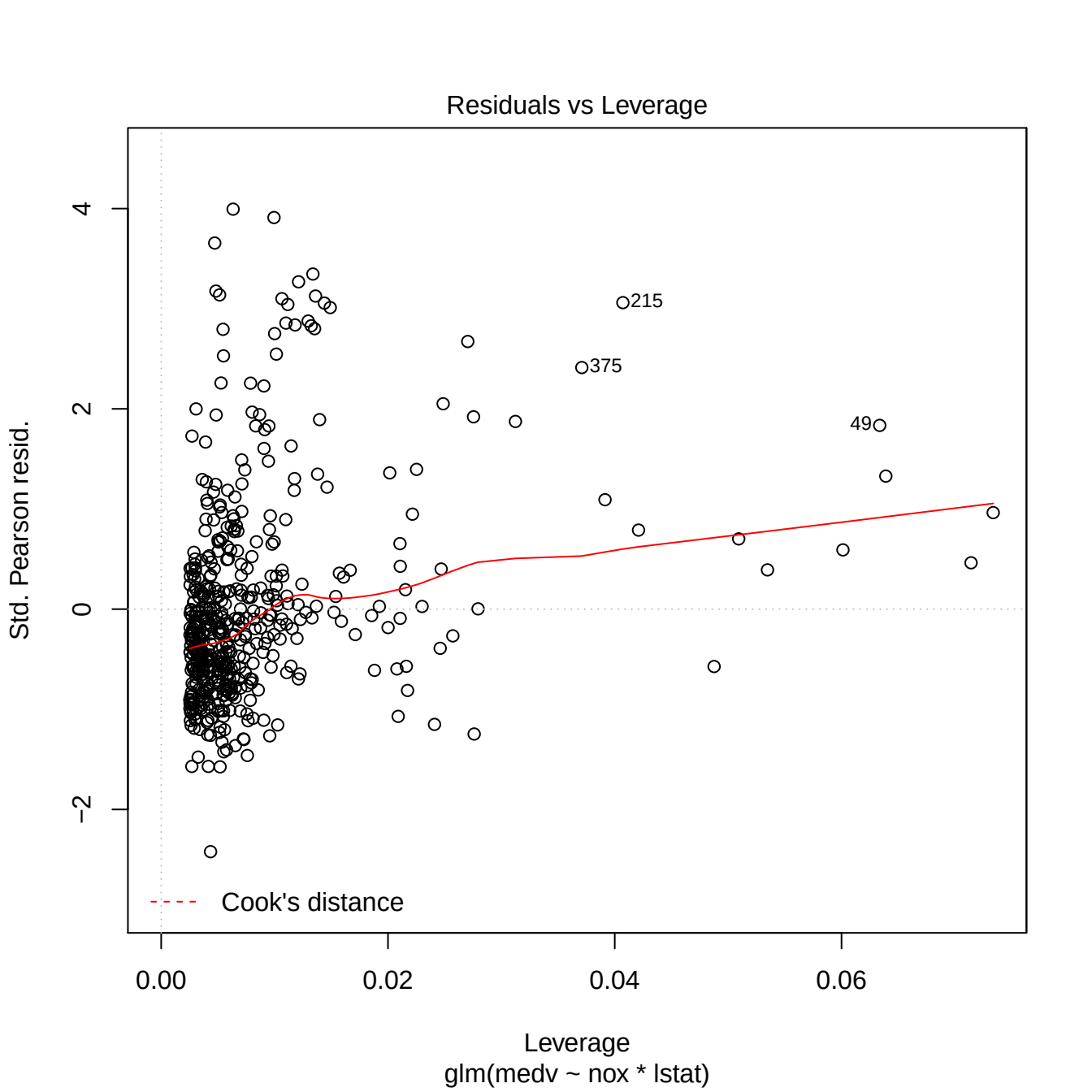

Scale−Location
369
373
372
√|Std. deviance resid.|
0.0
0.5
1.0
1.5
2.0
2.5
10
20
30
40
Predicted values
glm(medv ~ nox * rm)

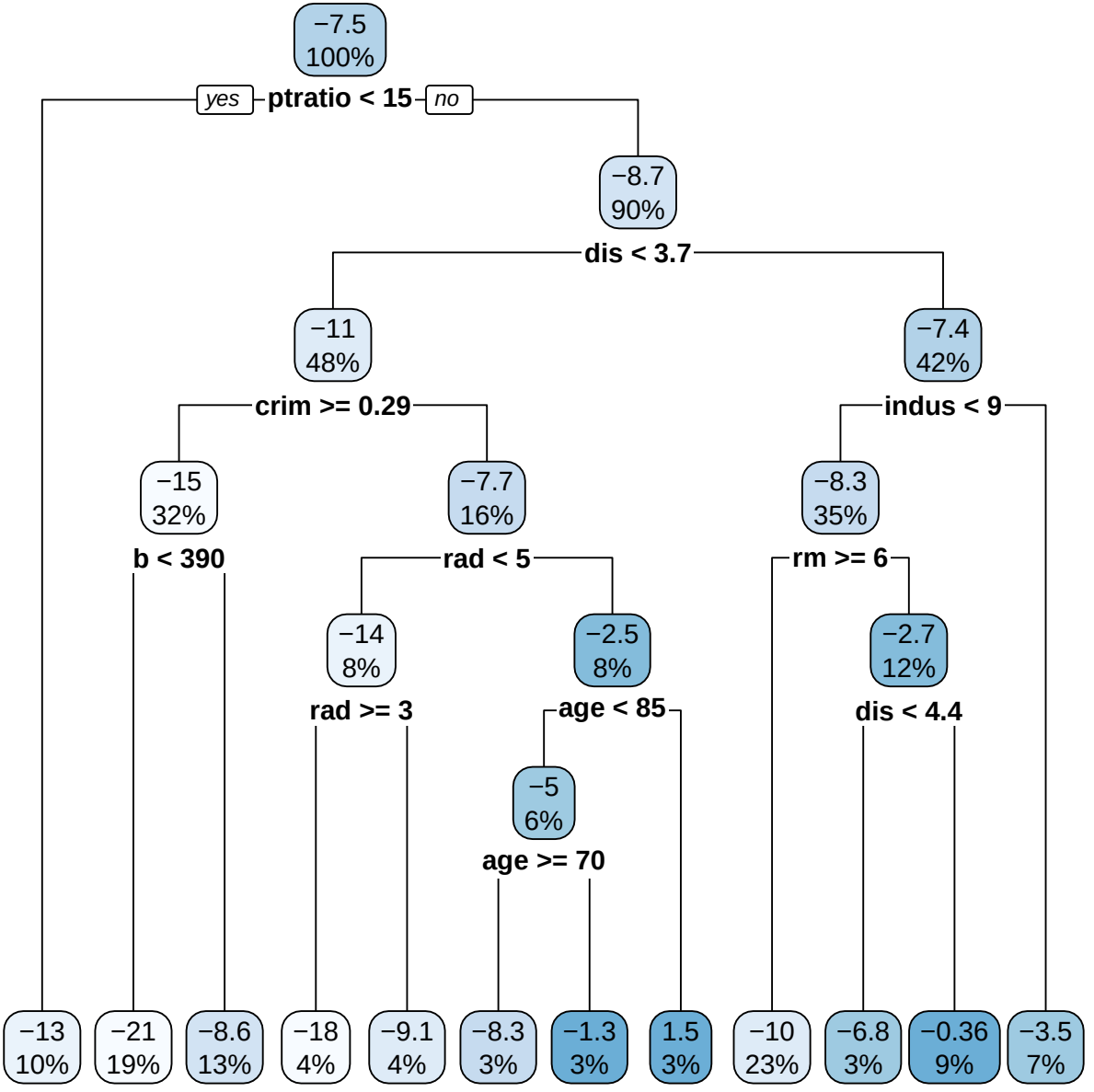

Residuals vs Leverage
Std. Pearson resid.
6
4
2
0
−2
369
366
258
1
0.5
Cook's distance
0.00
0.02
0.04
0.06
0.08
Leverage
glm(medv ~ nox * rm)


Residuals vs Fitted
372
373
268
Residuals
20
10
0
−10
−20
0
5
10
15
20
25
30
Predicted values
glm(medv ~ nox * lstat)


Normal Q−Q
Std. deviance resid.
Theoretical Quantiles
glm(medv ~ nox * lstat)
372
373
268
4
3
2
1
0
−1
−2
−3
−2
−1
0
1
2
3


Scale−Location
372
373
268
2.0
1.5
1.0
0.5
0.0
√|Std. deviance resid.|
0
5
10
15
20
25
30
Predicted values
glm(medv ~ nox * lstat)


Residuals vs Leverage
Std. Pearson resid.
4
2
0
−2
215
375
49
Cook's distance
0.00
0.02
0.04
0.06
Leverage
glm(medv ~ nox * lstat)


−7.5
100%
yes
ptratio < 15
no
−8.7
90%
dis < 3.7
−11
48%
−7.4
42%
crim >= 0.29
indus < 9
−15
32%
−7.7
16%
−8.3
35%
b < 390
rad < 5
rm >= 6
−14
8%
−2.5
8%
−2.7
12%
rad >= 3
age < 85
dis < 4.4
−5
6%
age >= 70
−13
10%
−21
19%
−8.6
13%
−18
4%
−9.1
4%
−8.3
3%
−1.3
3%
1.5
3%
−10
23%
−6.8
3%
−0.36
9%
−3.5
7%