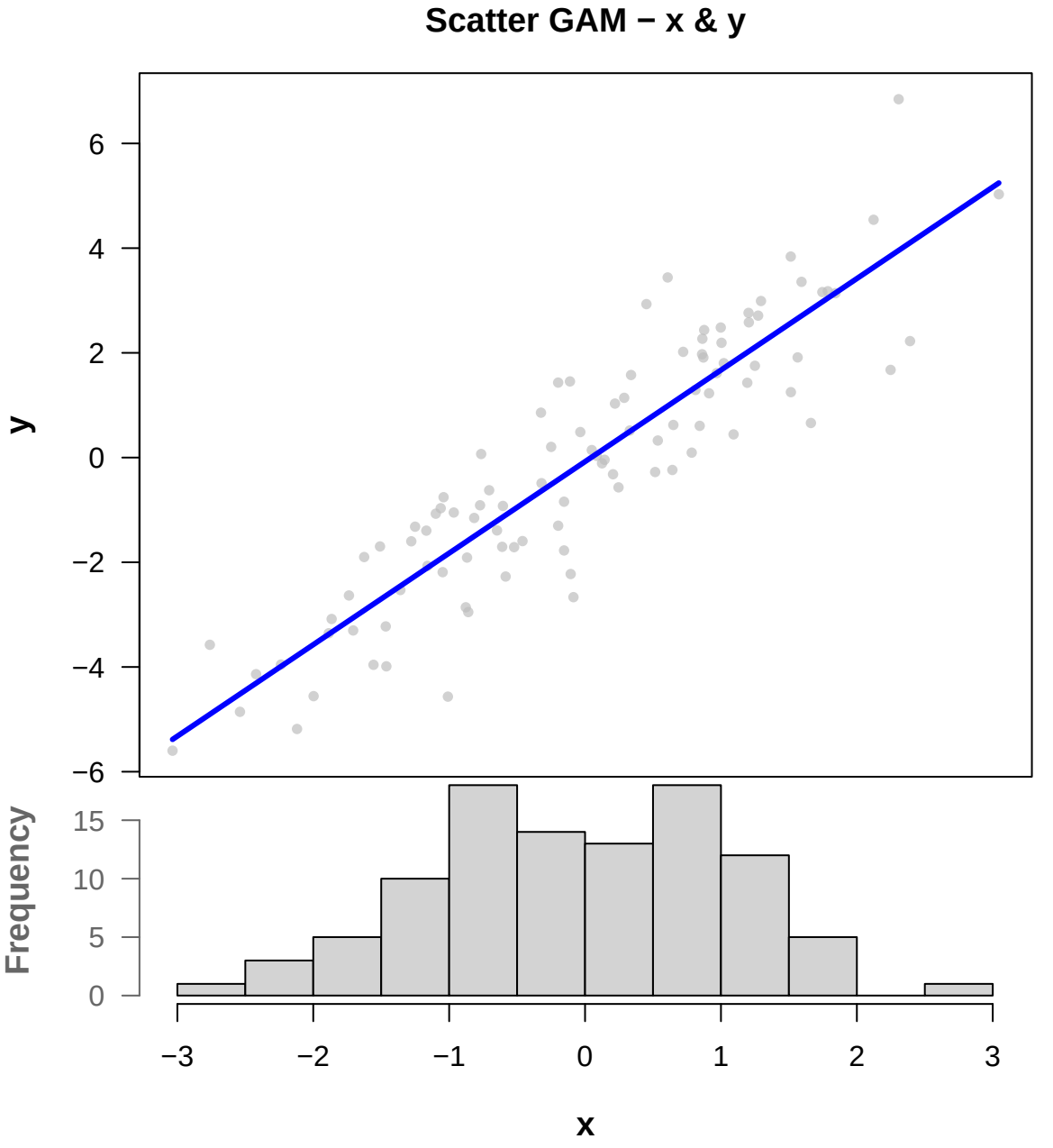
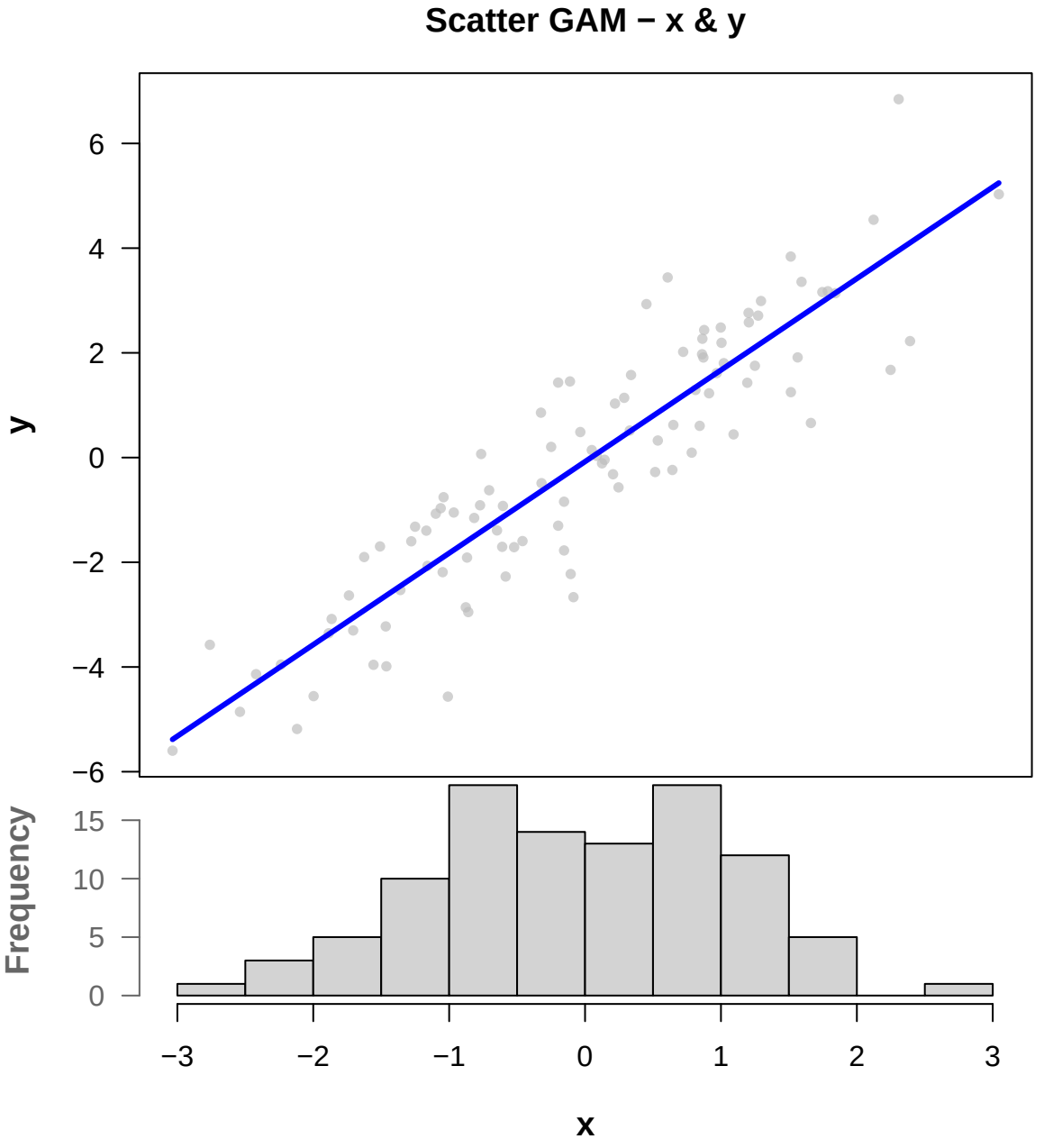
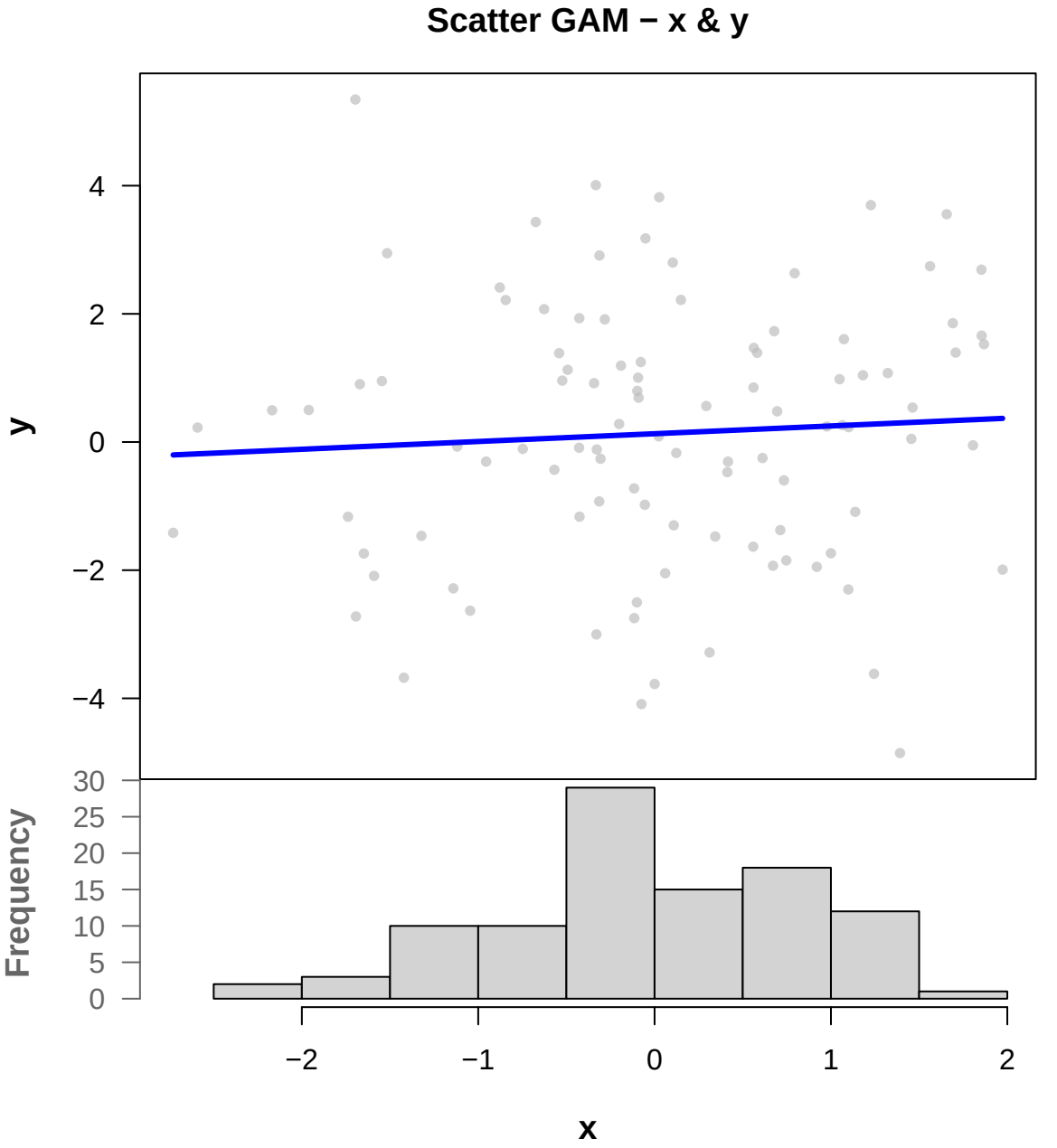
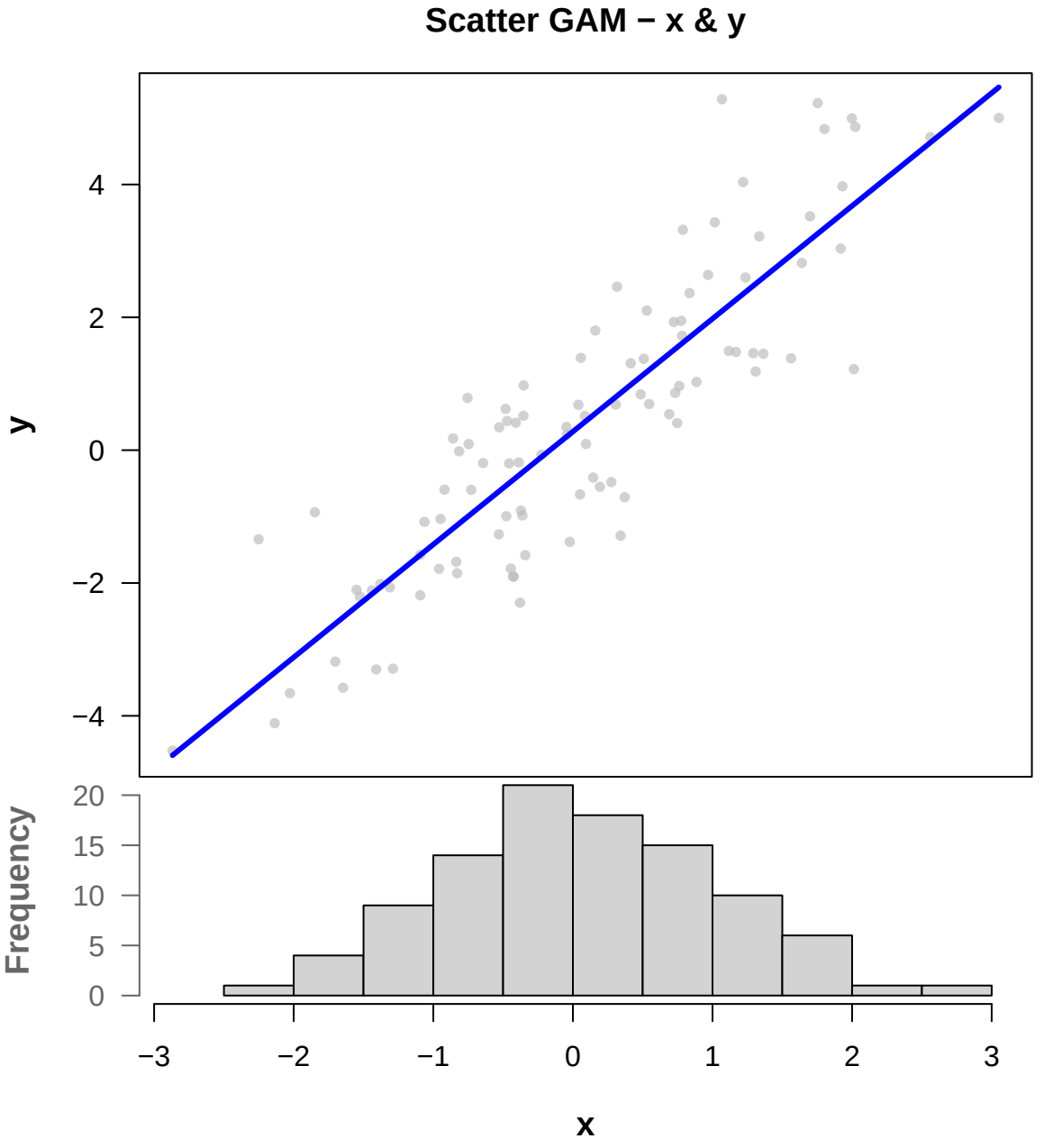
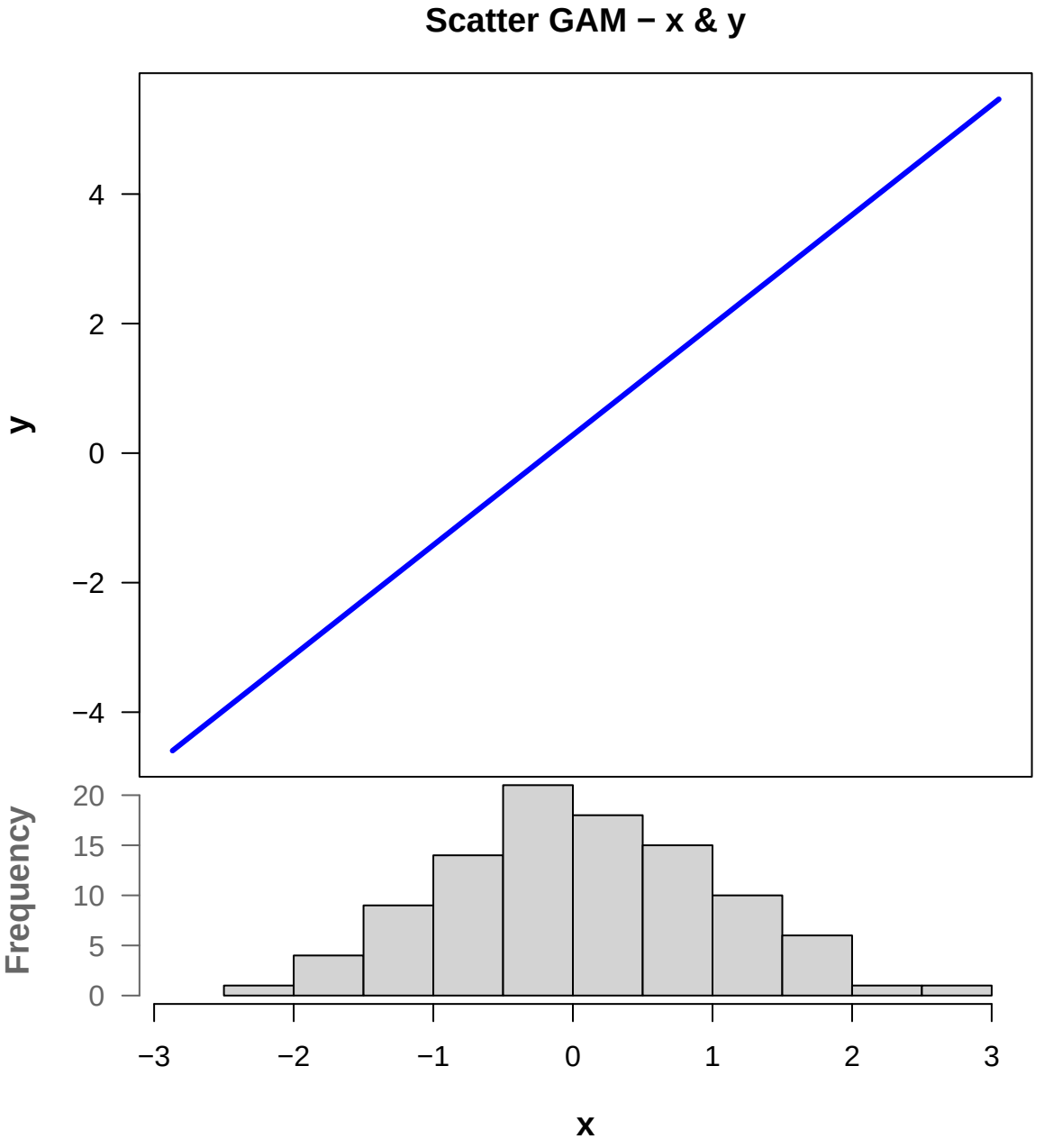
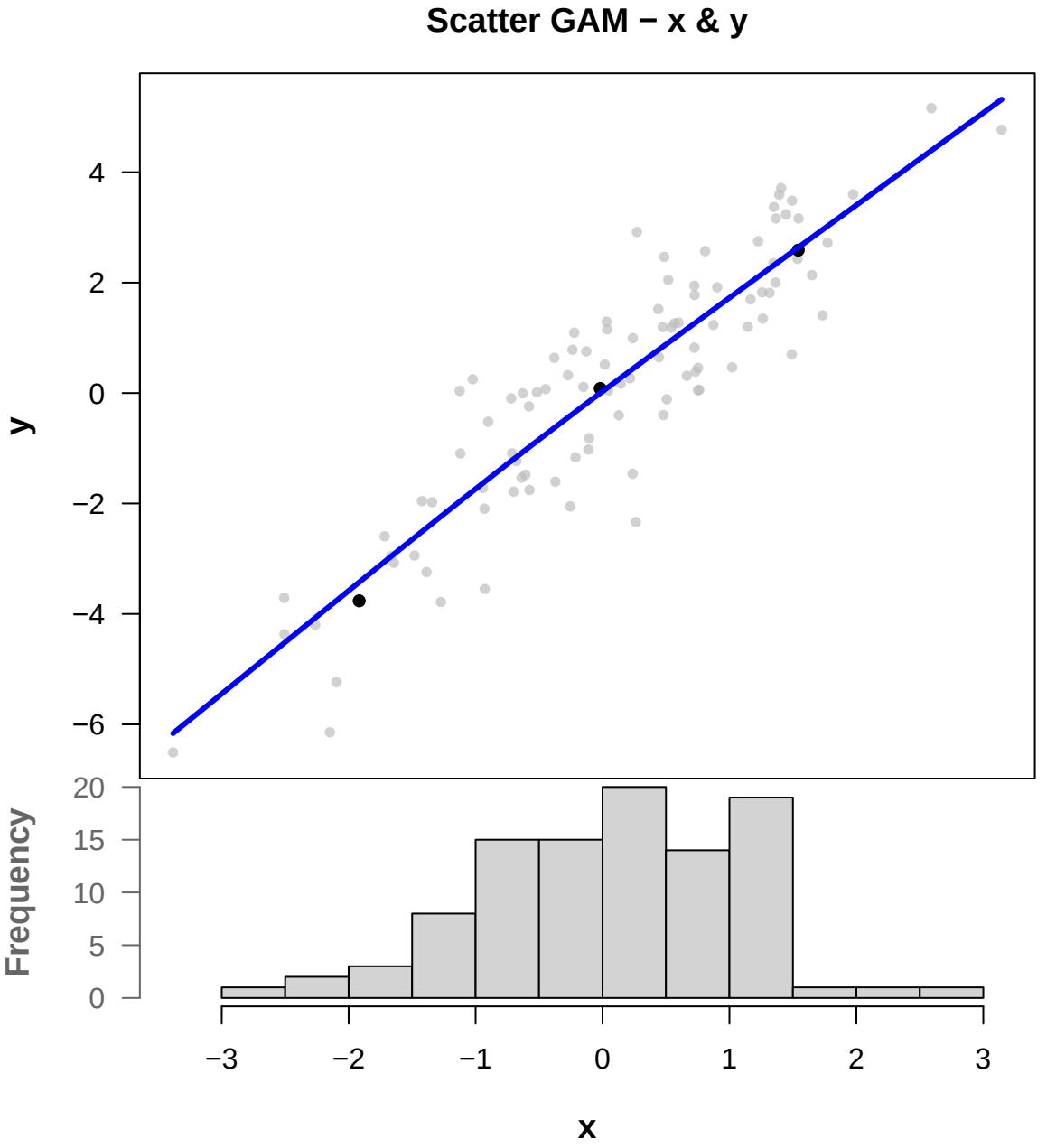

Scatter GAM − x & y
y
6
4
2
0
−2
−4
−6
Frequency
15
10
5
0
−3
−2
−1
0
1
2
3
x

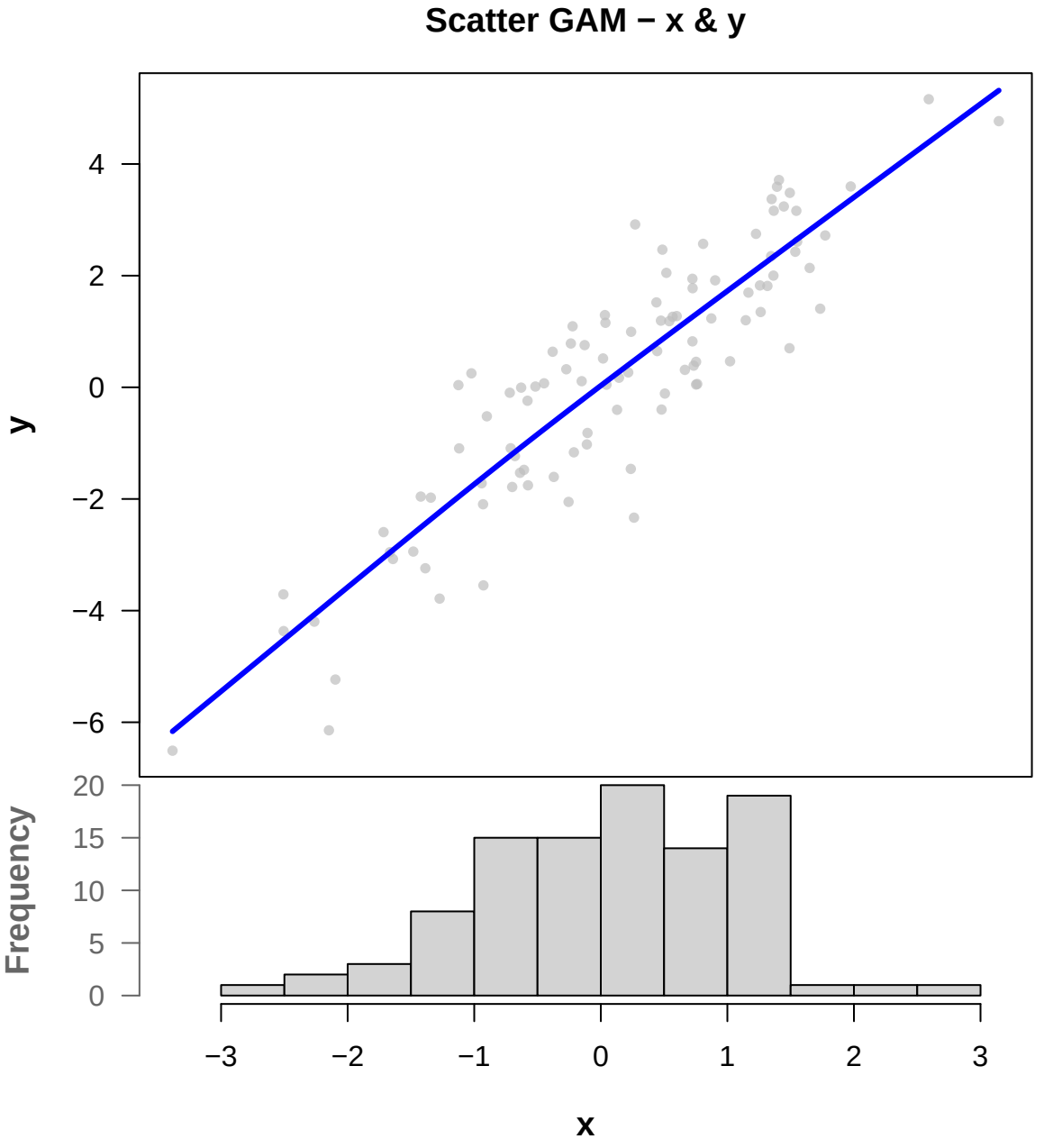

Scatter GAM − x & y
y
6
4
2
0
−2
−4
−6
Frequency
15
10
5
0
−3
−2
−1
0
1
2
3
x

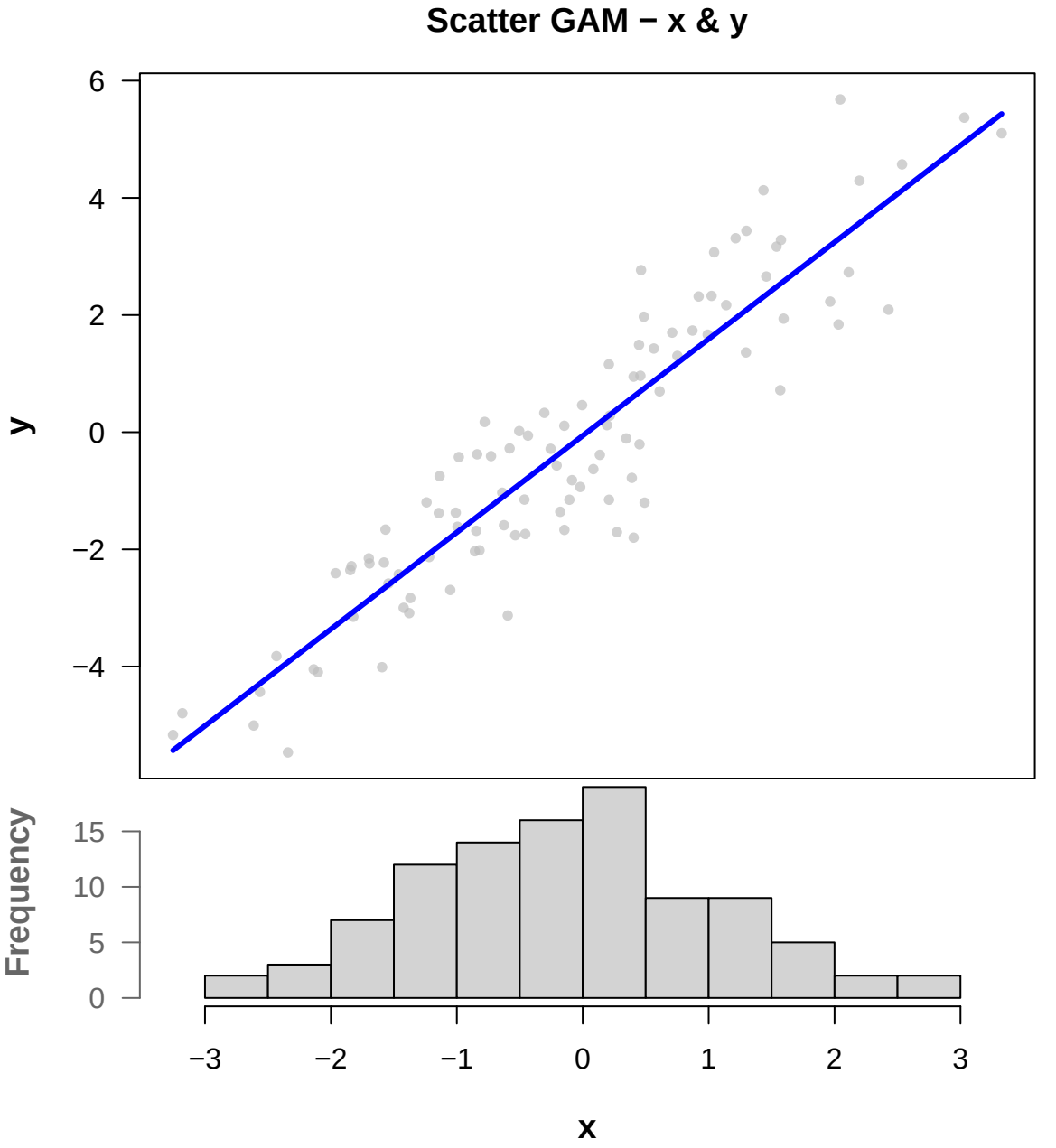

Scatter GAM − x & y
y
4
2
0
−2
−4
Frequency
30
25
20
15
10
5
0
−2
−1
0
1
2
x

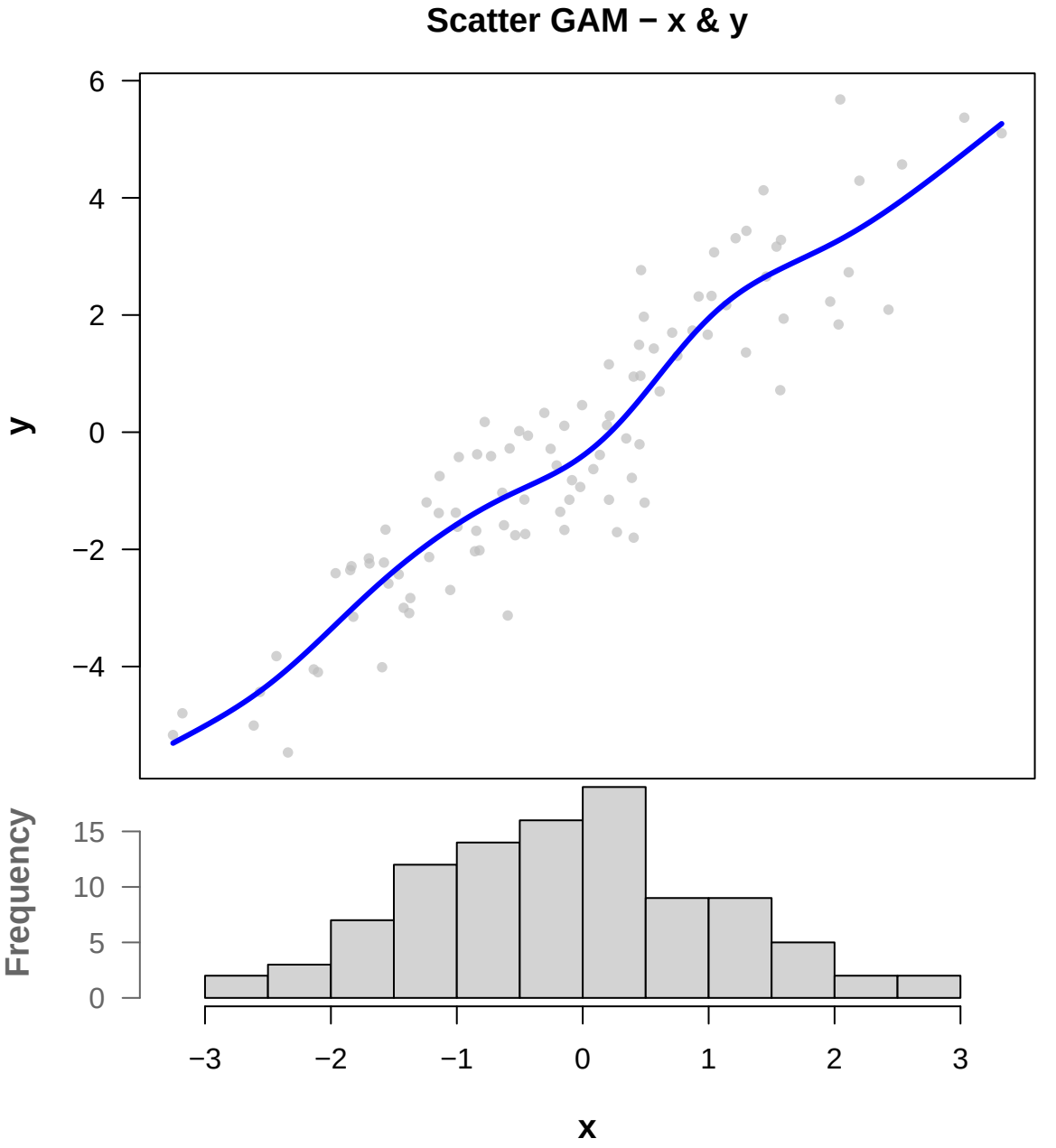

Scatter GAM − x & y
y
4
2
0
−2
−4
Frequency
20
15
10
5
0
−3
−2
−1
0
1
2
3
x

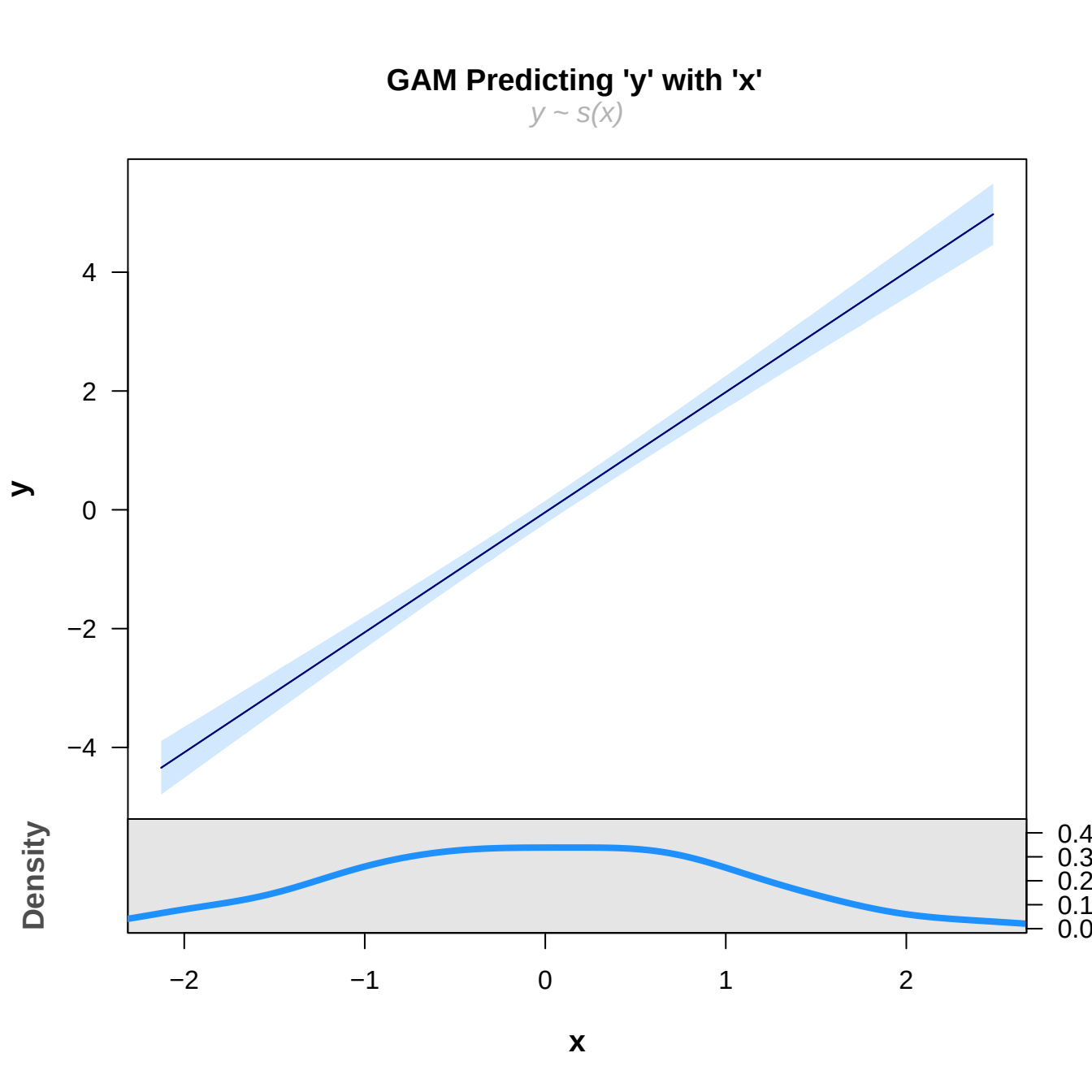

Scatter GAM − x & y
y
4
2
0
−2
−4
Frequency
20
15
10
5
0
−3
−2
−1
0
1
2
3
x

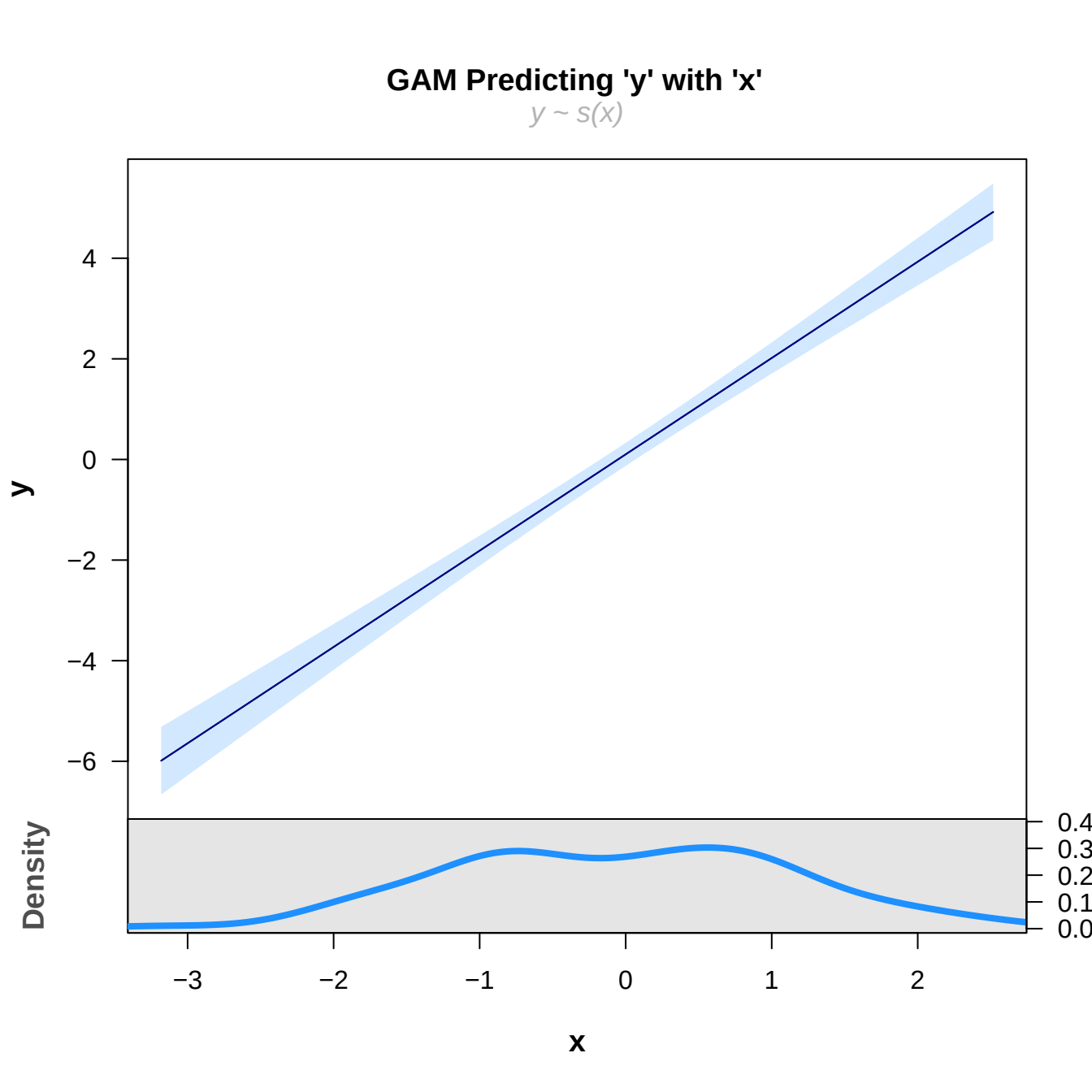

Scatter GAM − x & y
y
4
2
0
−2
−4
−6
Frequency
20
15
10
5
0
−3
−2
−1
0
1
2
3
x

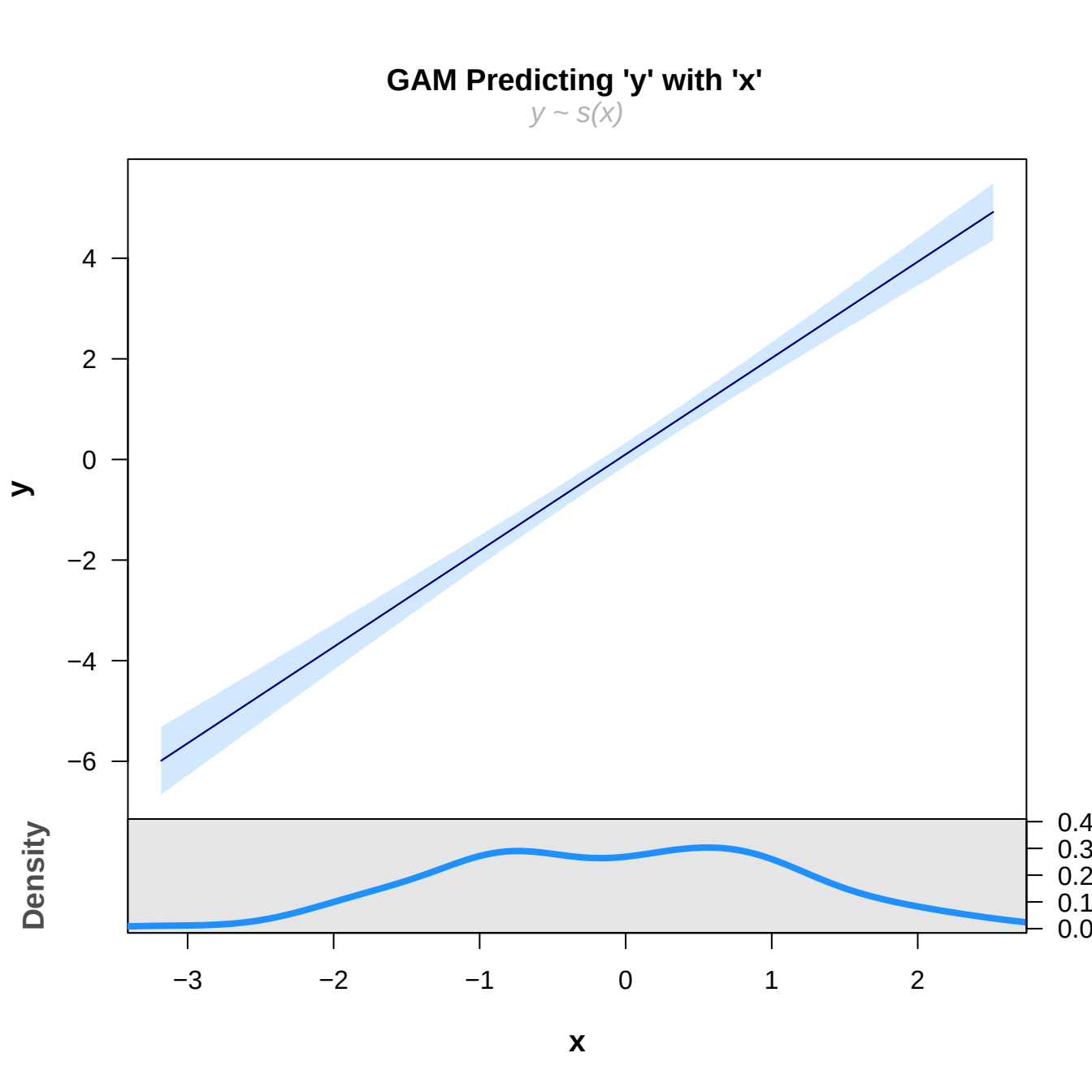

Scatter GAM − x & y
y
4
2
0
−2
−4
−6
Frequency
20
15
10
5
0
−3
−2
−1
0
1
2
3
x

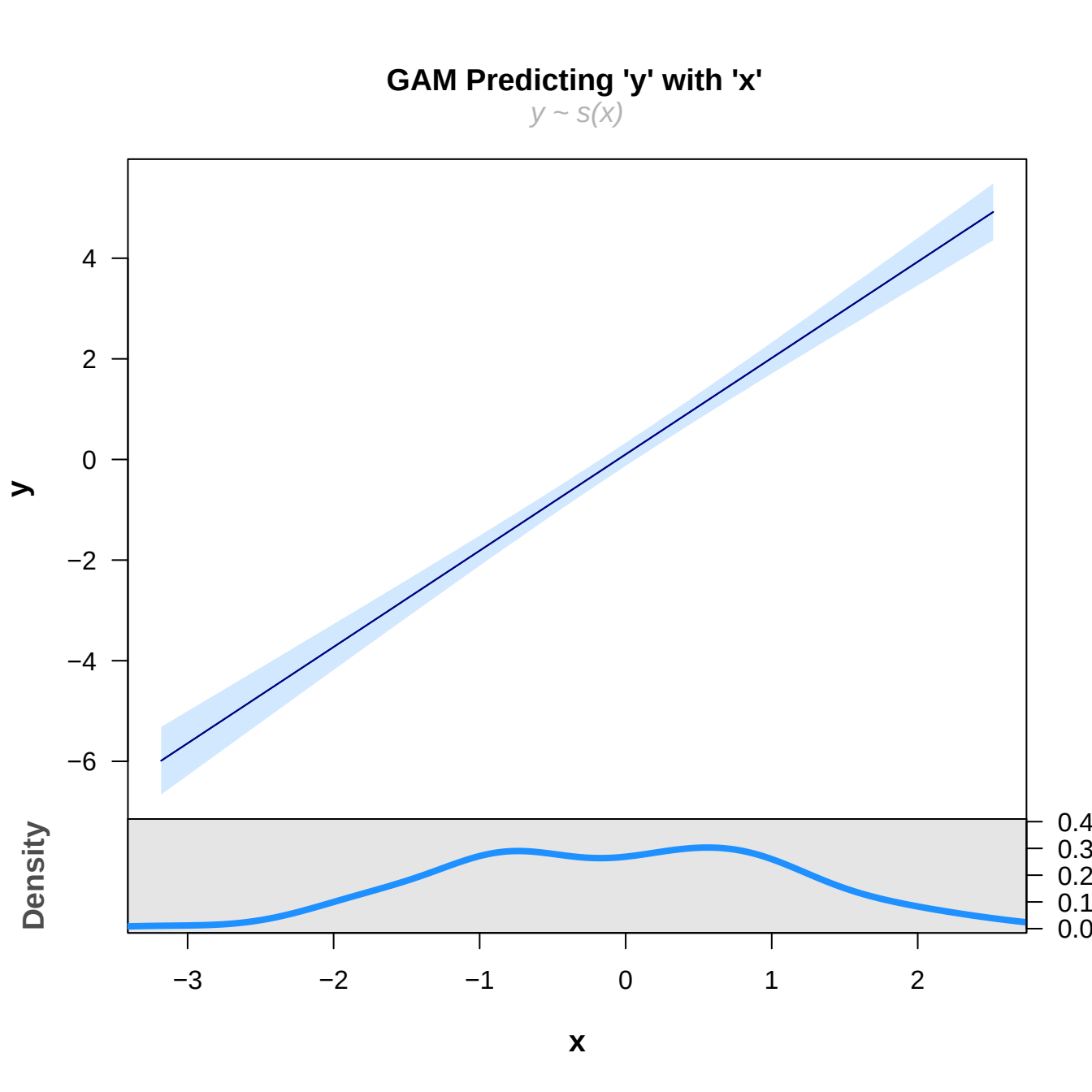

Scatter GAM − x & y
y
6
4
2
0
−2
−4
Frequency
15
10
5
0
−3
−2
−1
0
1
2
3
x

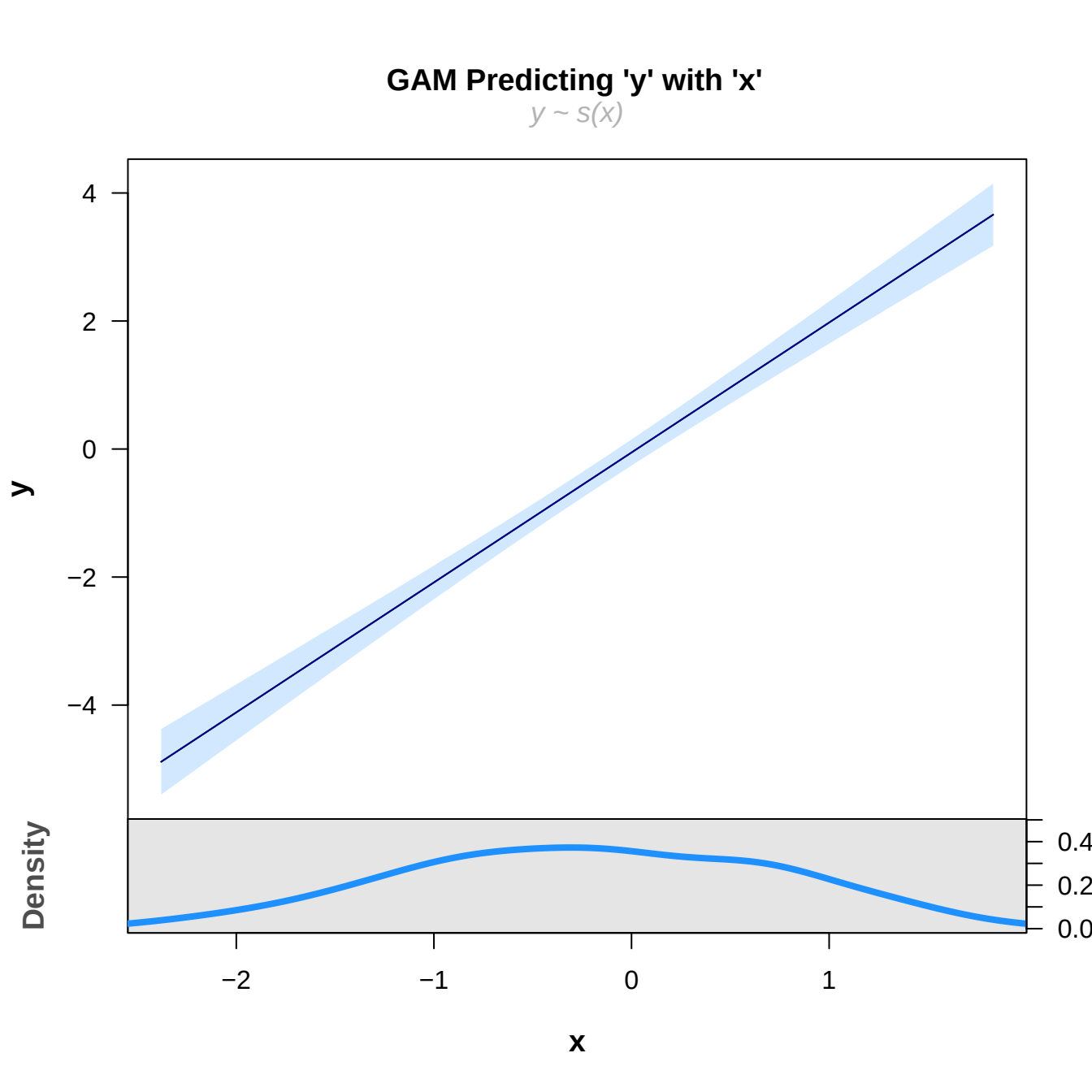

Scatter GAM − x & y
y
6
4
2
0
−2
−4
Frequency
15
10
5
0
−3
−2
−1
0
1
2
3
x

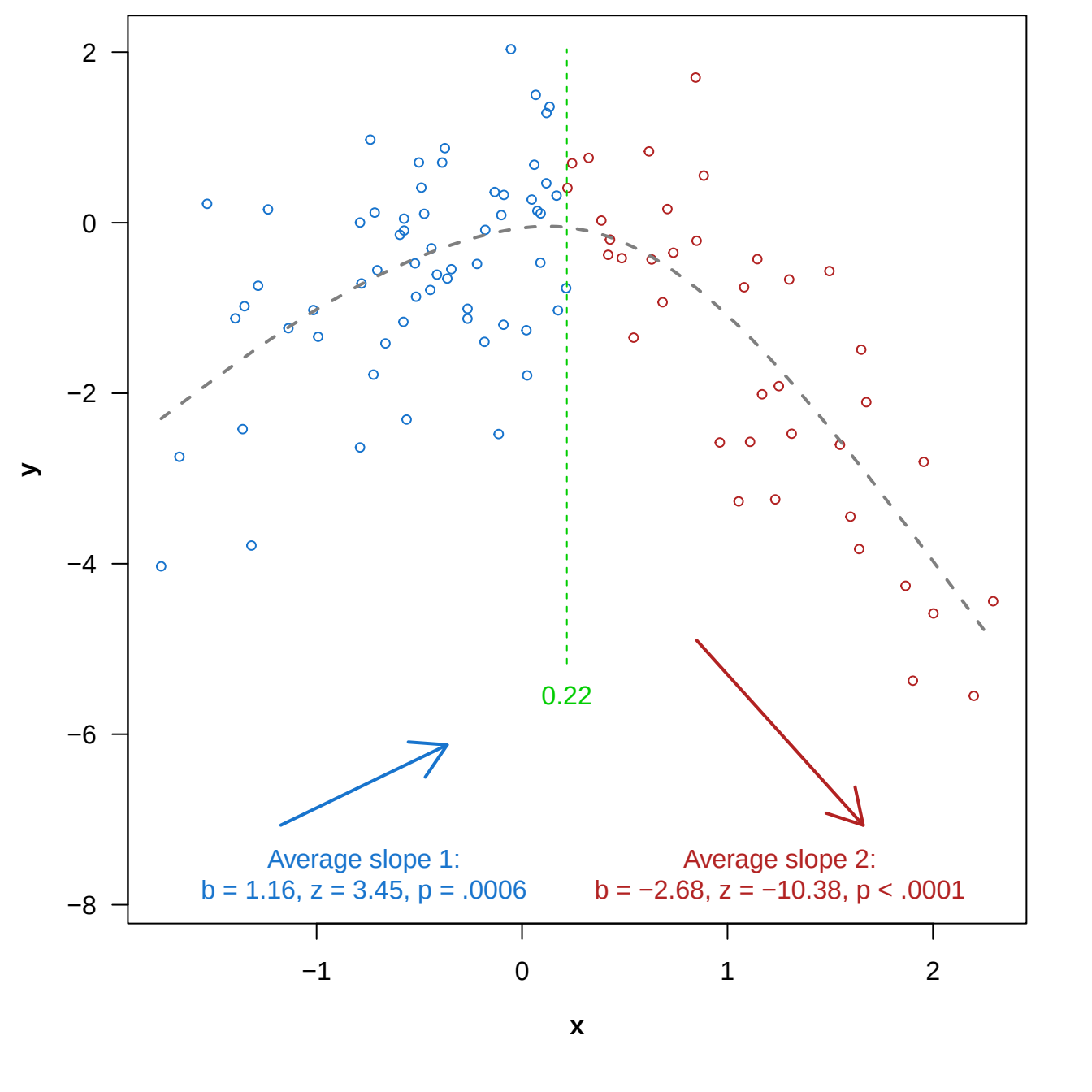

GAM Predicting 'y' with 'x'
y ~ s(x)
y
4
2
0
−2
−4
Density
0.4
0.3
0.2
0.1
0.0
−2
−1
0
1
2
x

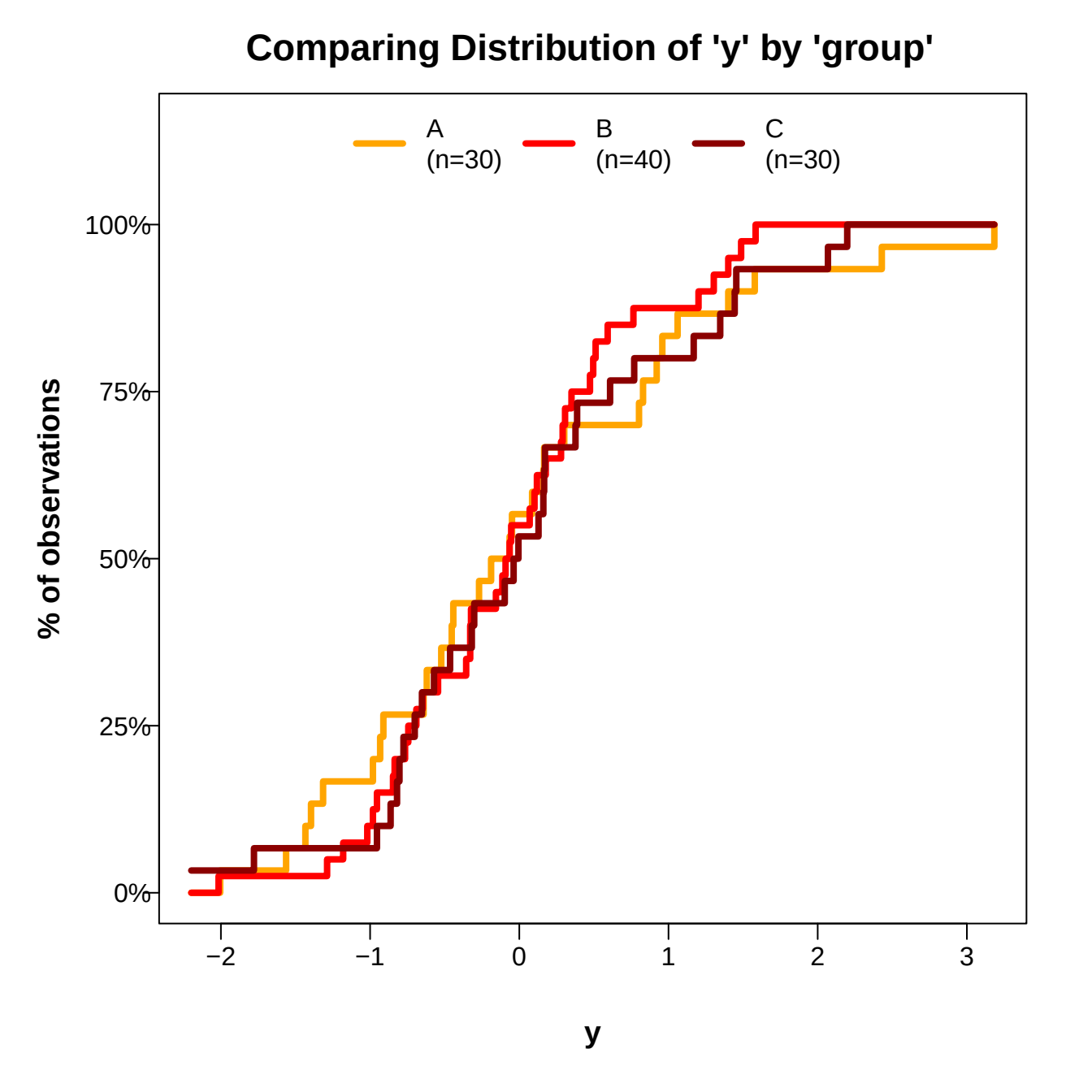

GAM Predicting 'y' with 'x'
y ~ s(x)
y
4
2
0
−2
−4
−6
Density
0.4
0.3
0.2
0.1
0.0
−3
−2
−1
0
1
2
x

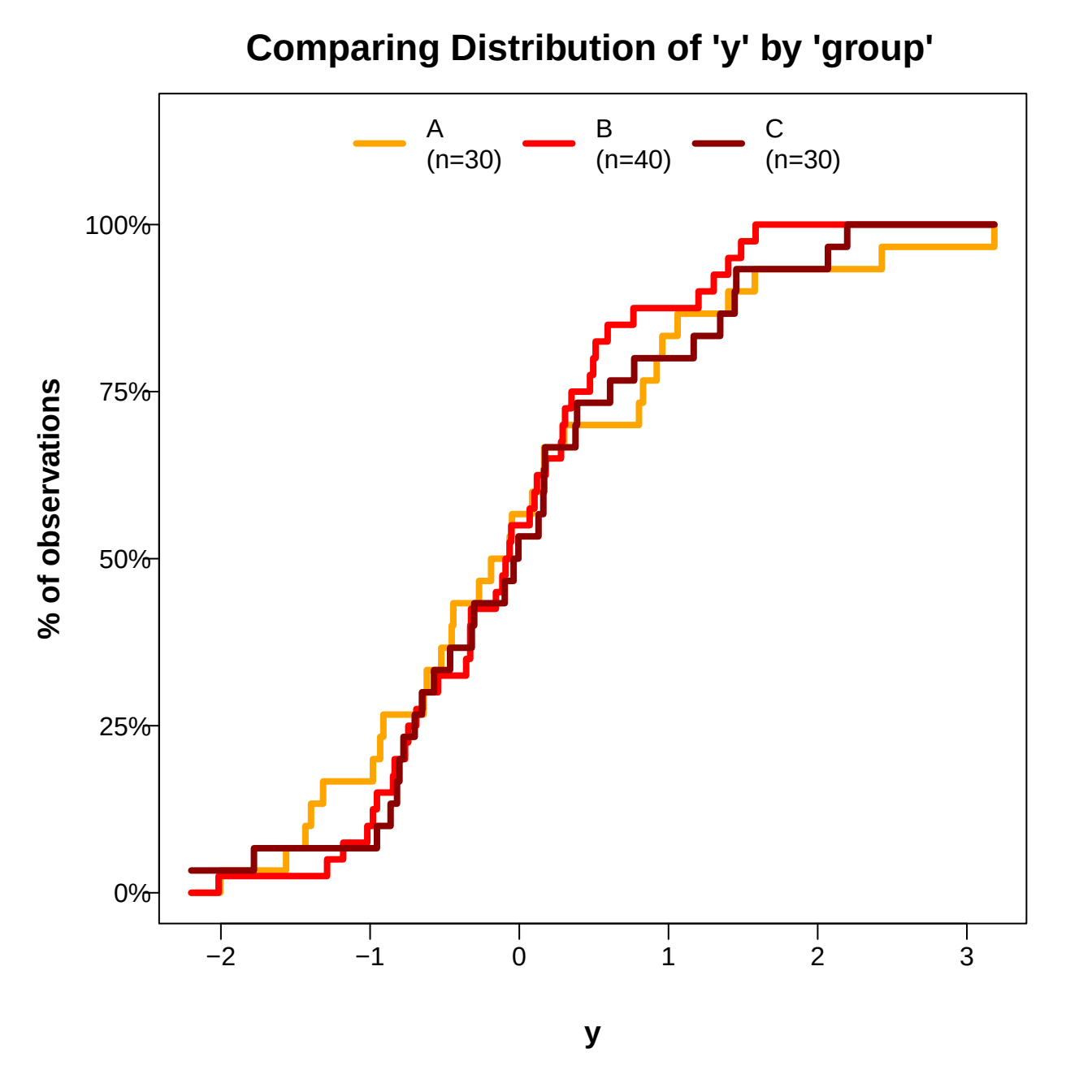

GAM Predicting 'y' with 'x'
y ~ s(x)
y
4
2
0
−2
−4
−6
Density
0.4
0.3
0.2
0.1
0.0
−3
−2
−1
0
1
2
x

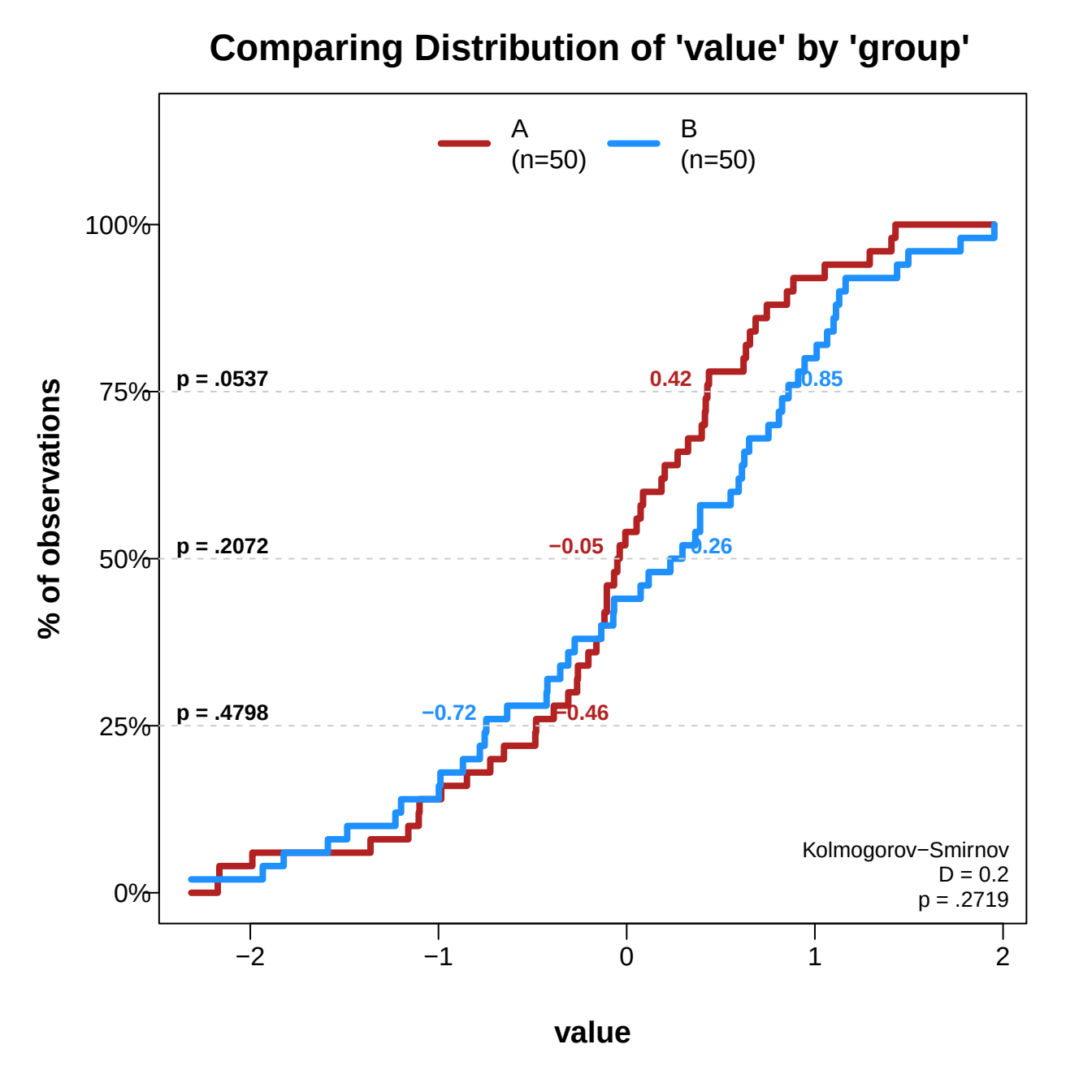

GAM Predicting 'y' with 'x'
y ~ s(x)
y
4
2
0
−2
−4
−6
Density
0.4
0.3
0.2
0.1
0.0
−3
−2
−1
0
1
2
x

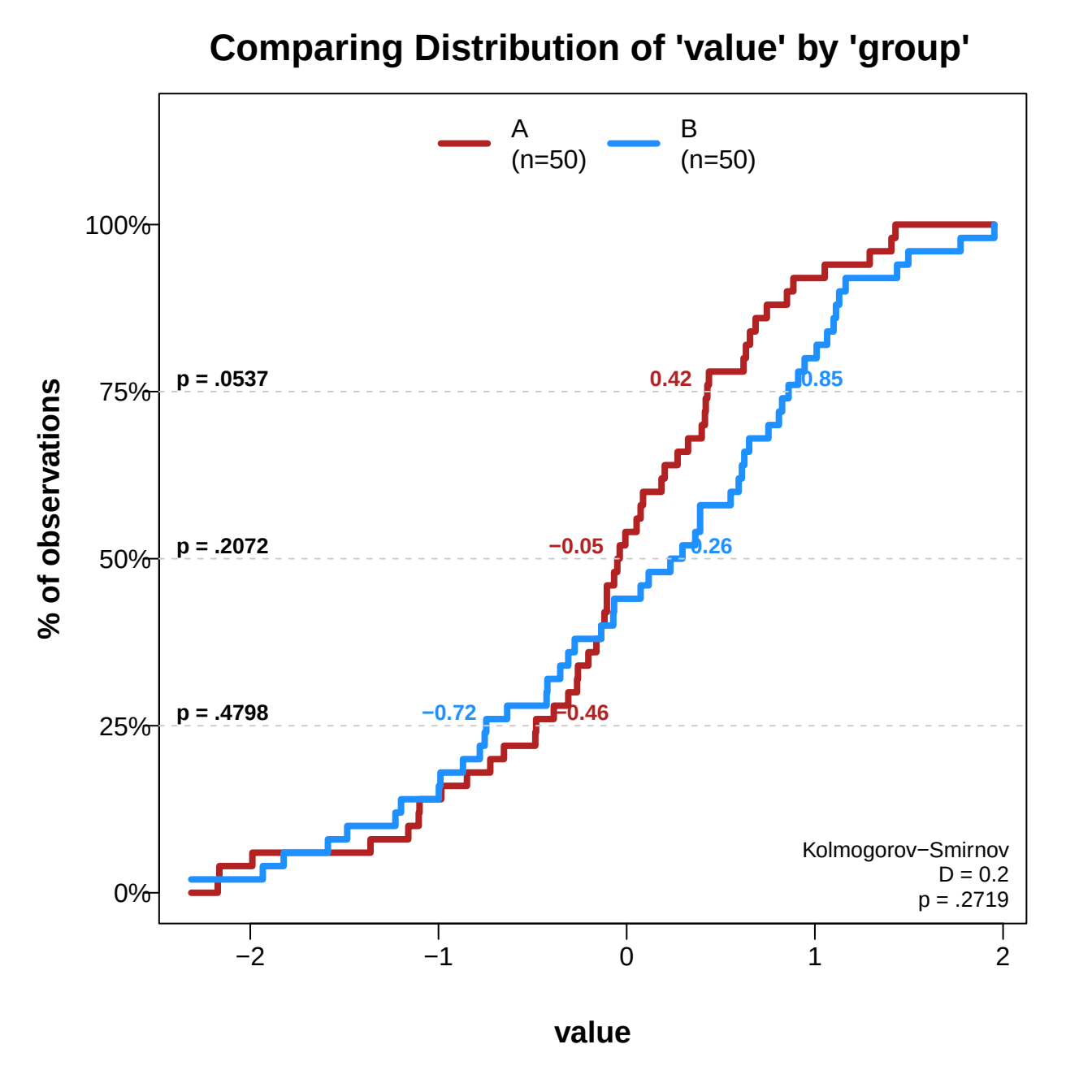

GAM Predicting 'y' with 'x'
y ~ s(x)
y
4
2
0
−2
−4
Density
0.4
0.2
0.0
−2
−1
0
1
x

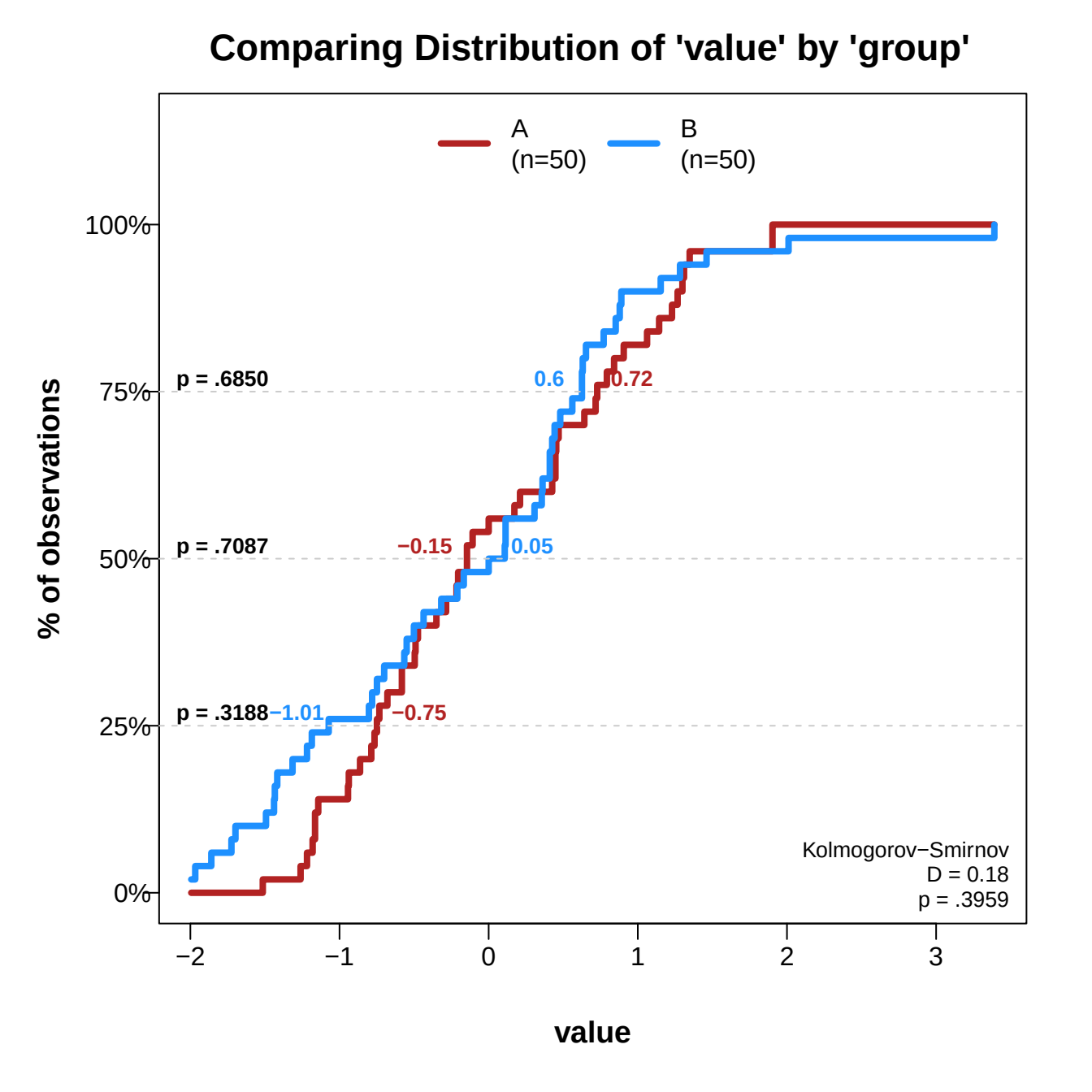

2
0
−2
−4
−6
−8
y
−1
0
1
2
x
0.22
Average slope 1:
b = 1.16, z = 3.45, p = .0006
Average slope 2:
b = −2.68, z = −10.38, p < .0001

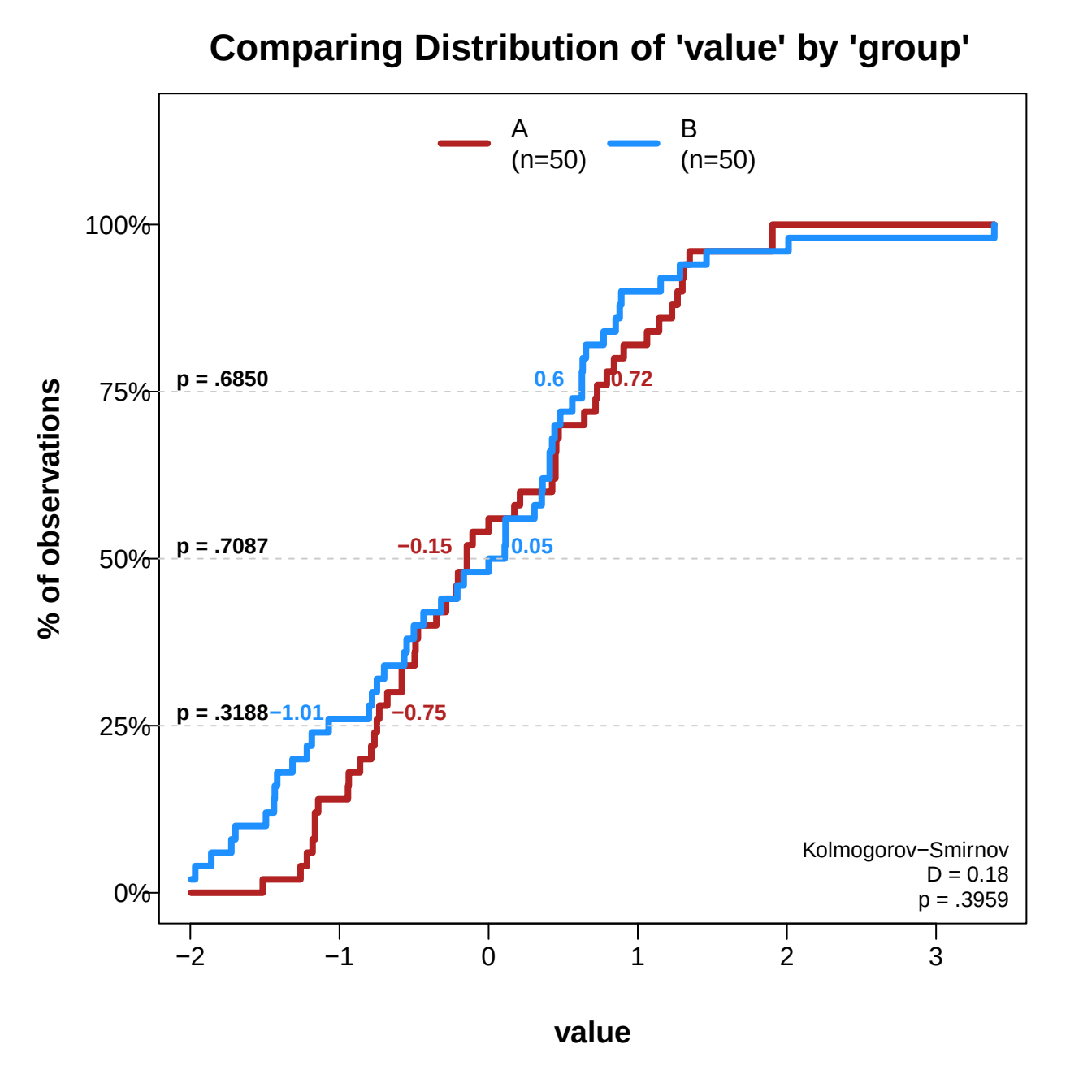

Comparing Distribution of 'y' by 'group'
A
(n=30)
B
(n=40)
C
(n=30)
100%
75%
50%
25%
0%
% of observations
−2
−1
0
1
2
3
y

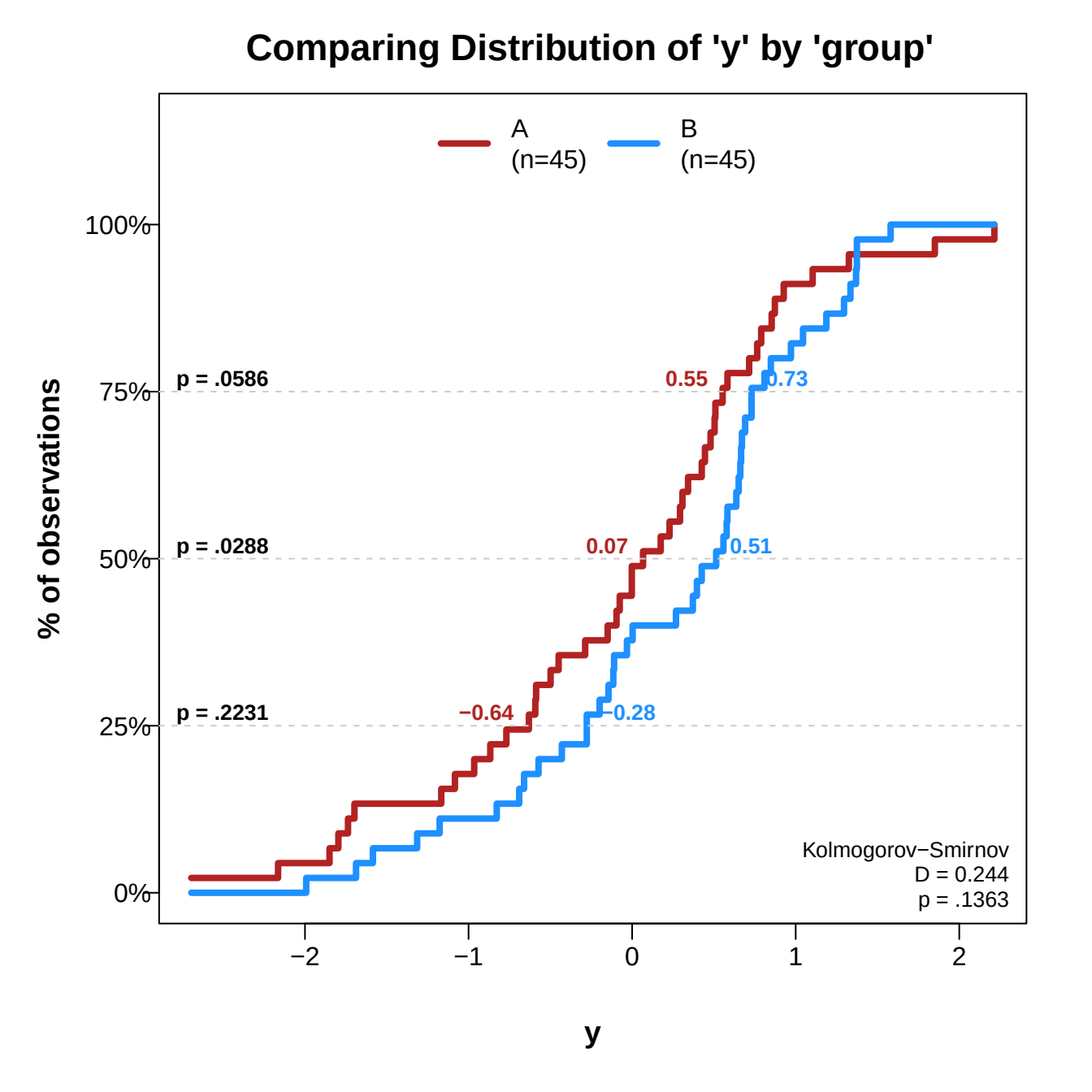

Comparing Distribution of 'y' by 'group'
A
(n=30)
B
(n=40)
C
(n=30)
100%
75%
50%
25%
0%
% of observations
−2
−1
0
1
2
3
y

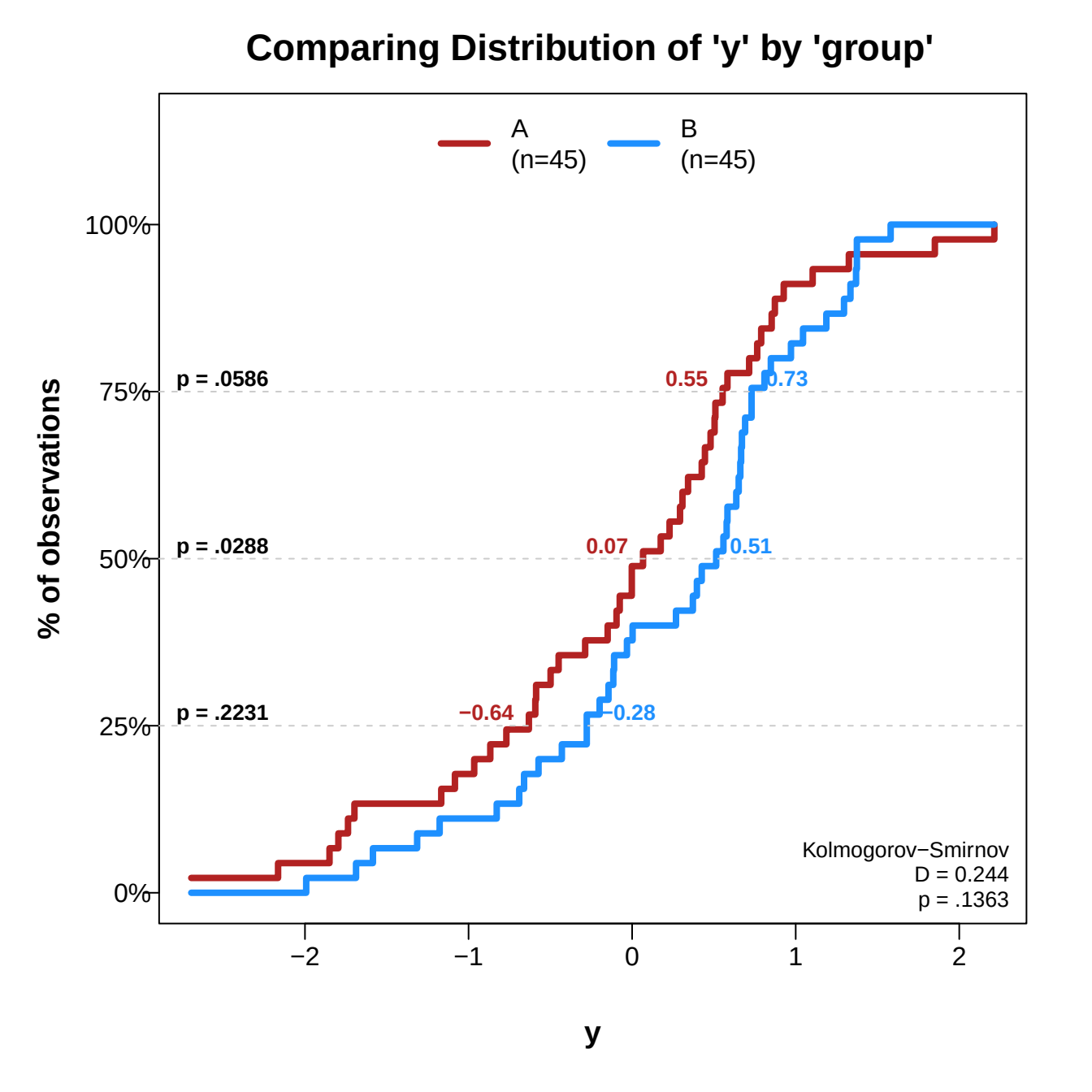

Comparing Distribution of 'value' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .0537
p = .2072
p = .4798
0.42
0.85
−0.05
0.26
−0.72
−0.46
Kolmogorov−Smirnov
D = 0.2
p = .2719
−2
−1
0
1
2
value

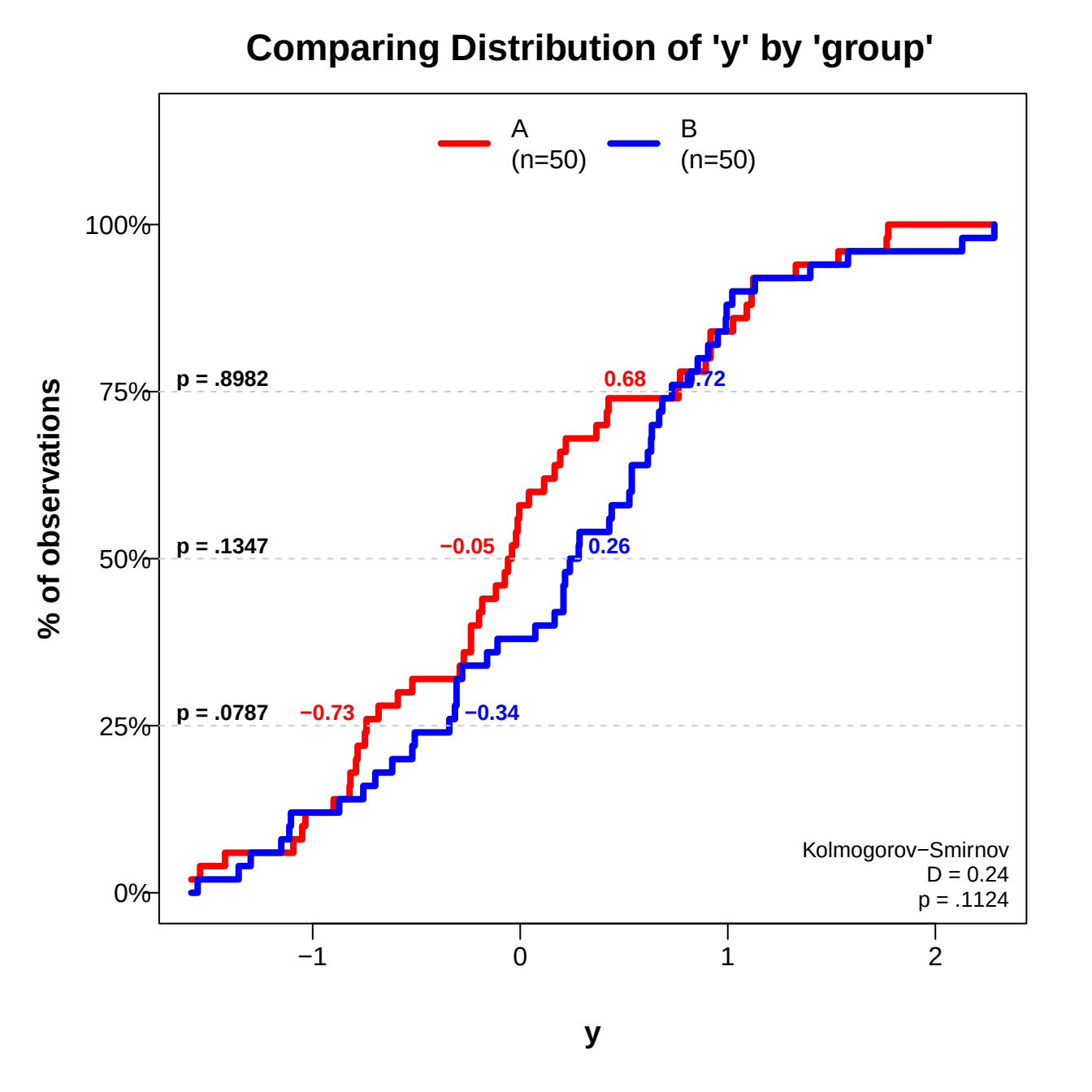

Comparing Distribution of 'value' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .0537
p = .2072
p = .4798
0.42
0.85
−0.05
0.26
−0.72
−0.46
Kolmogorov−Smirnov
D = 0.2
p = .2719
−2
−1
0
1
2
value

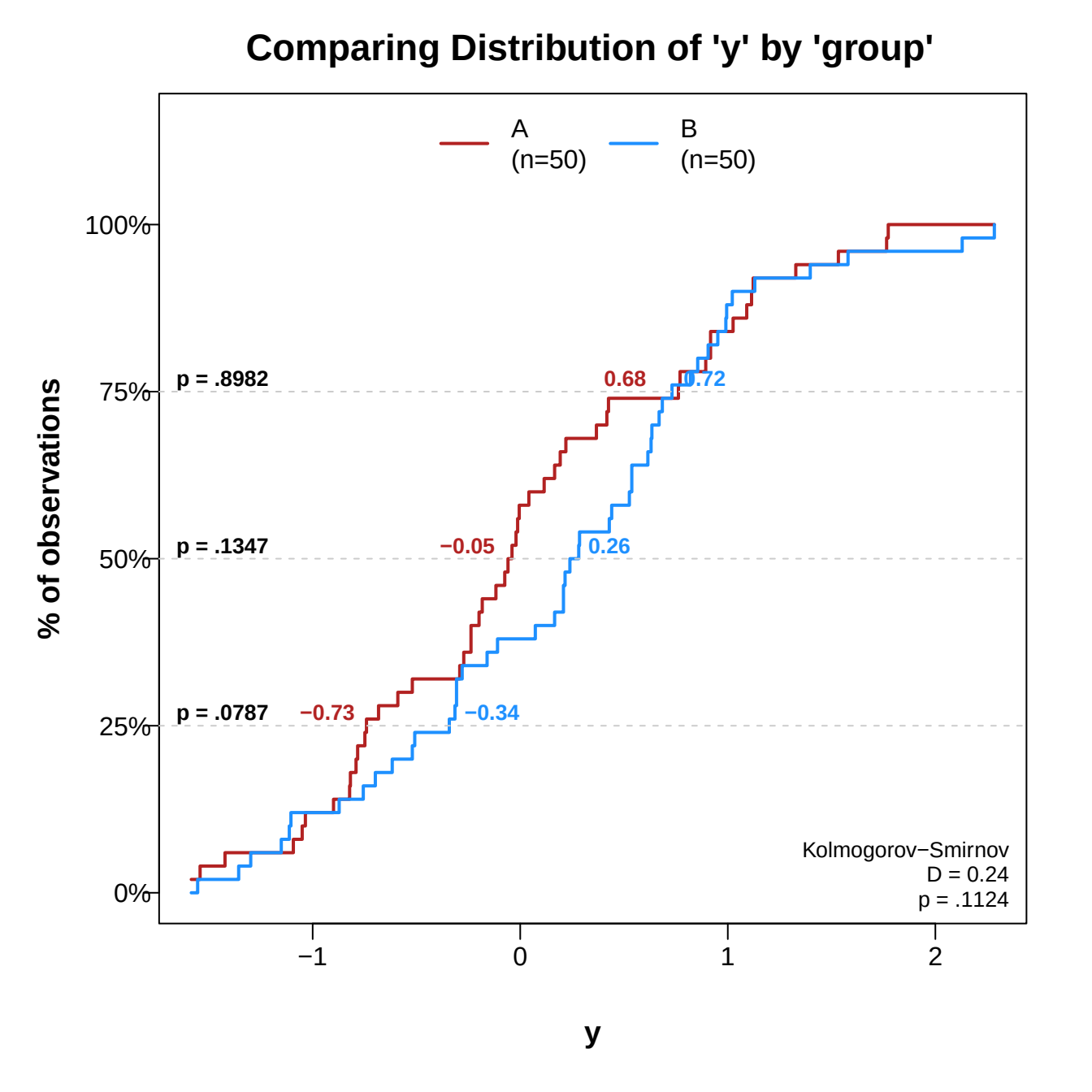

Comparing Distribution of 'value' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .6850
p = .7087
p = .3188
0.6
0.72
−0.15
0.05
−1.01
−0.75
Kolmogorov−Smirnov
D = 0.18
p = .3959
−2
−1
0
1
2
3
value

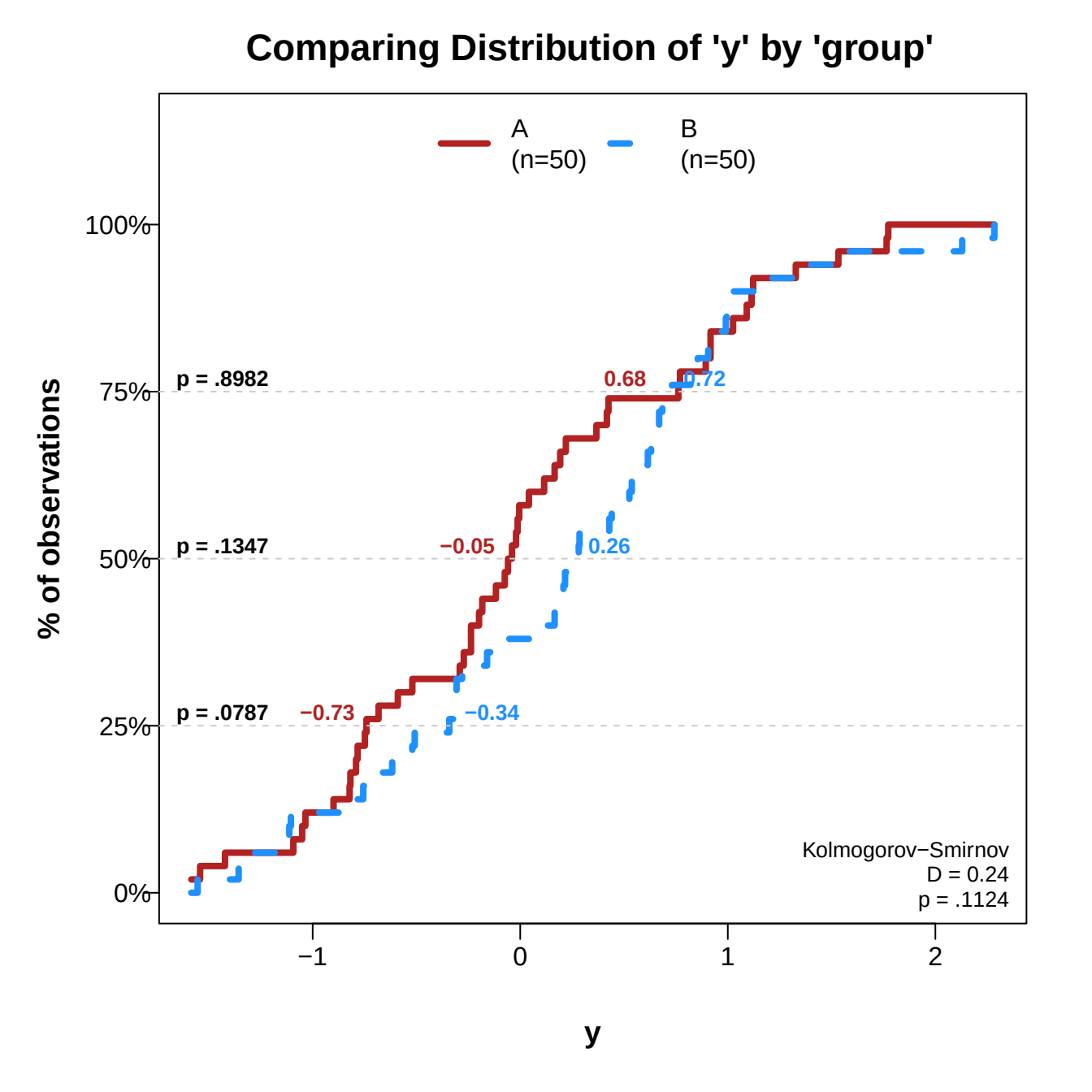

Comparing Distribution of 'value' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .6850
p = .7087
p = .3188
0.6
0.72
−0.15
0.05
−1.01
−0.75
Kolmogorov−Smirnov
D = 0.18
p = .3959
−2
−1
0
1
2
3
value

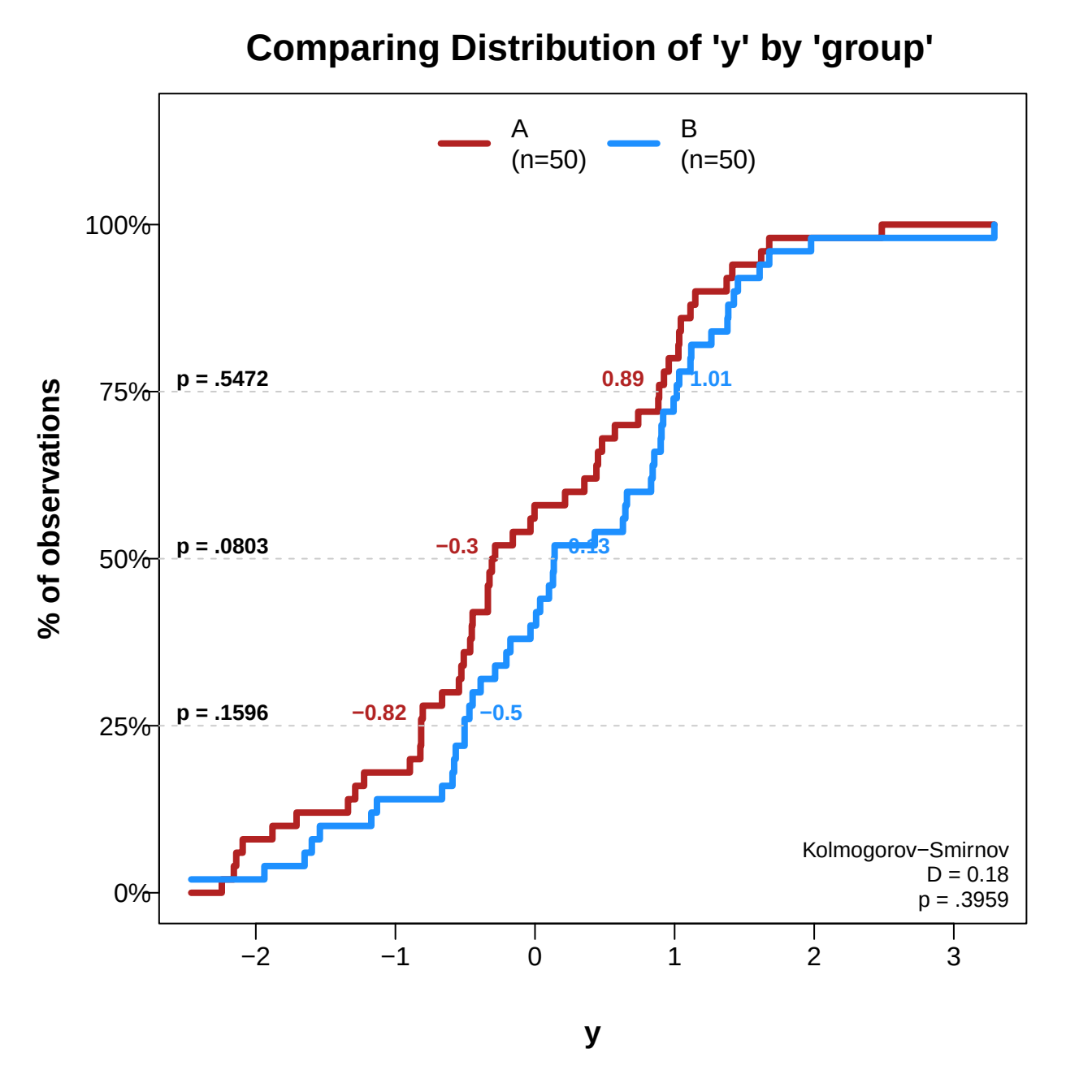

Comparing Distribution of 'y' by 'group'
A
(n=45)
B
(n=45)
100%
75%
50%
25%
0%
% of observations
p = .0586
p = .0288
p = .2231
0.55
0.73
0.07
0.51
−0.64
−0.28
Kolmogorov−Smirnov
D = 0.244
p = .1363
−2
−1
0
1
2
y

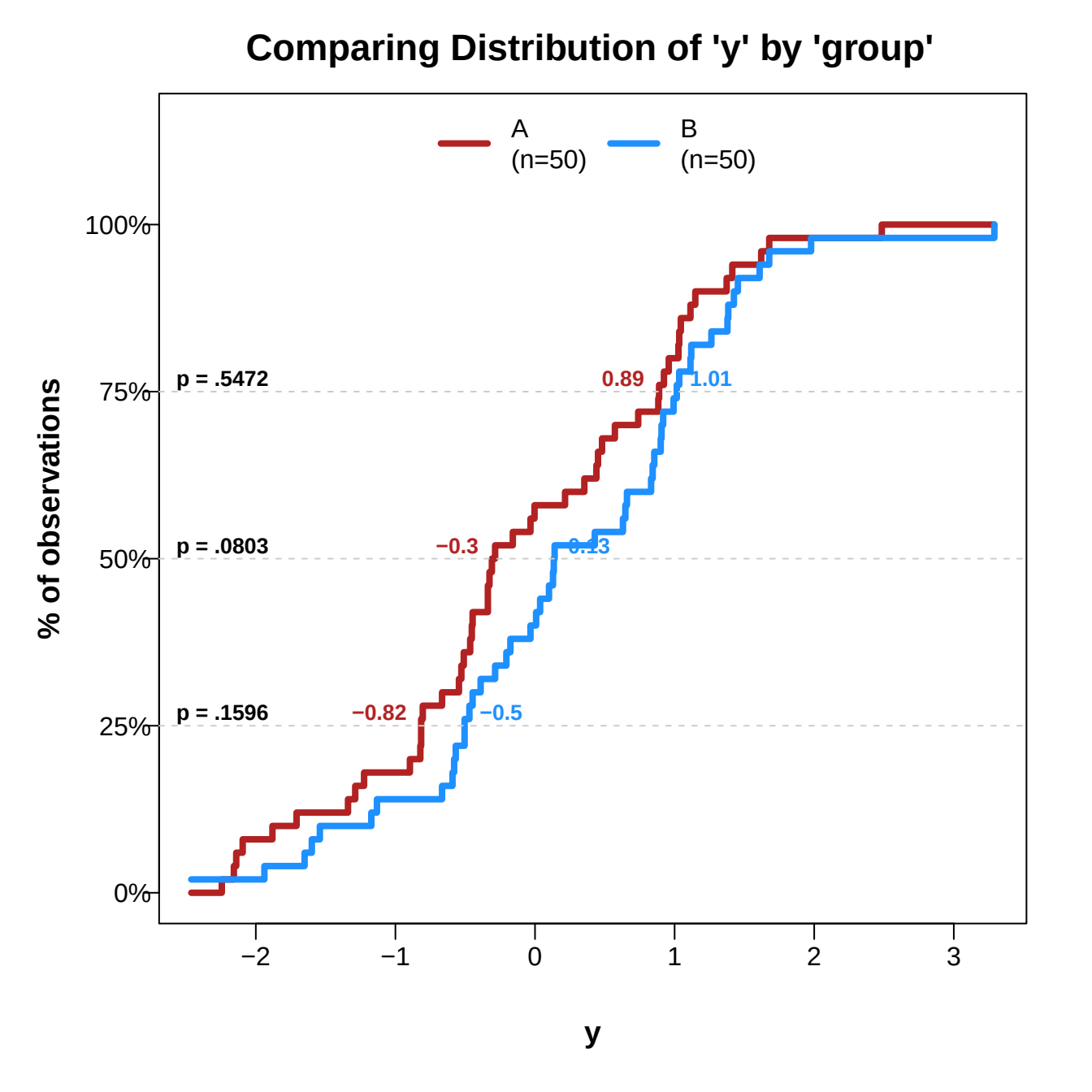

Comparing Distribution of 'y' by 'group'
A
(n=45)
B
(n=45)
100%
75%
50%
25%
0%
% of observations
p = .0586
p = .0288
p = .2231
0.55
0.73
0.07
0.51
−0.64
−0.28
Kolmogorov−Smirnov
D = 0.244
p = .1363
−2
−1
0
1
2
y

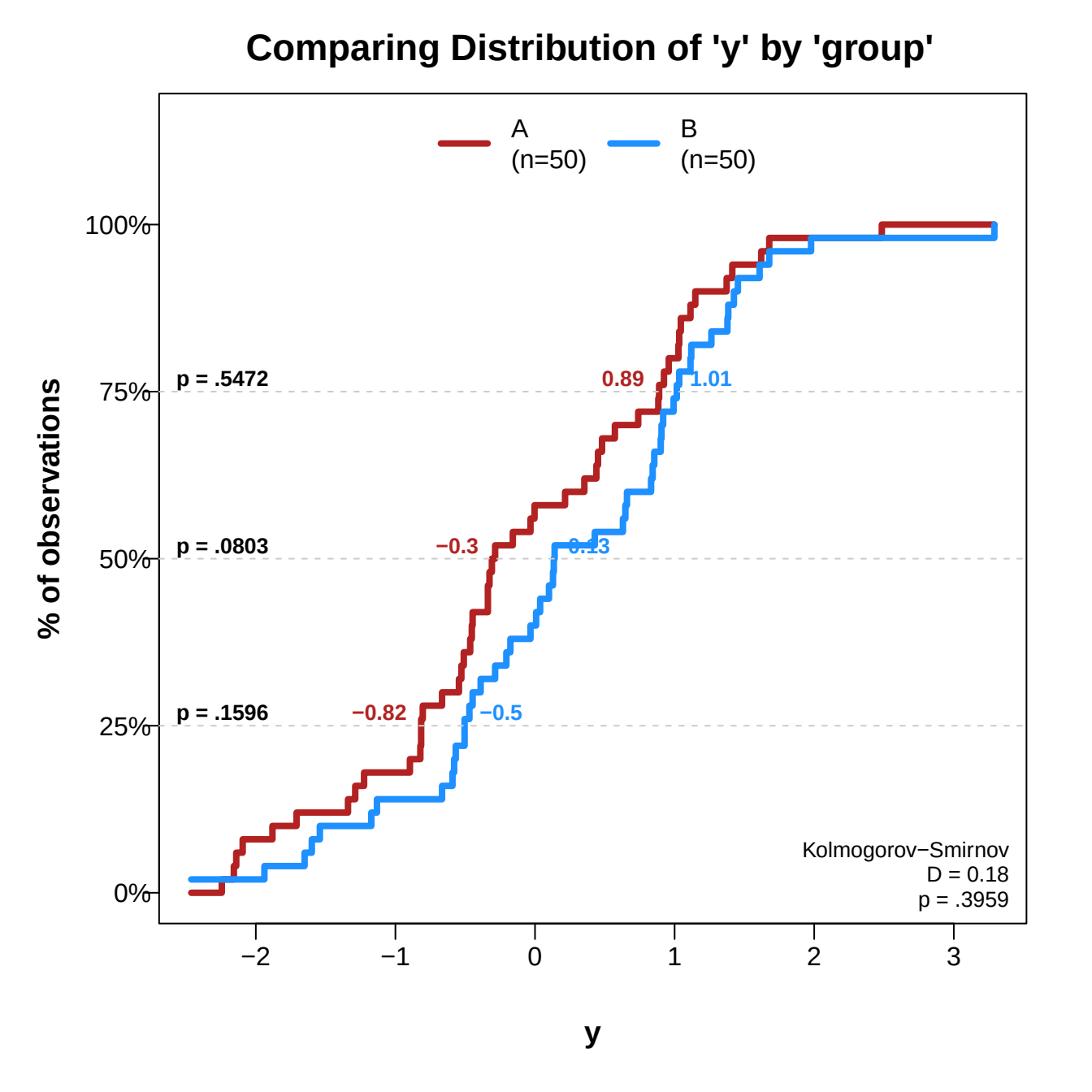

Comparing Distribution of 'y' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .8982
p = .1347
p = .0787
0.68
.72
−0.05
0.26
−0.73
−0.34
Kolmogorov−Smirnov
D = 0.24
p = .1124
−1
0
1
2
y

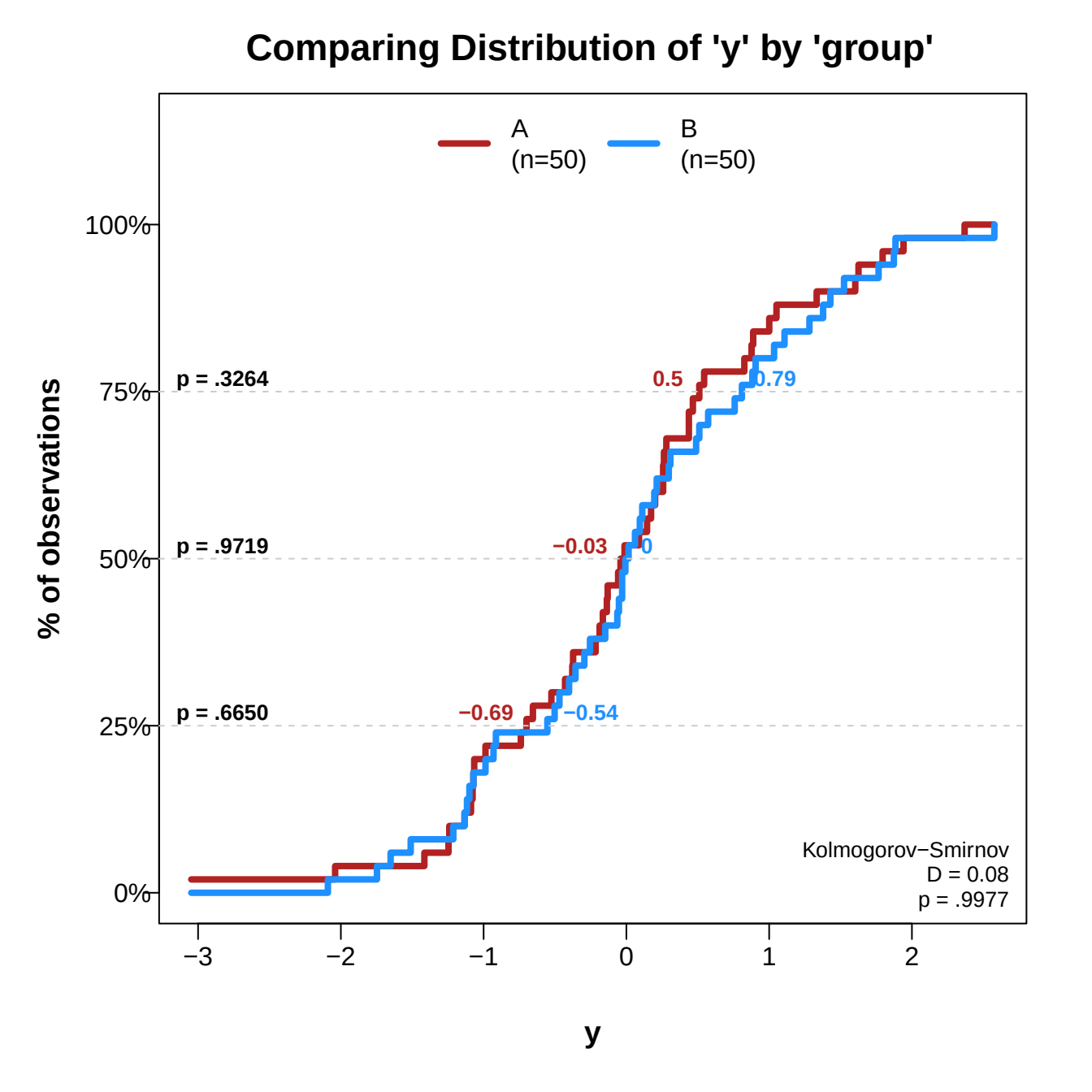

Comparing Distribution of 'y' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .8982
p = .1347
p = .0787
0.68
0.72
−0.05
0.26
−0.73
−0.34
Kolmogorov−Smirnov
D = 0.24
p = .1124
−1
0
1
2
y

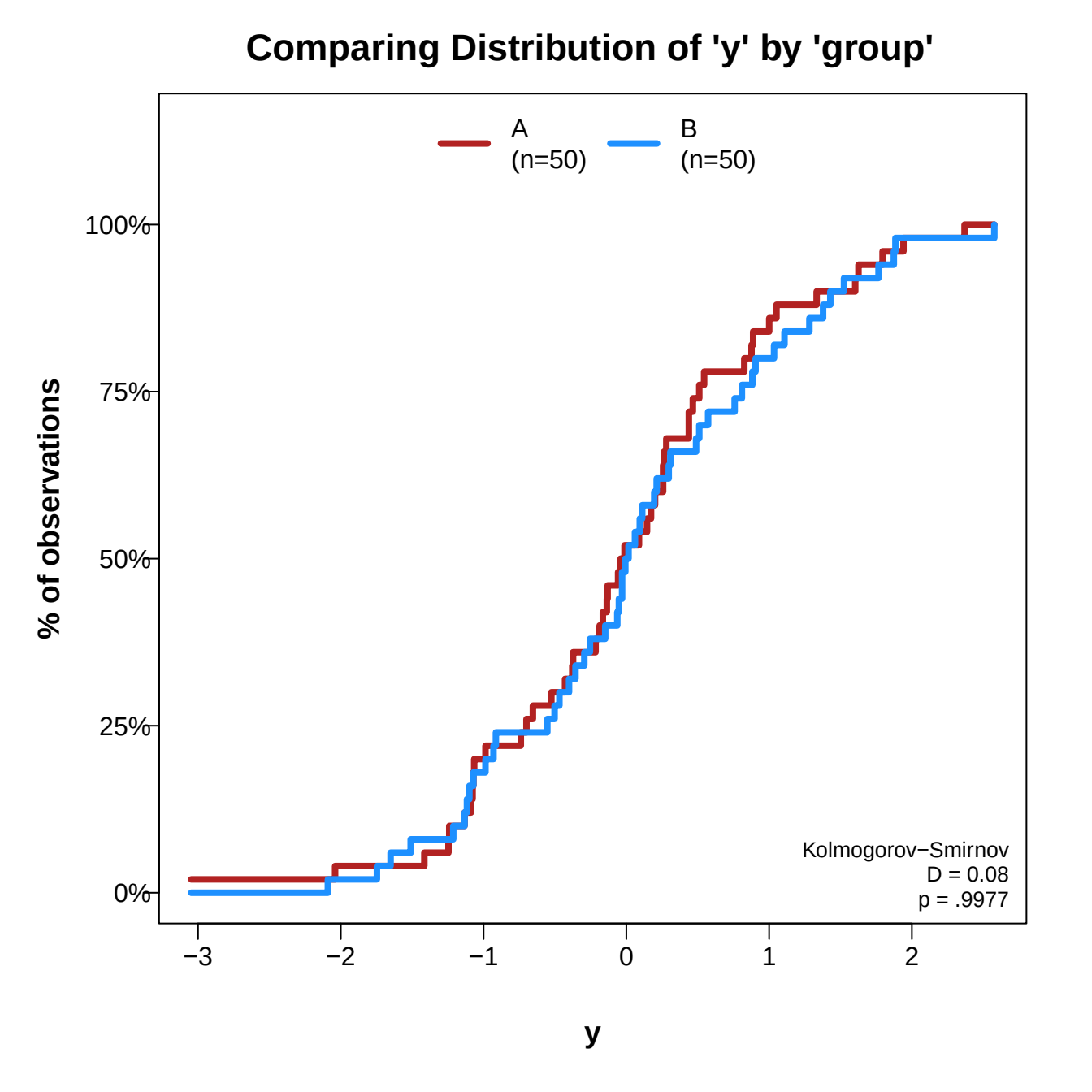

Comparing Distribution of 'y' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .8982
p = .1347
p = .0787
0.68
0.72
−0.05
0.26
−0.73
−0.34
Kolmogorov−Smirnov
D = 0.24
p = .1124
−1
0
1
2
y

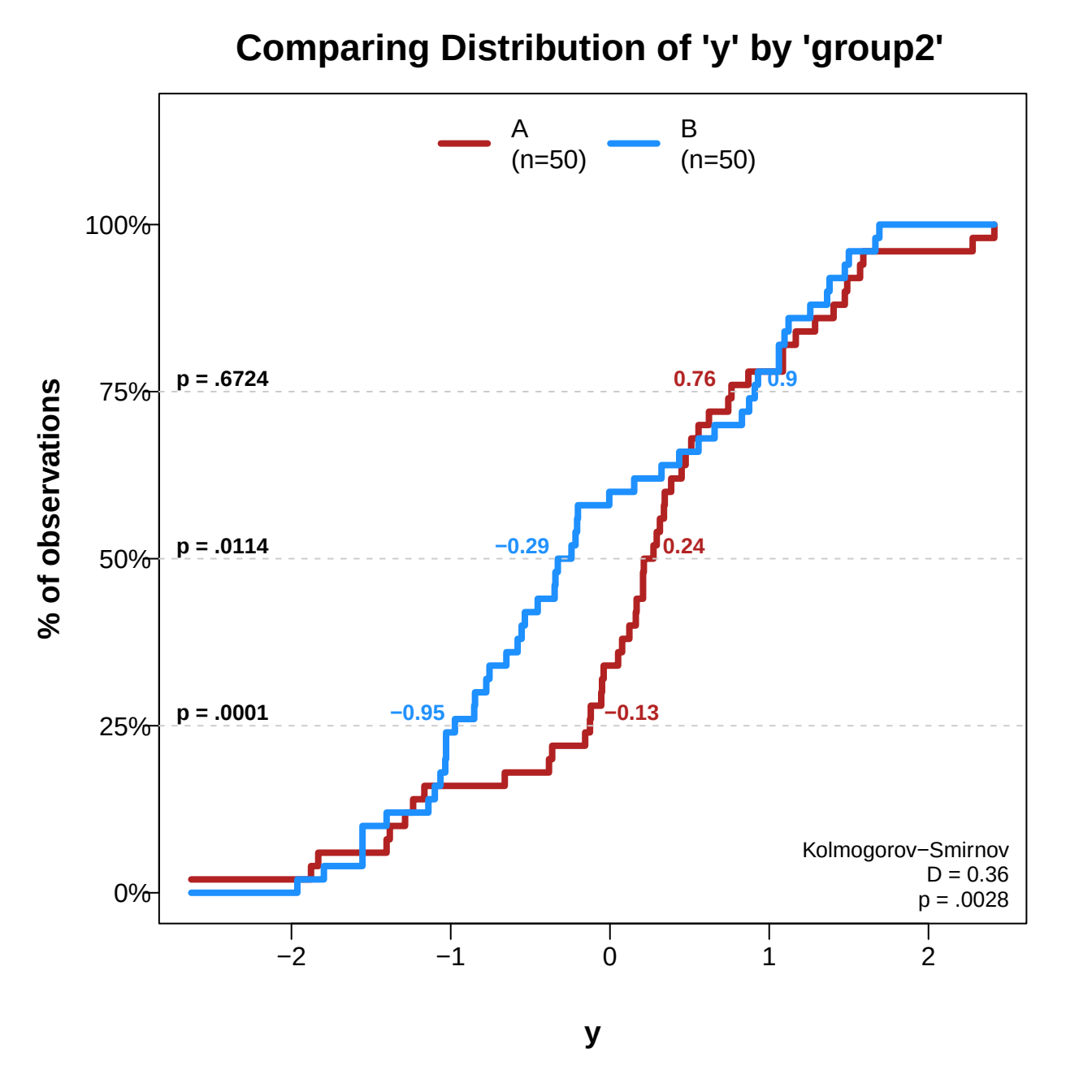

Comparing Distribution of 'y' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .5472
p = .0803
p = .1596
0.89
1.01
−0.3
0.13
−0.82
−0.5
Kolmogorov−Smirnov
D = 0.18
p = .3959
−2
−1
0
1
2
3
y

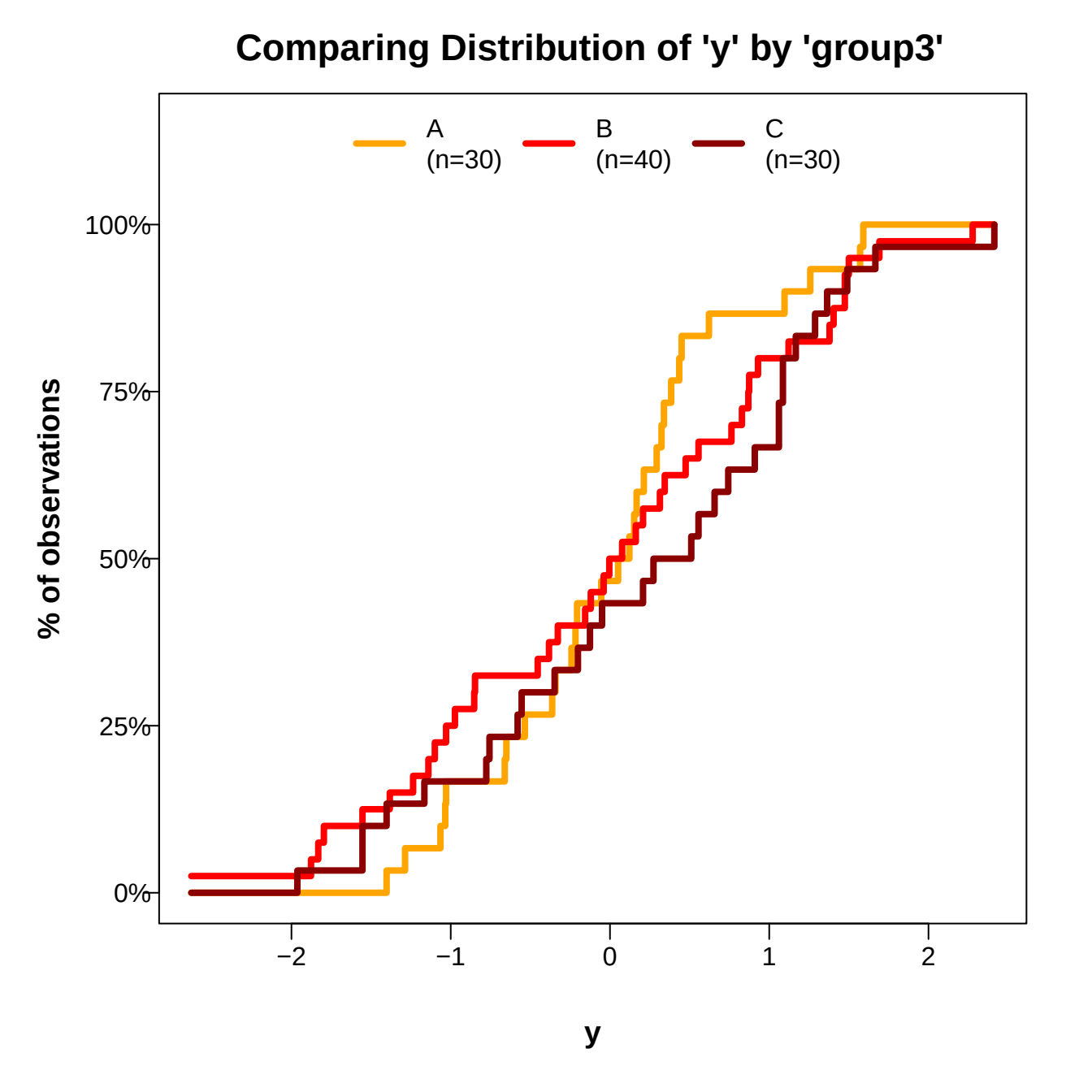

Comparing Distribution of 'y' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .5472
p = .0803
p = .1596
0.89
1.01
−0.3
0.13
−0.82
−0.5
−2
−1
0
1
2
3
y

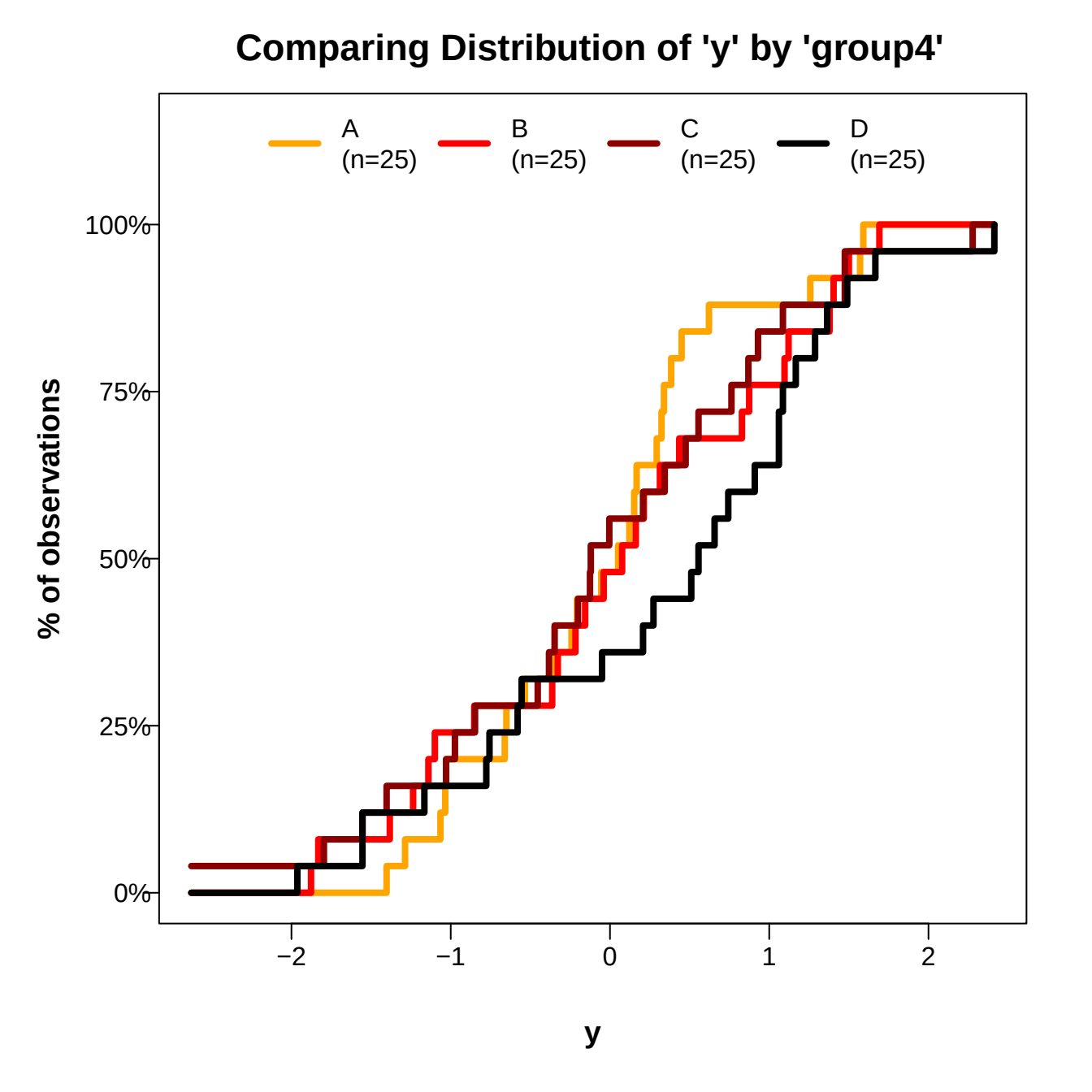

Comparing Distribution of 'y' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .5472
p = .0803
p = .1596
0.89
1.01
−0.3
0.13
−0.82
−0.5
Kolmogorov−Smirnov
D = 0.18
p = .3959
−2
−1
0
1
2
3
y

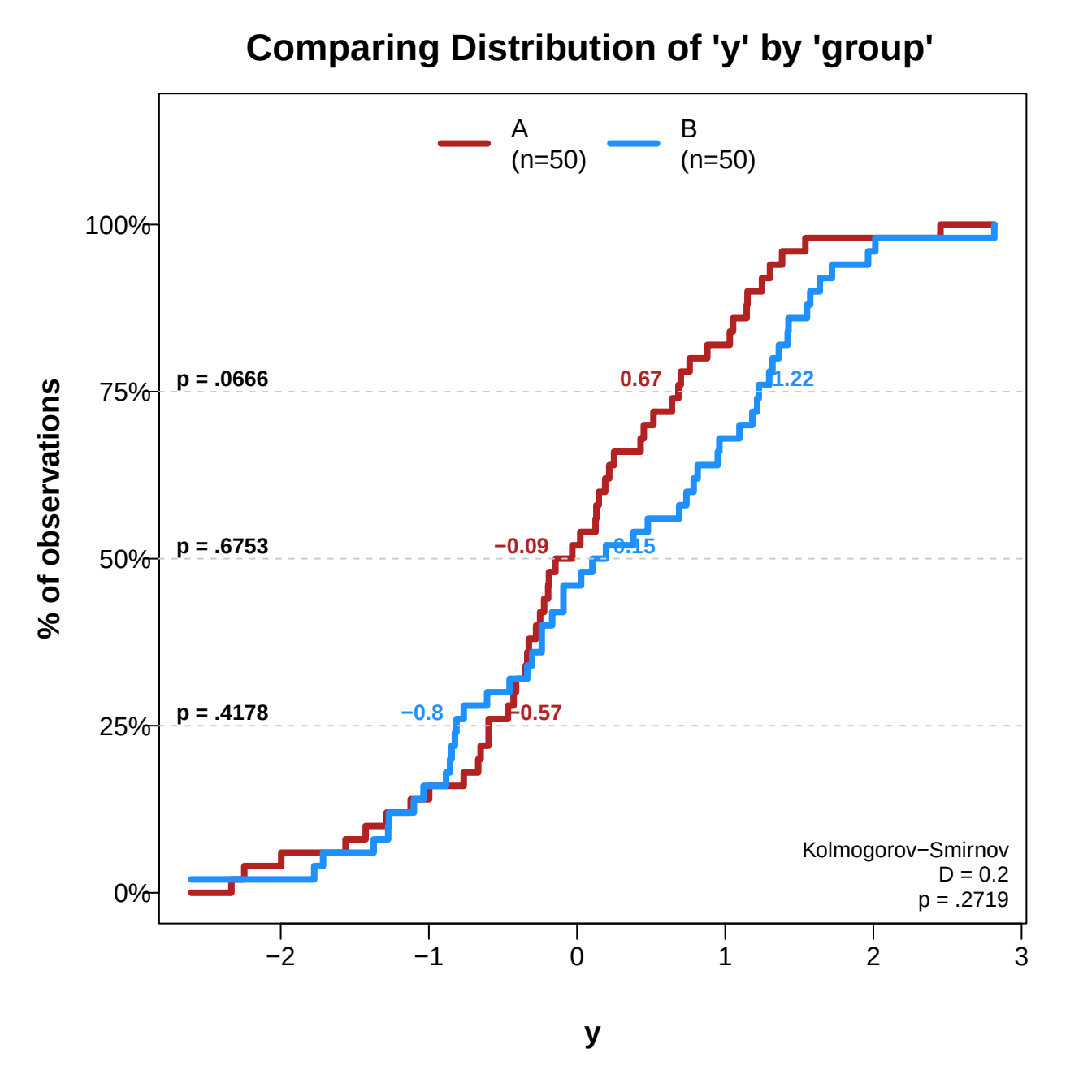

Comparing Distribution of 'y' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .3264
p = .9719
p = .6650
0.5
0.79
−0.03
0
−0.69
−0.54
Kolmogorov−Smirnov
D = 0.08
p = .9977
−3
−2
−1
0
1
2
y

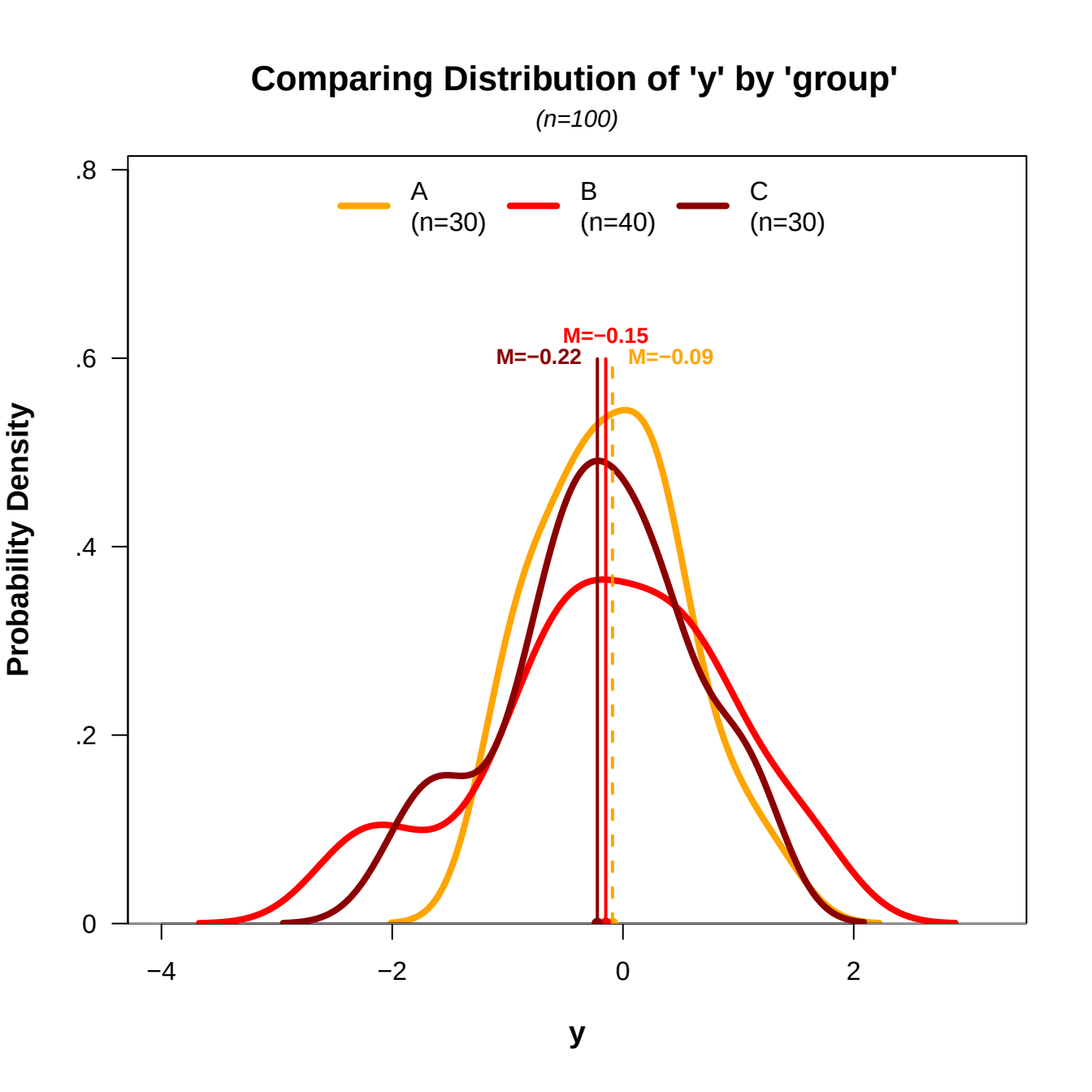

Comparing Distribution of 'y' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
−3
−2
−1
0
1
2
y
Kolmogorov−Smirnov
D = 0.08
p = .9977

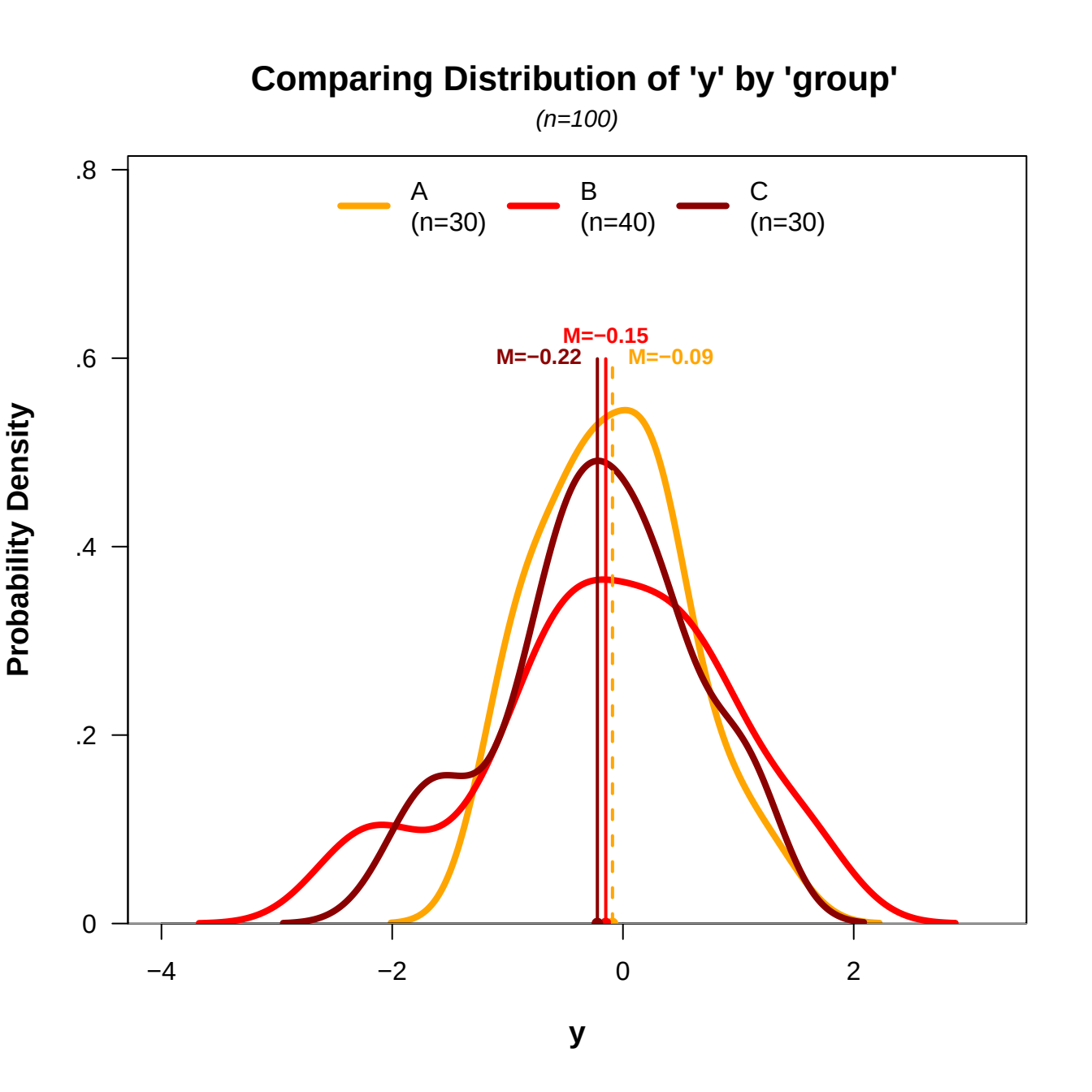

Comparing Distribution of 'y' by 'group2'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .6724
p = .0114
p = .0001
0.76
0.9
−0.29
0.24
−0.95
−0.13
Kolmogorov−Smirnov
D = 0.36
p = .0028
−2
−1
0
1
2
y

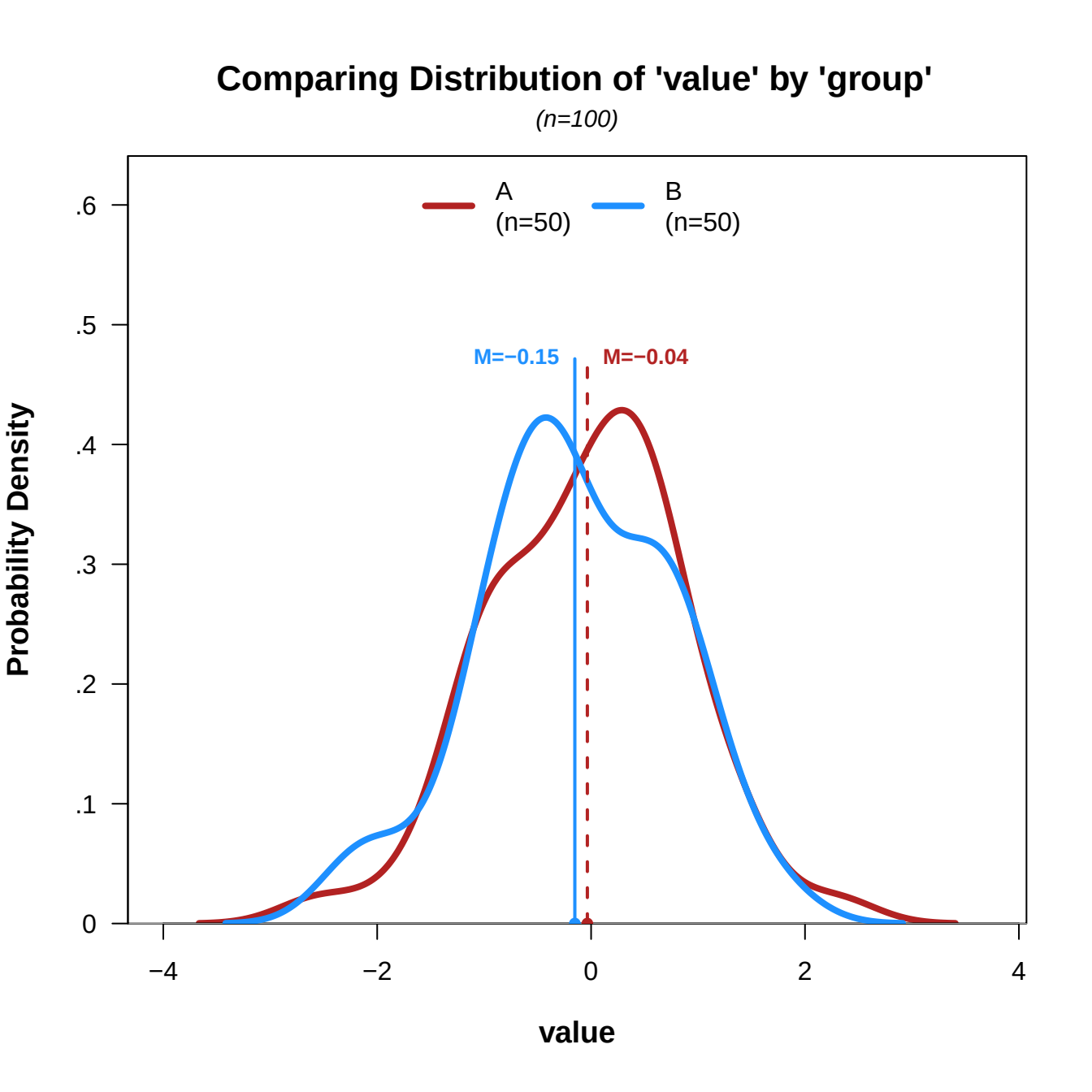

Comparing Distribution of 'y' by 'group3'
A
(n=30)
B
(n=40)
C
(n=30)
100%
75%
50%
25%
0%
% of observations
−2
−1
0
1
2
y

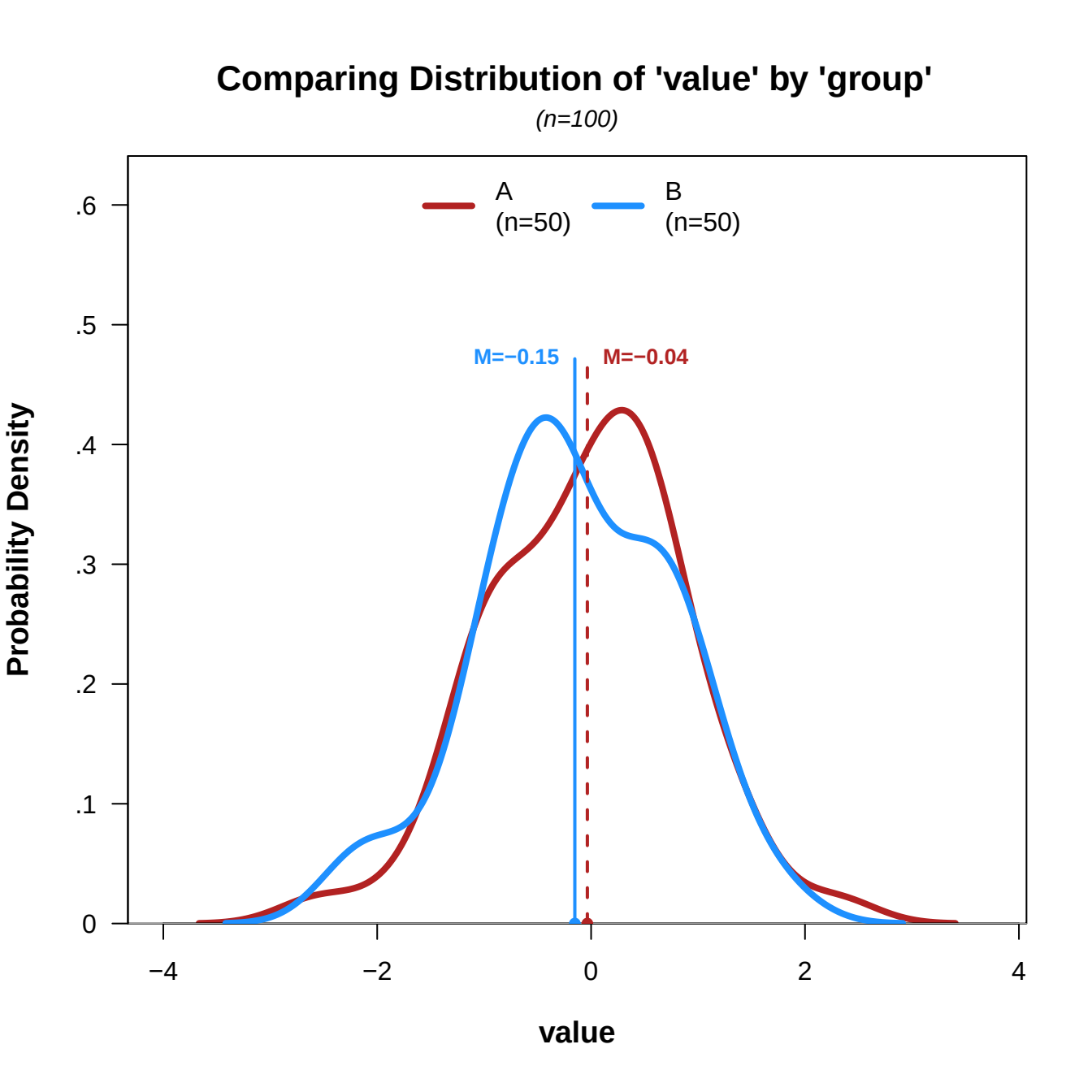

Comparing Distribution of 'y' by 'group4'
A
(n=25)
B
(n=25)
C
(n=25)
D
(n=25)
100%
75%
50%
25%
0%
% of observations
−2
−1
0
1
2
y

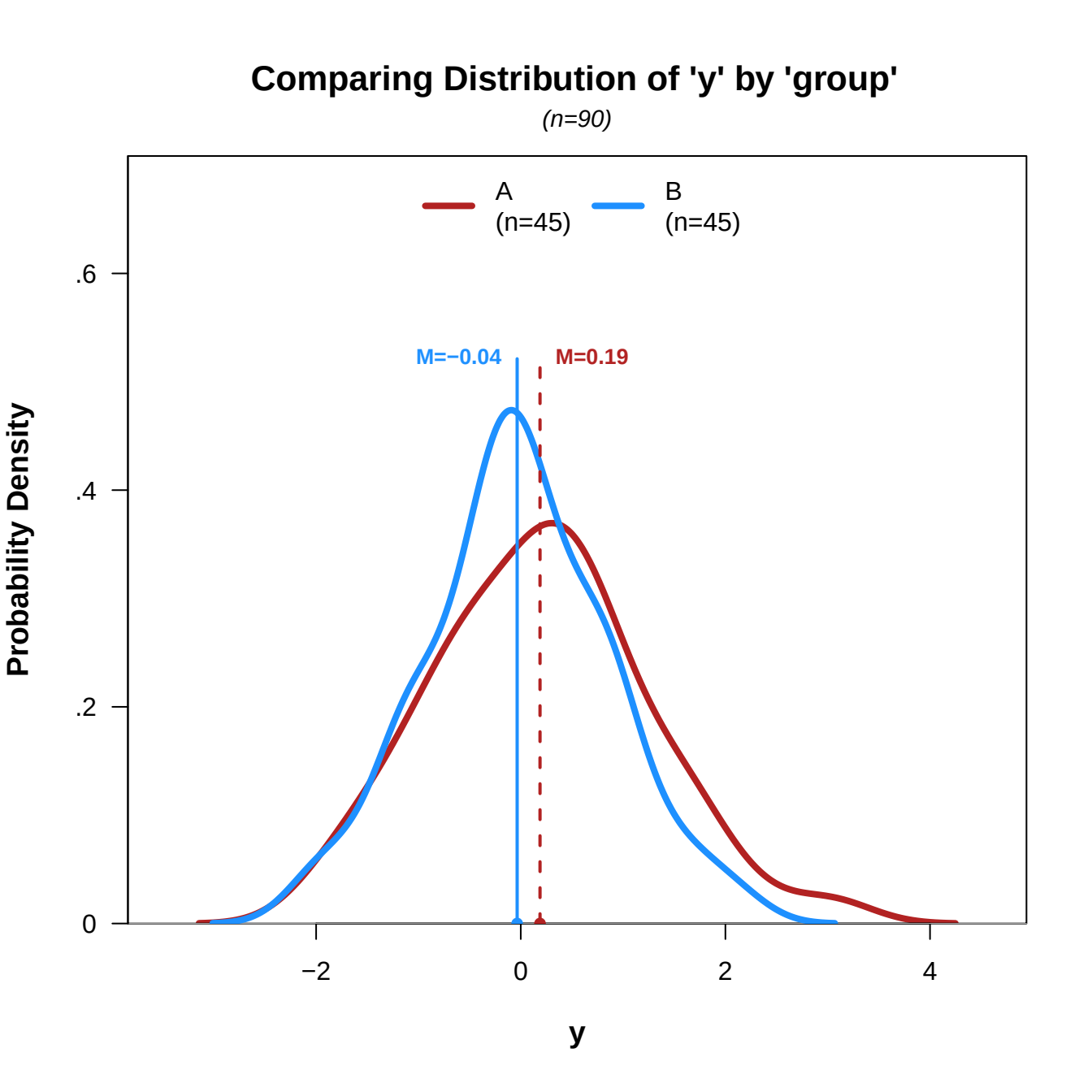

Comparing Distribution of 'y' by 'group'
A
(n=50)
B
(n=50)
100%
75%
50%
25%
0%
% of observations
p = .0666
p = .6753
p = .4178
0.67
1.22
−0.09
0.15
−0.8
−0.57
Kolmogorov−Smirnov
D = 0.2
p = .2719
−2
−1
0
1
2
3
y

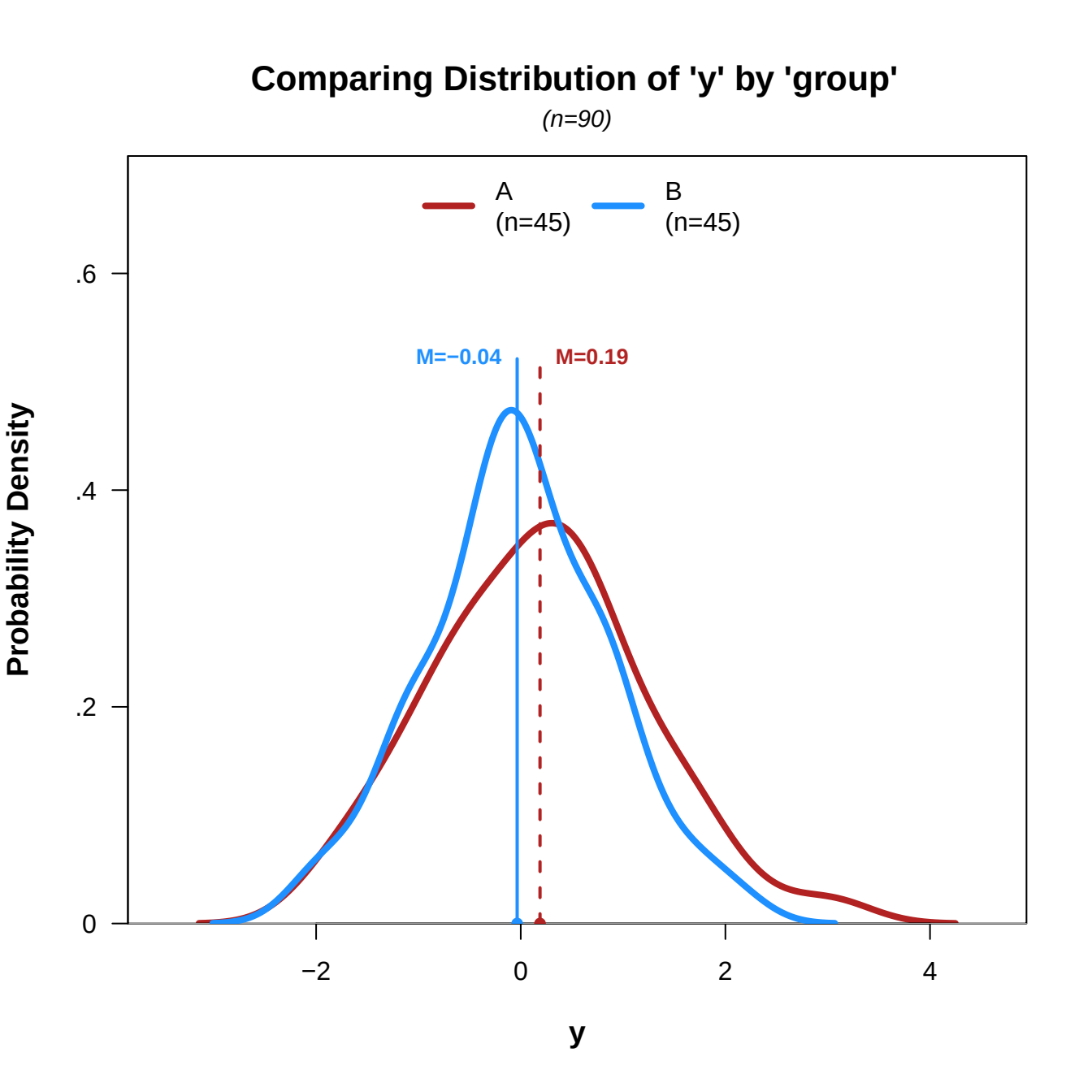

Comparing Distribution of 'y' by 'group'
(n=100)
A
(n=30)
B
(n=40)
C
(n=30)
M=−0.15
M=−0.22
M=−0.09
Probability Density
.8
.6
.4
.2
0
−4
−2
0
2
y

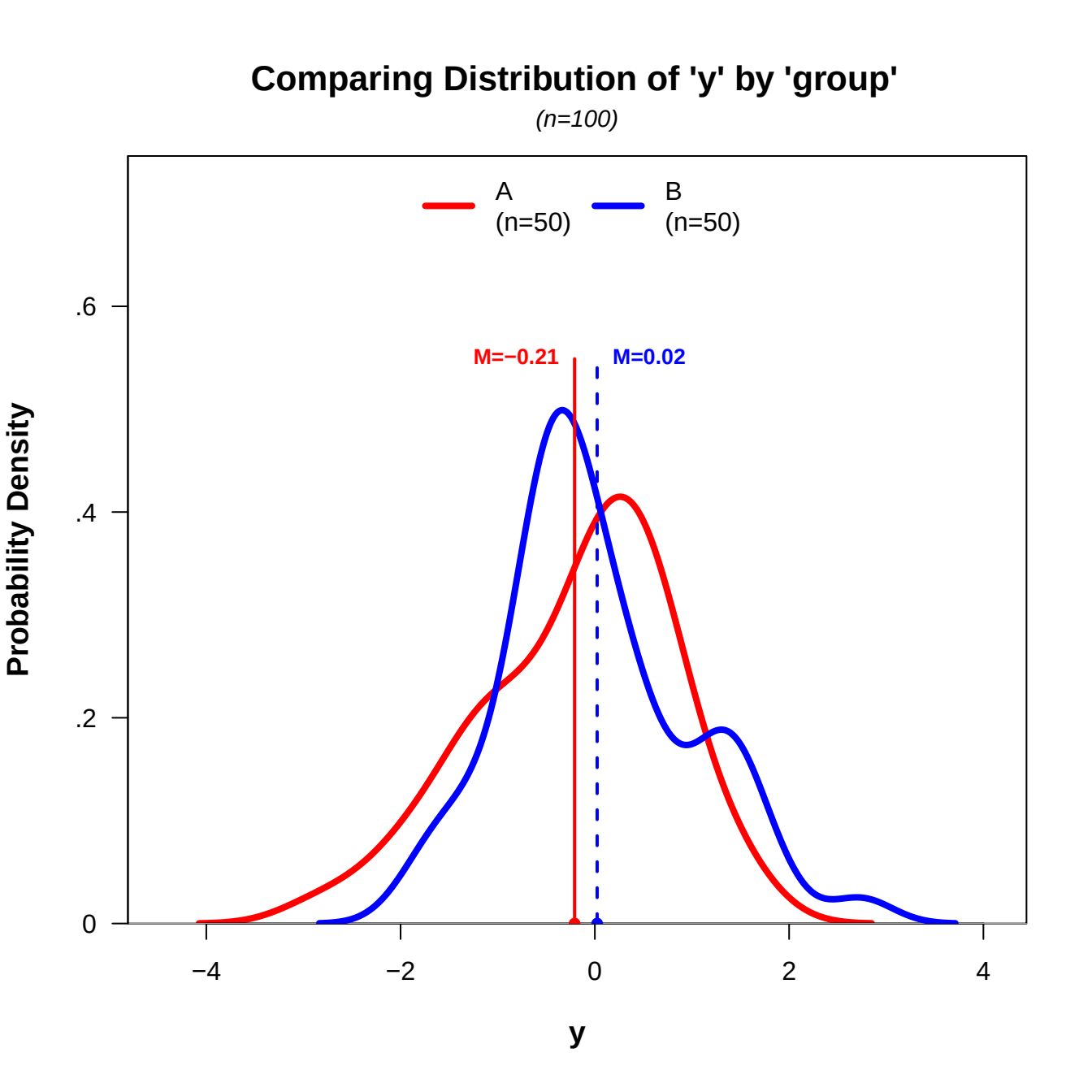

Comparing Distribution of 'y' by 'group'
(n=100)
A
(n=30)
B
(n=40)
C
(n=30)
M=−0.15
M=−0.22
M=−0.09
Probability Density
.8
.6
.4
.2
0
−4
−2
0
2
y

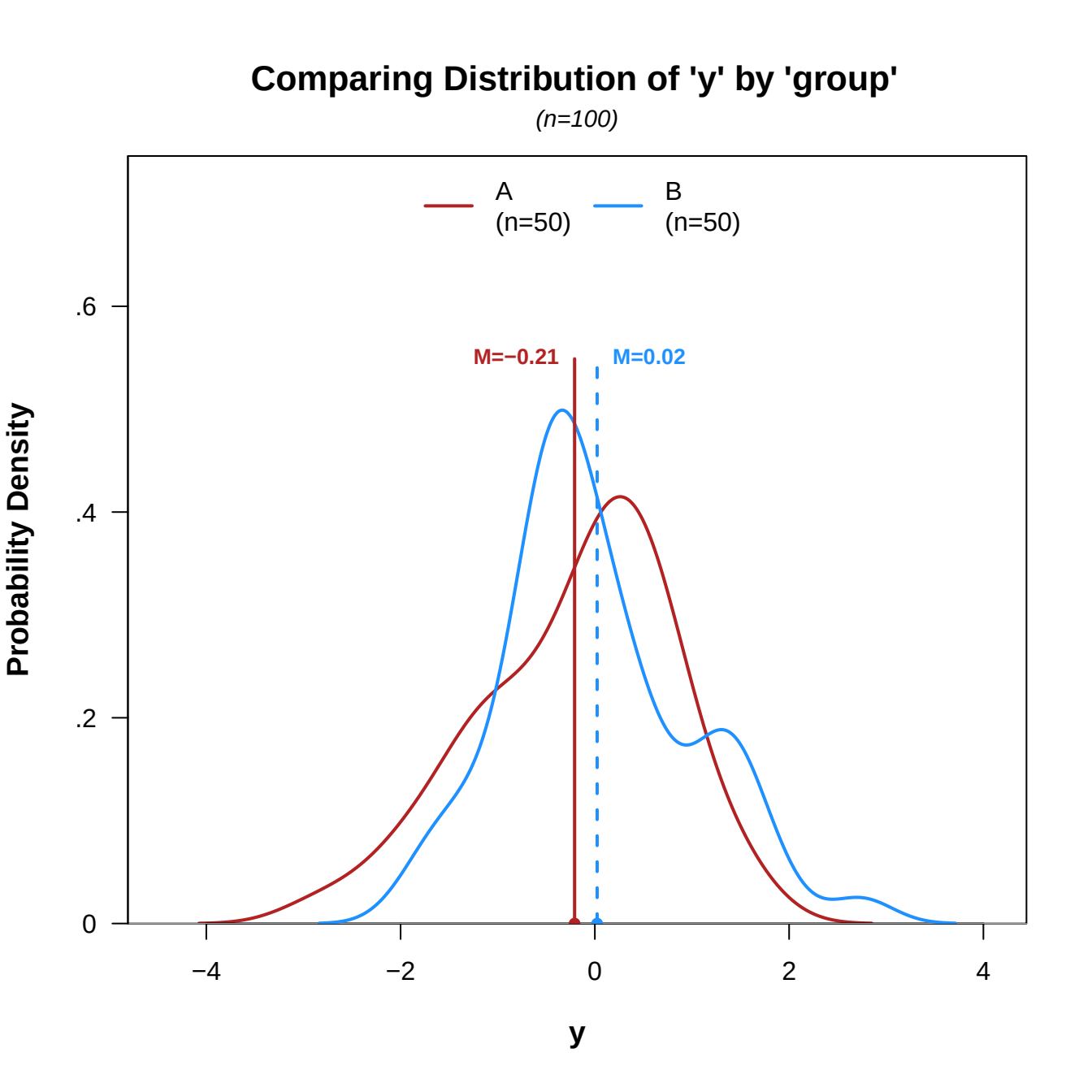

Comparing Distribution of 'value' by 'group'
(n=100)
A
(n=50)
B
(n=50)
M=−0.15
M=−0.04
Probability Density
.6
.5
.4
.3
.2
.1
0
−4
−2
0
2
4
value

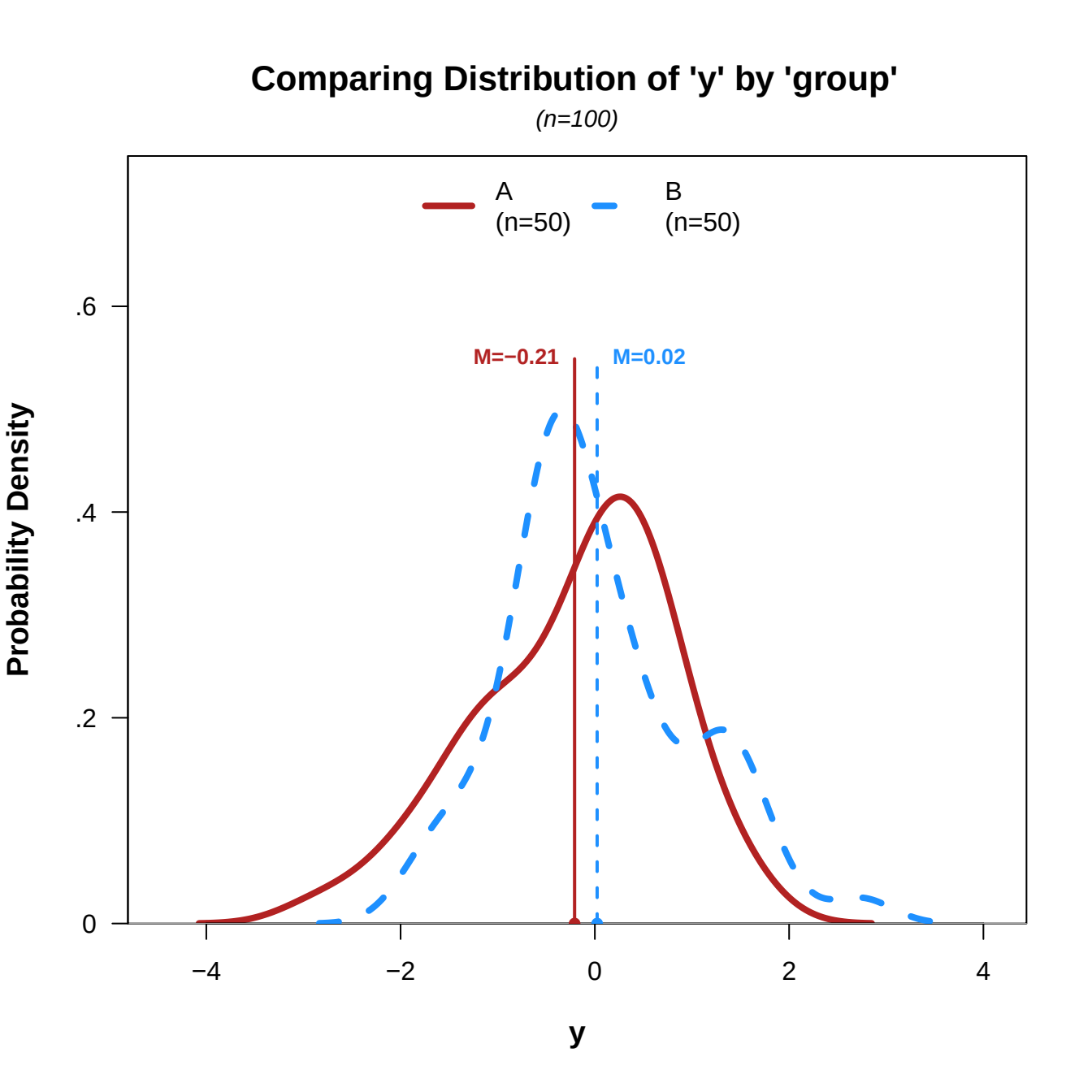

Comparing Distribution of 'value' by 'group'
(n=100)
A
(n=50)
B
(n=50)
M=−0.15
M=−0.04
Probability Density
.6
.5
.4
.3
.2
.1
0
−4
−2
0
2
4
value

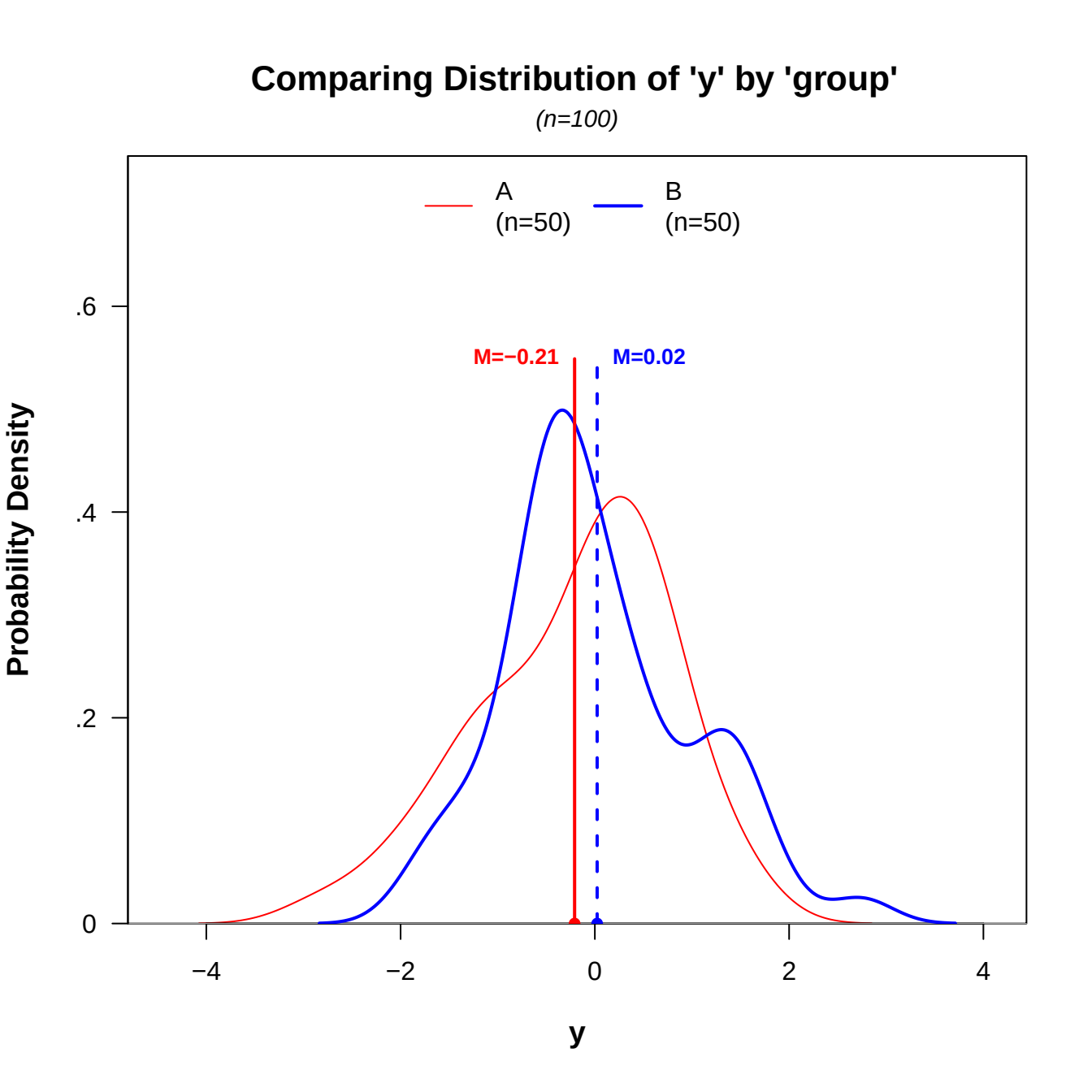

Comparing Distribution of 'y' by 'group'
(n=90)
A
(n=45)
B
(n=45)
M=−0.04
M=0.19
Probability Density
.6
.4
.2
0
−2
0
2
4
y

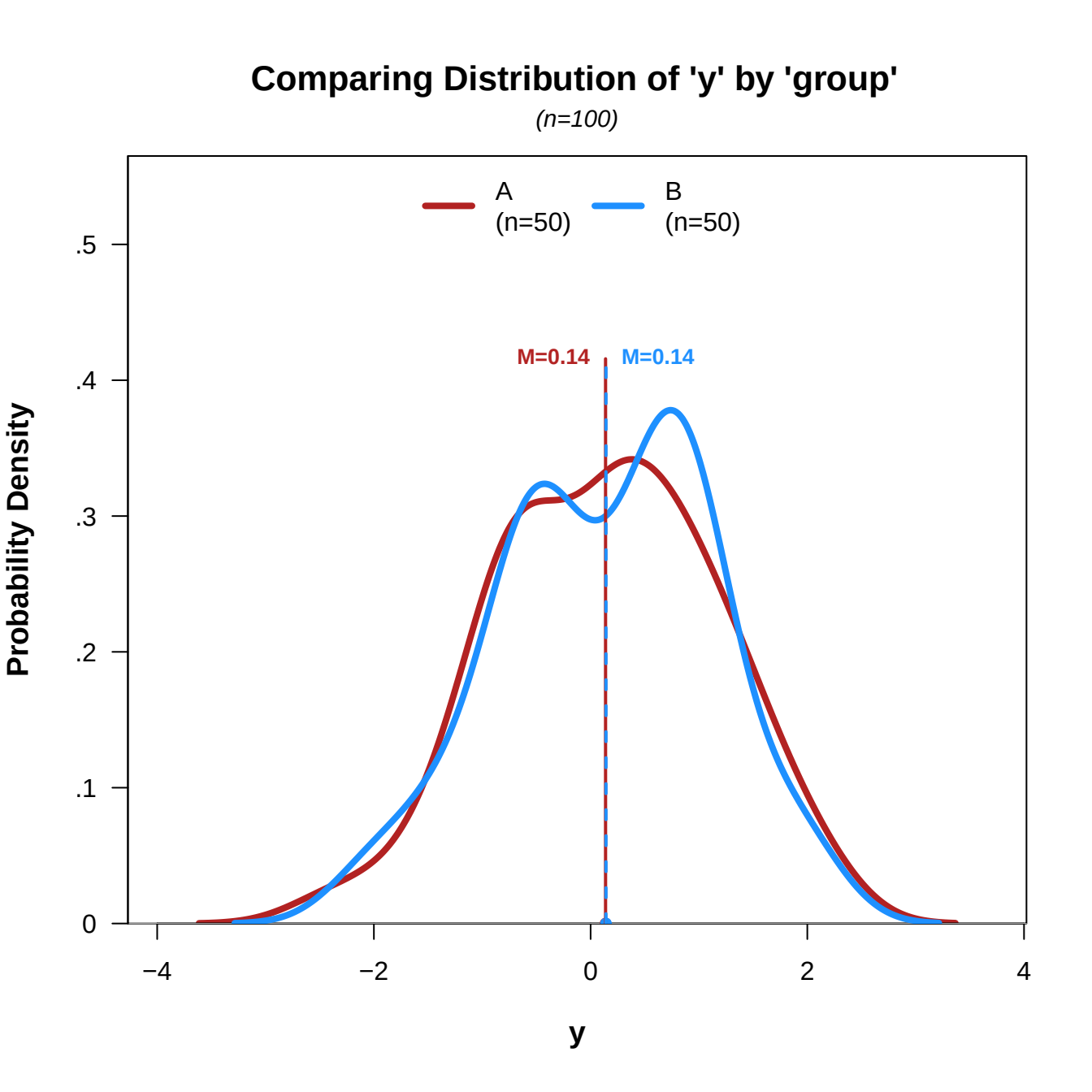

Comparing Distribution of 'y' by 'group'
(n=90)
A
(n=45)
B
(n=45)
M=−0.04
M=0.19
Probability Density
.6
.4
.2
0
−2
0
2
4
y

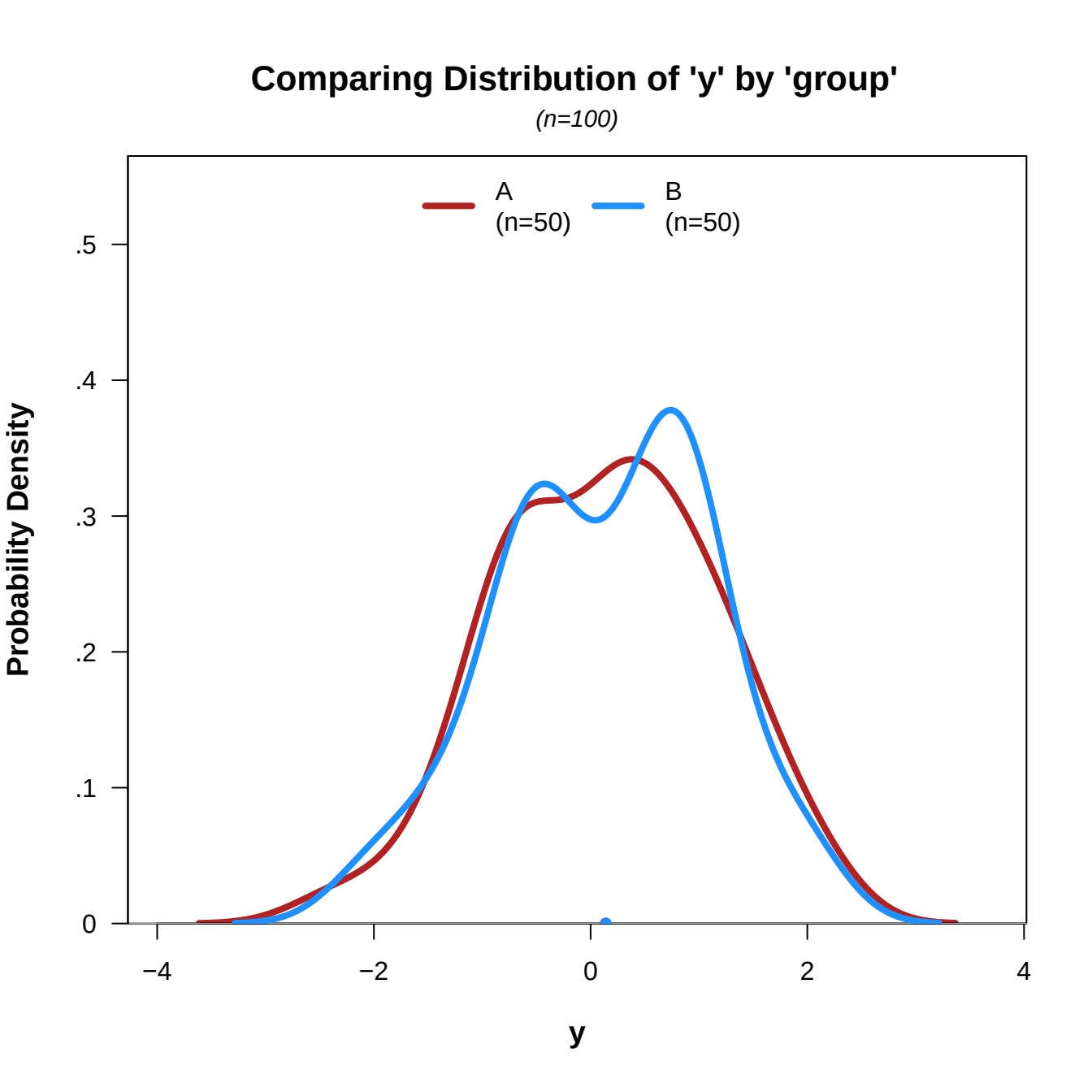

Comparing Distribution of 'y' by 'group'
(n=100)
A
(n=50)
B
(n=50)
M=−0.21
M=0.02
Probability Density
.6
.4
.2
0
−4
−2
0
2
4
y

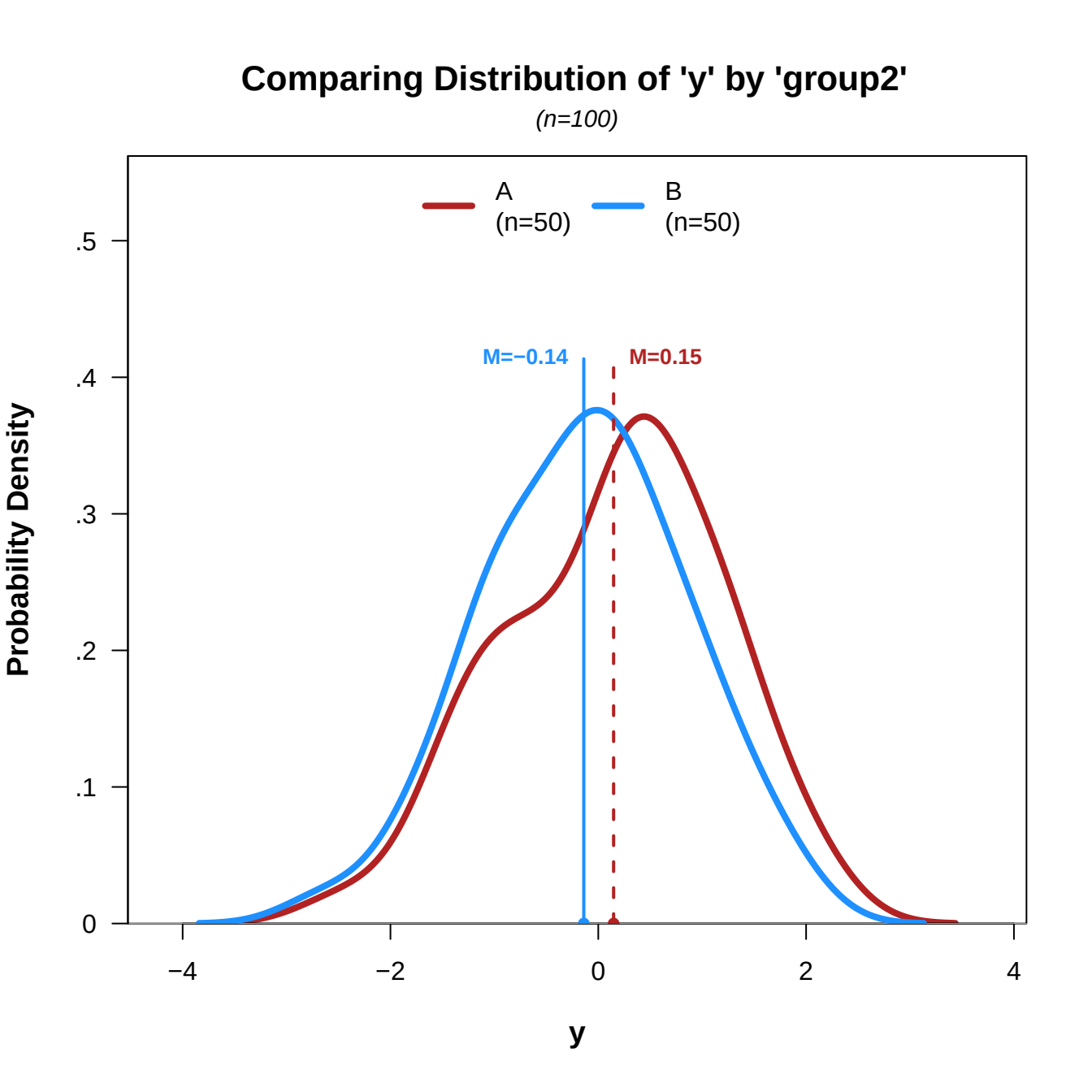

Comparing Distribution of 'y' by 'group'
(n=100)
A
(n=50)
B
(n=50)
M=−0.21
M=0.02
Probability Density
.6
.4
.2
0
−4
−2
0
2
4
y

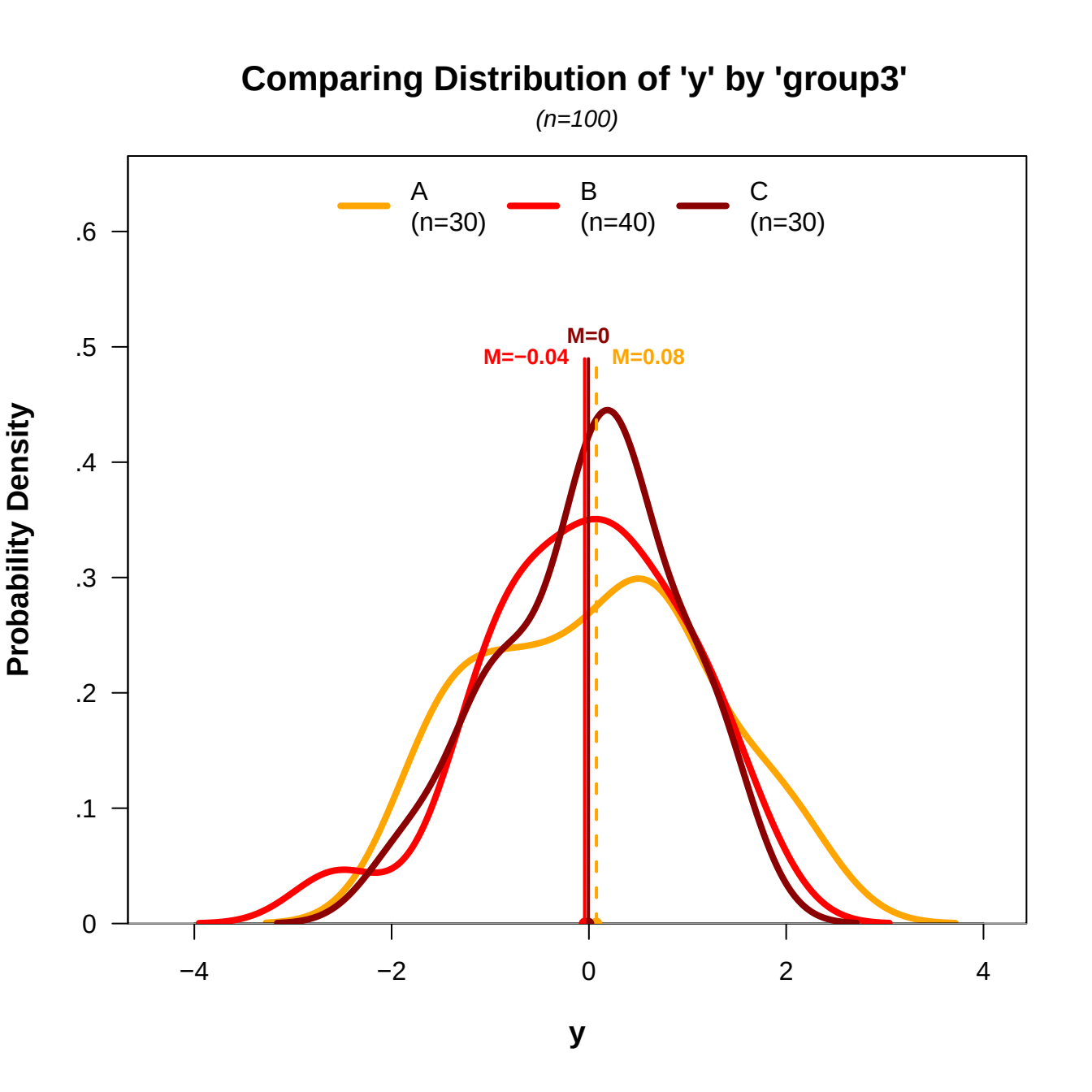

Comparing Distribution of 'y' by 'group'
(n=100)
A
(n=50)
B
(n=50)
M=−0.21
M=0.02
Probability Density
.6
.4
.2
0
−4
−2
0
2
4
y

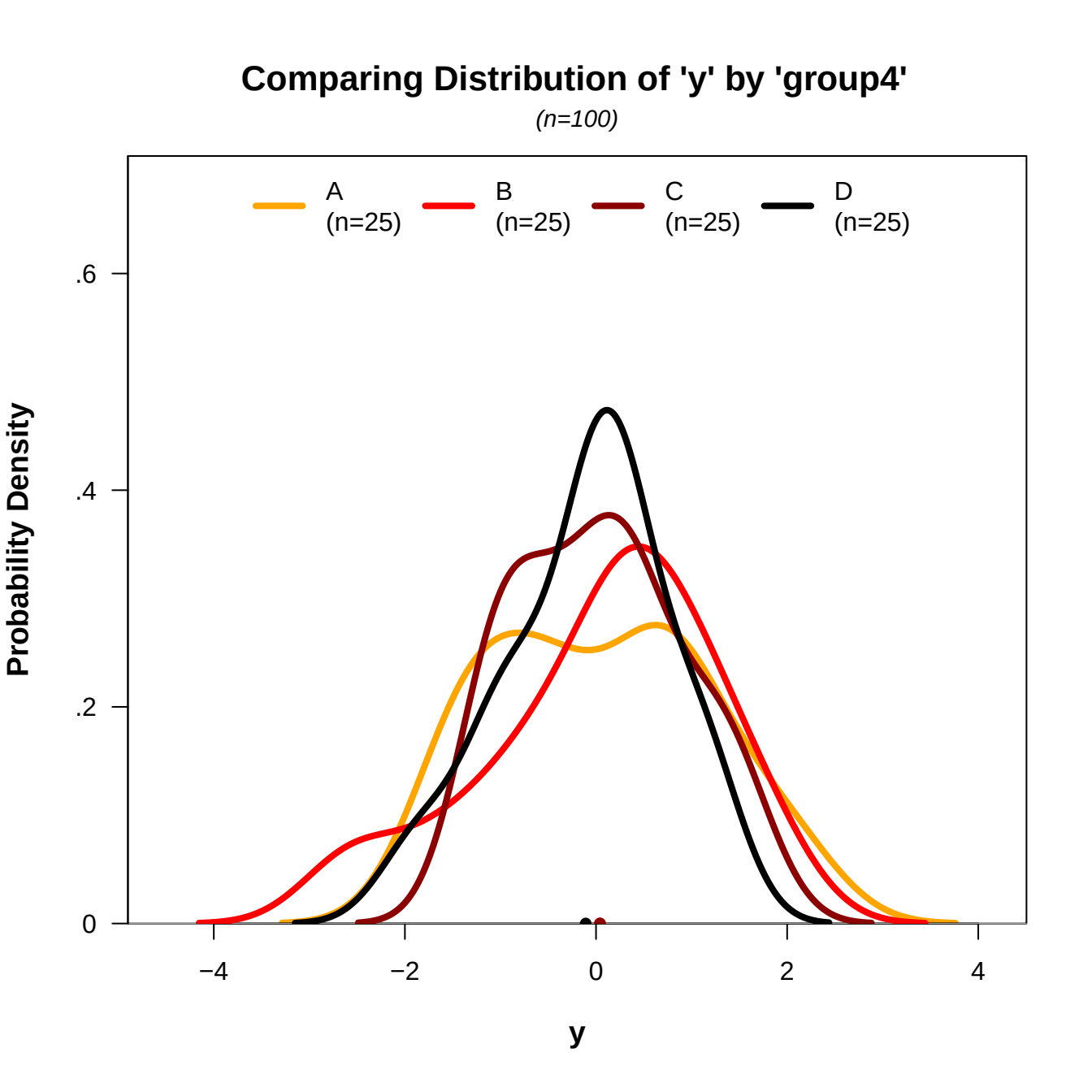

Comparing Distribution of 'y' by 'group'
(n=100)
A
(n=50)
B
(n=50)
M=−0.21
M=0.02
Probability Density
.6
.4
.2
0
−4
−2
0
2
4
y

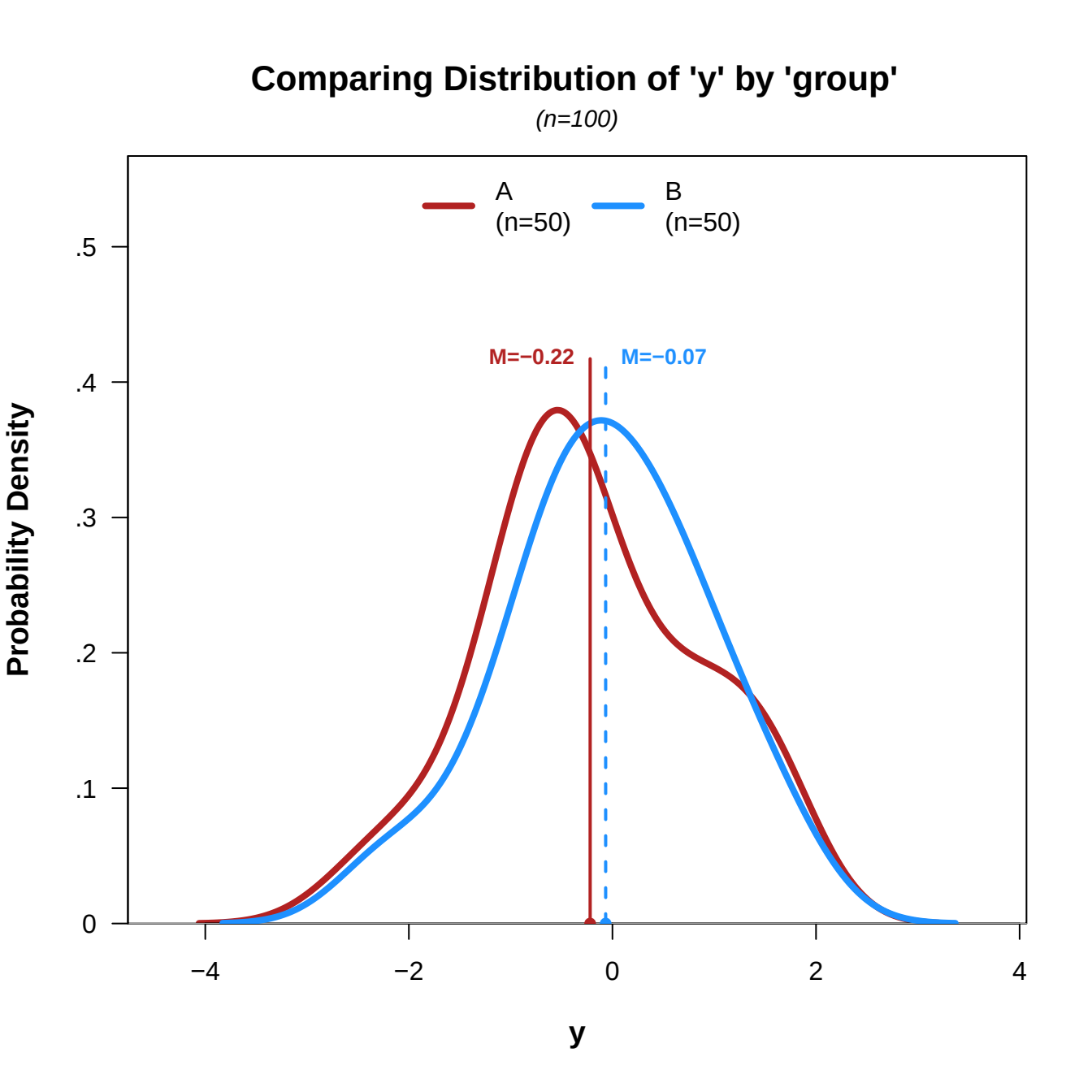

Comparing Distribution of 'y' by 'group'
(n=100)
A
(n=50)
B
(n=50)
M=0.14
M=0.14
Probability Density
.5
.4
.3
.2
.1
0
−4
−2
0
2
4
y

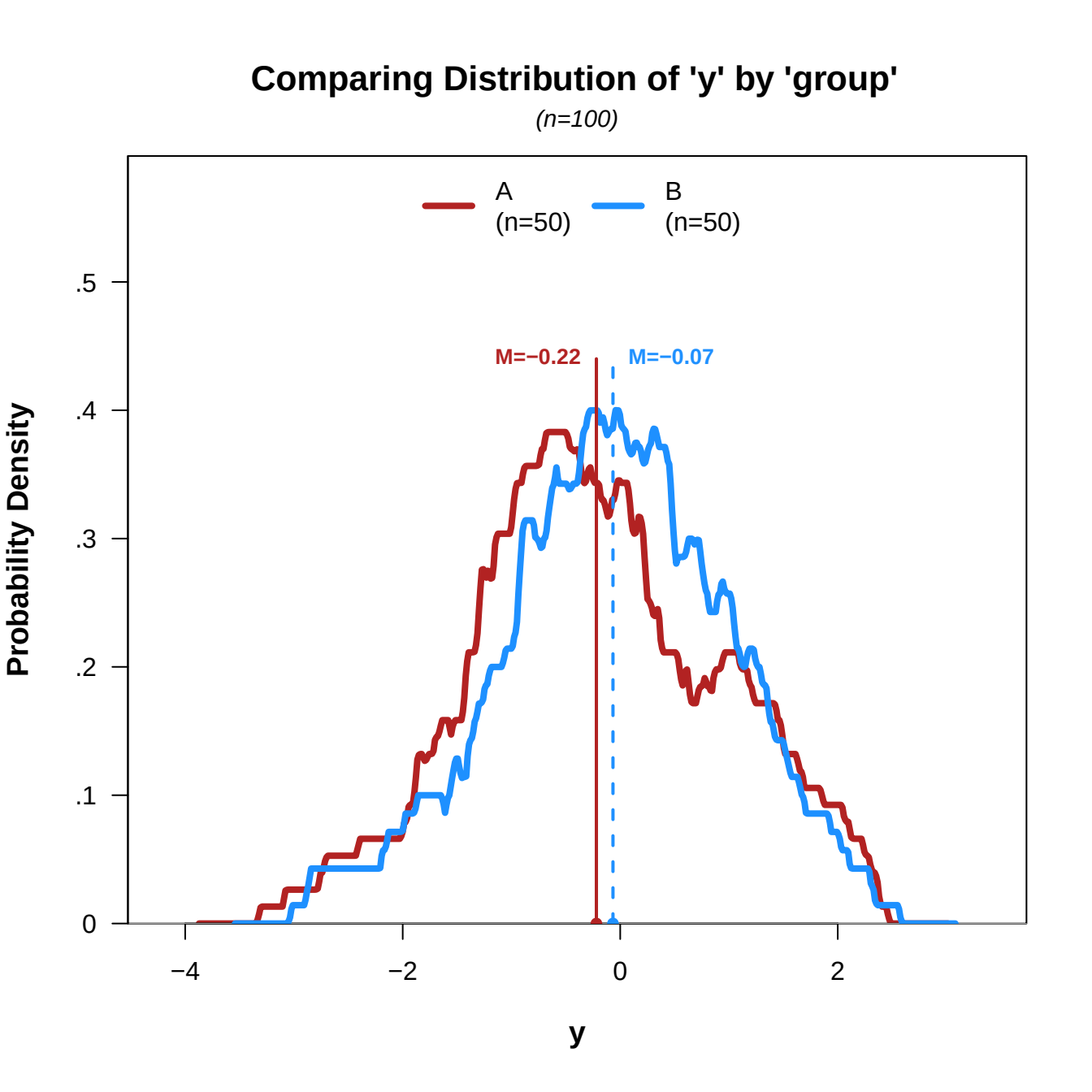

Comparing Distribution of 'y' by 'group'
(n=100)
A
(n=50)
B
(n=50)
Probability Density
.5
.4
.3
.2
.1
0
−4
−2
0
2
4
y

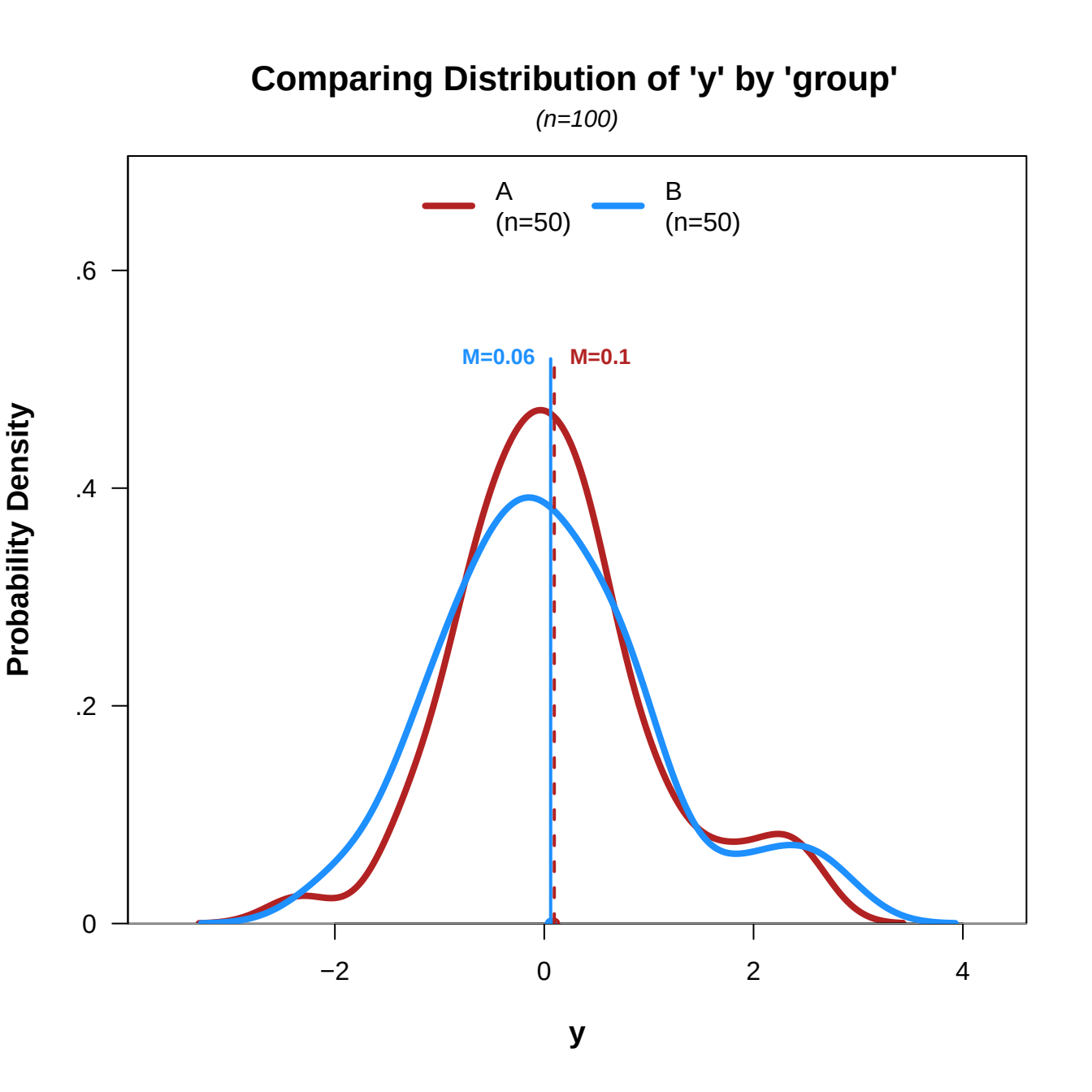

Comparing Distribution of 'y' by 'group2'
(n=100)
A
(n=50)
B
(n=50)
M=−0.14
M=0.15
Probability Density
.5
.4
.3
.2
.1
0
−4
−2
0
2
4
y

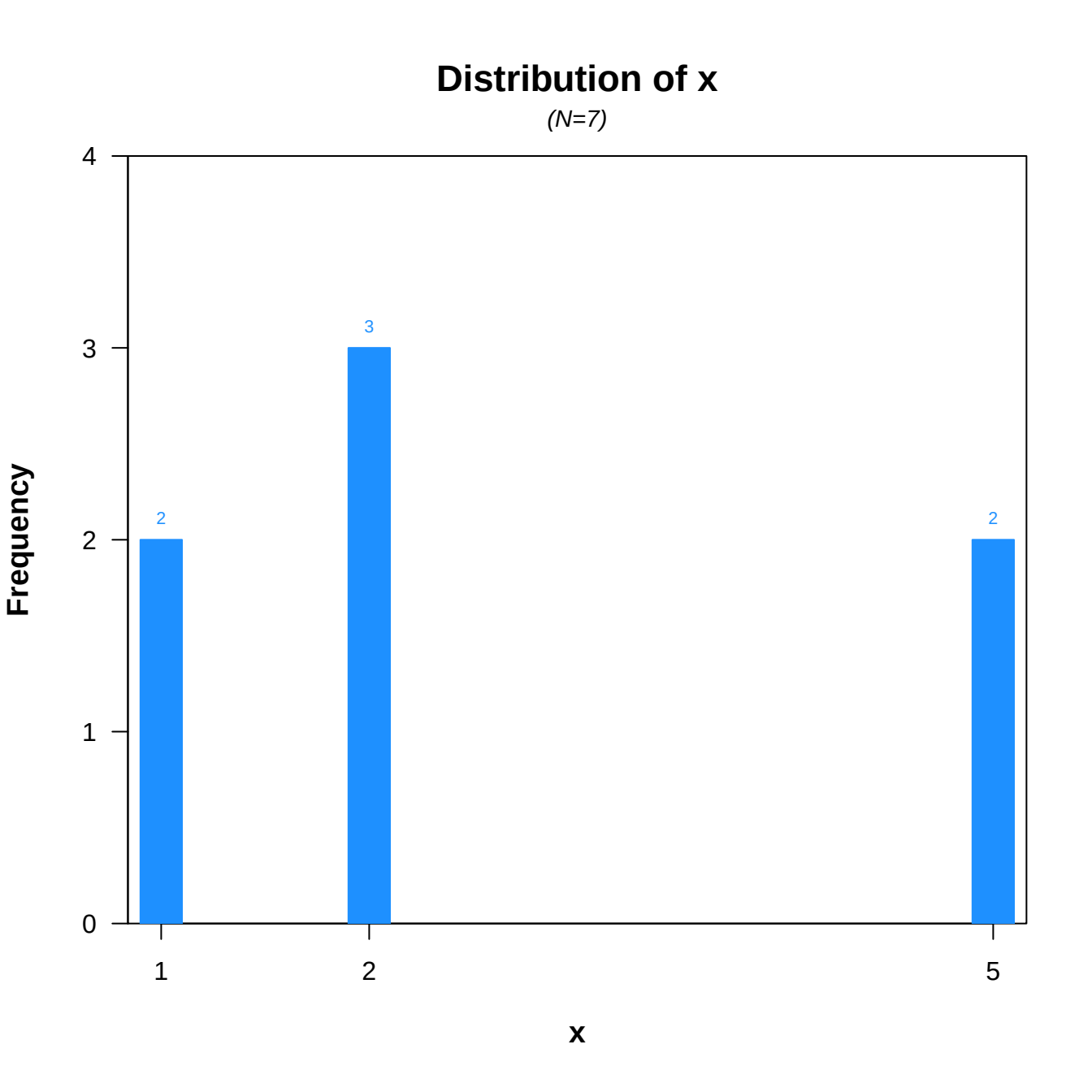

Comparing Distribution of 'y' by 'group3'
(n=100)
A
(n=30)
B
(n=40)
C
(n=30)
M=0
M=−0.04
M=0.08
Probability Density
.6
.5
.4
.3
.2
.1
0
−4
−2
0
2
4
y

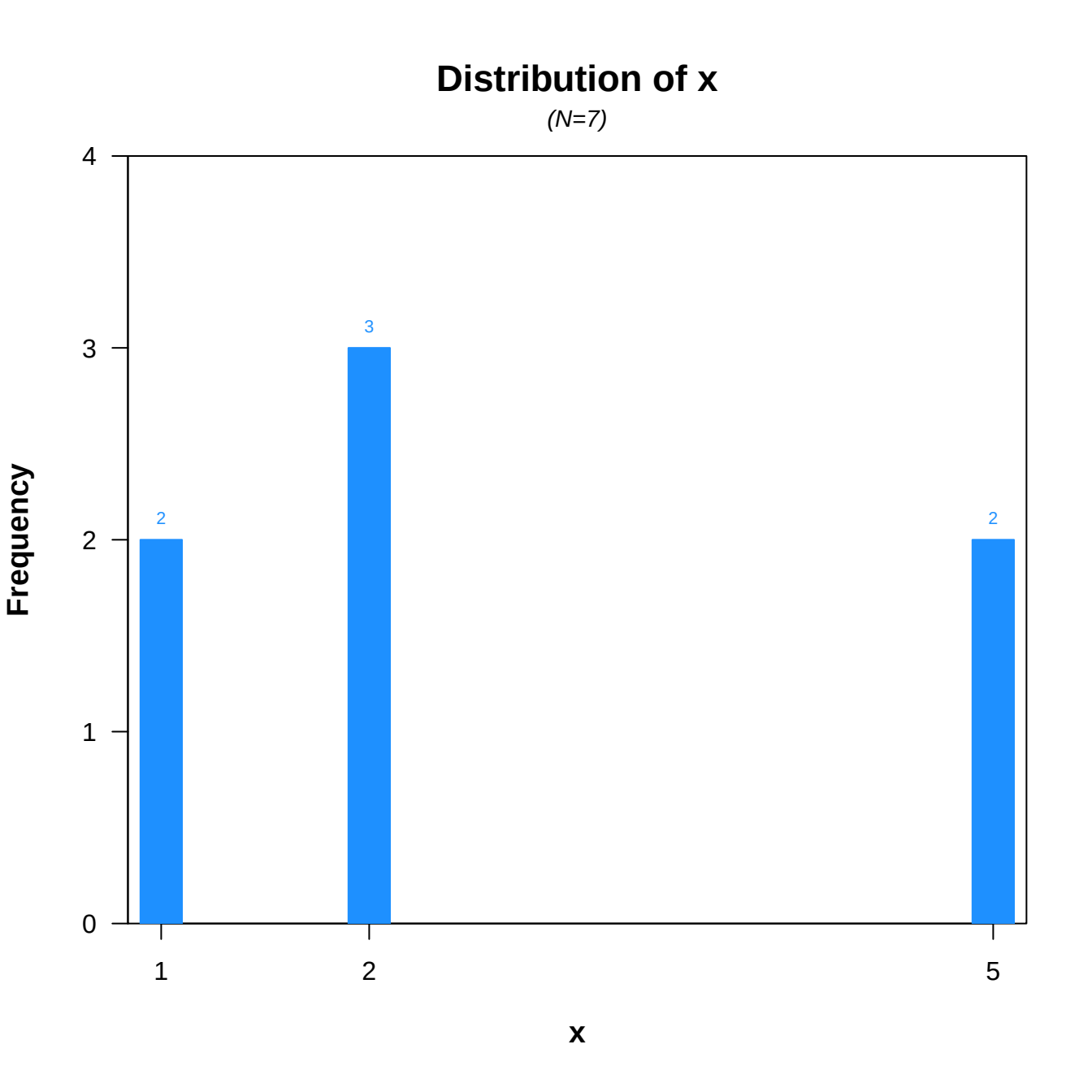

Comparing Distribution of 'y' by 'group4'
(n=100)
A
(n=25)
B
(n=25)
C
(n=25)
D
(n=25)
Probability Density
.6
.4
.2
0
−4
−2
0
2
4
y

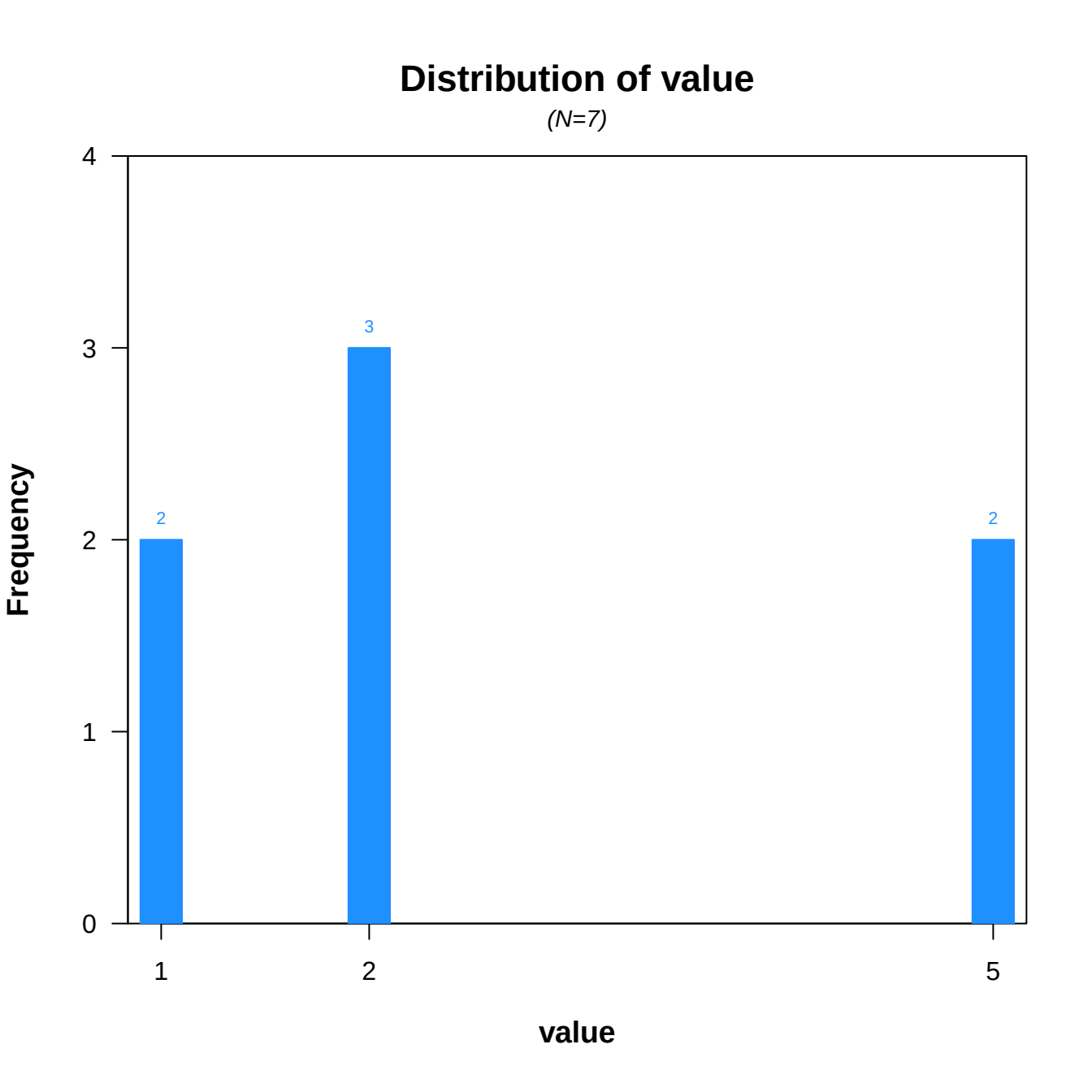

Comparing Distribution of 'y' by 'group'
(n=100)
A
(n=50)
B
(n=50)
M=−0.22
M=−0.07
Probability Density
.5
.4
.3
.2
.1
0
−4
−2
0
2
4
y

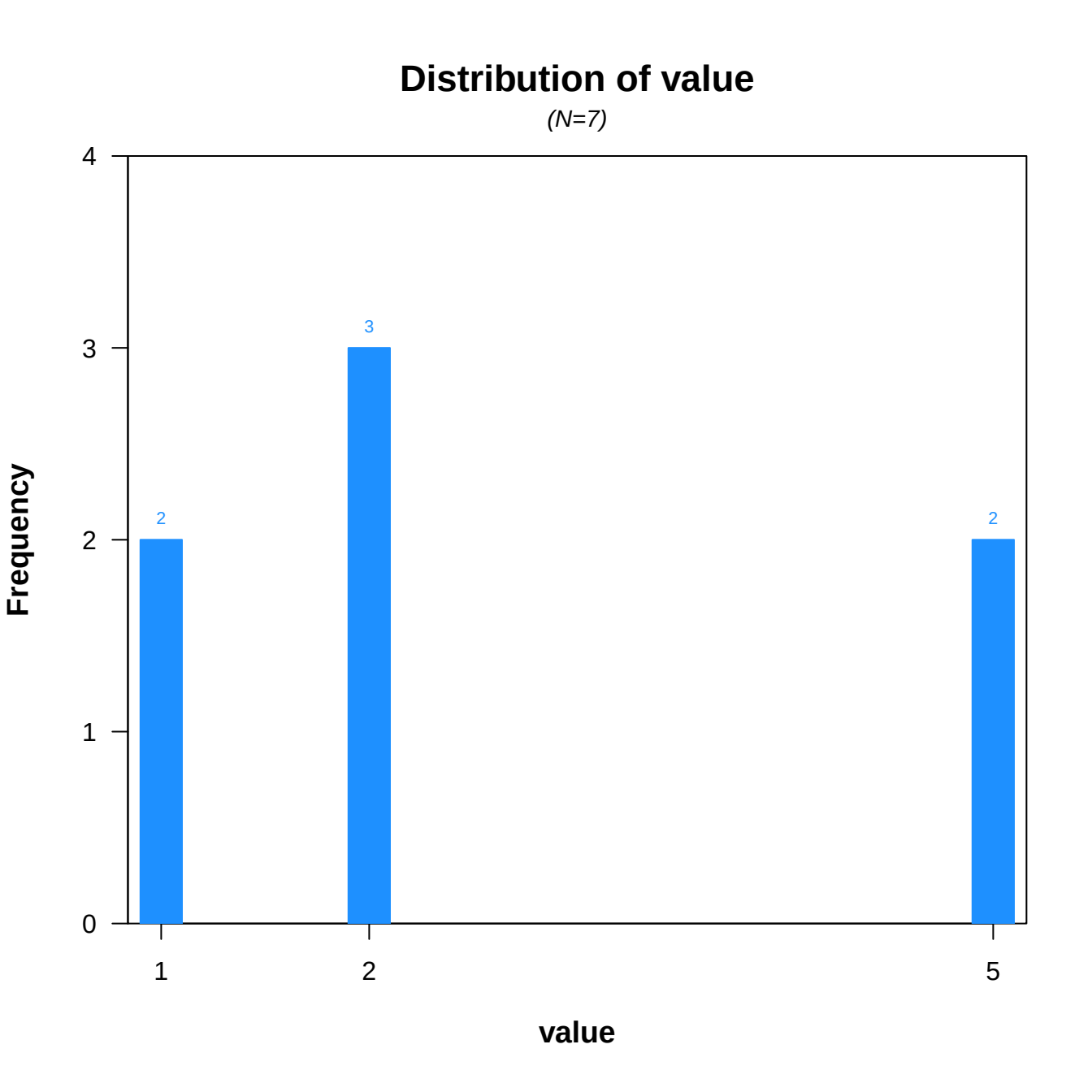

Comparing Distribution of 'y' by 'group'
(n=100)
A
(n=50)
B
(n=50)
M=−0.22
M=−0.07
Probability Density
.5
.4
.3
.2
.1
0
−4
−2
0
2
y

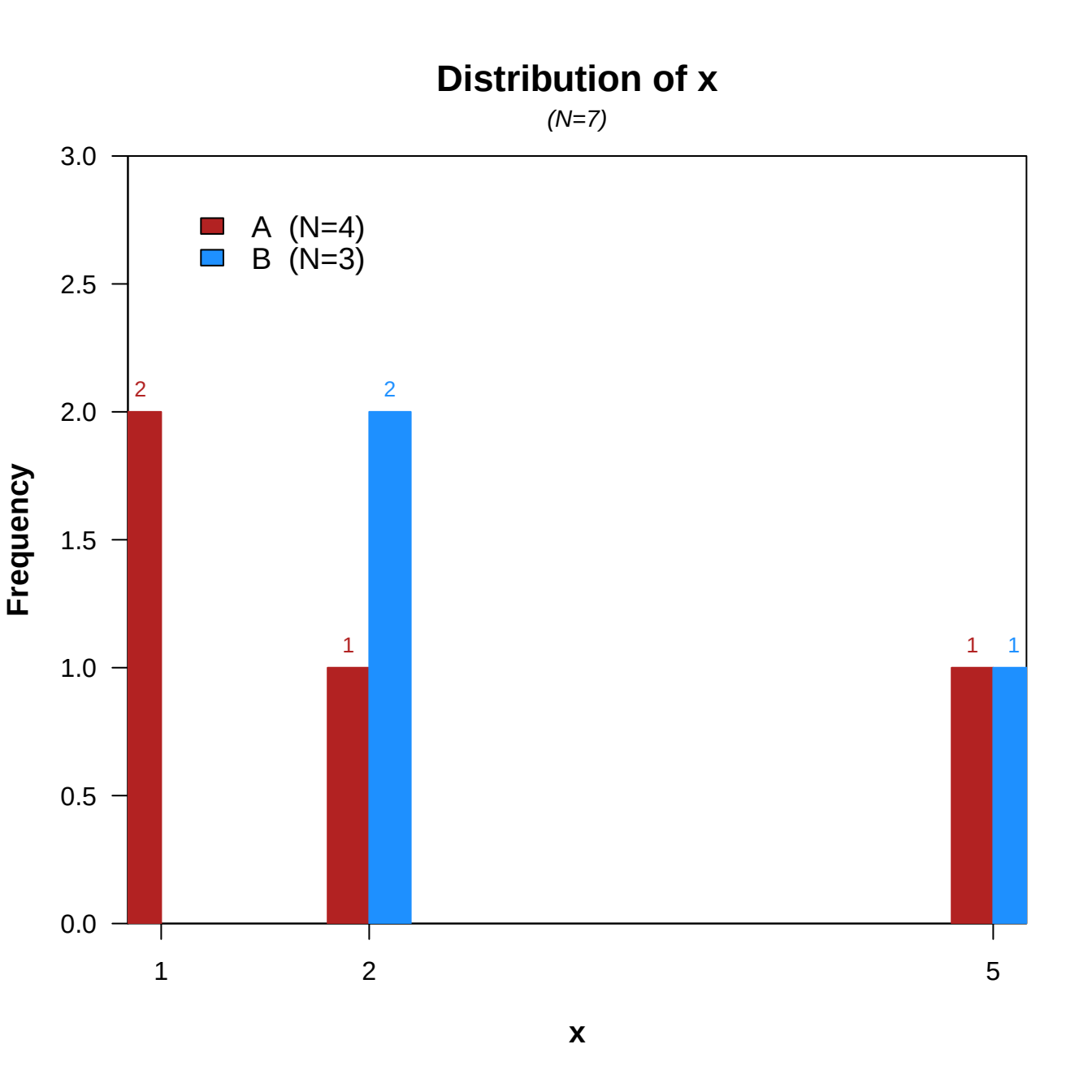

Comparing Distribution of 'y' by 'group'
(n=100)
A
(n=50)
B
(n=50)
M=0.06
M=0.1
Probability Density
.6
.4
.2
0
−2
0
2
4
y

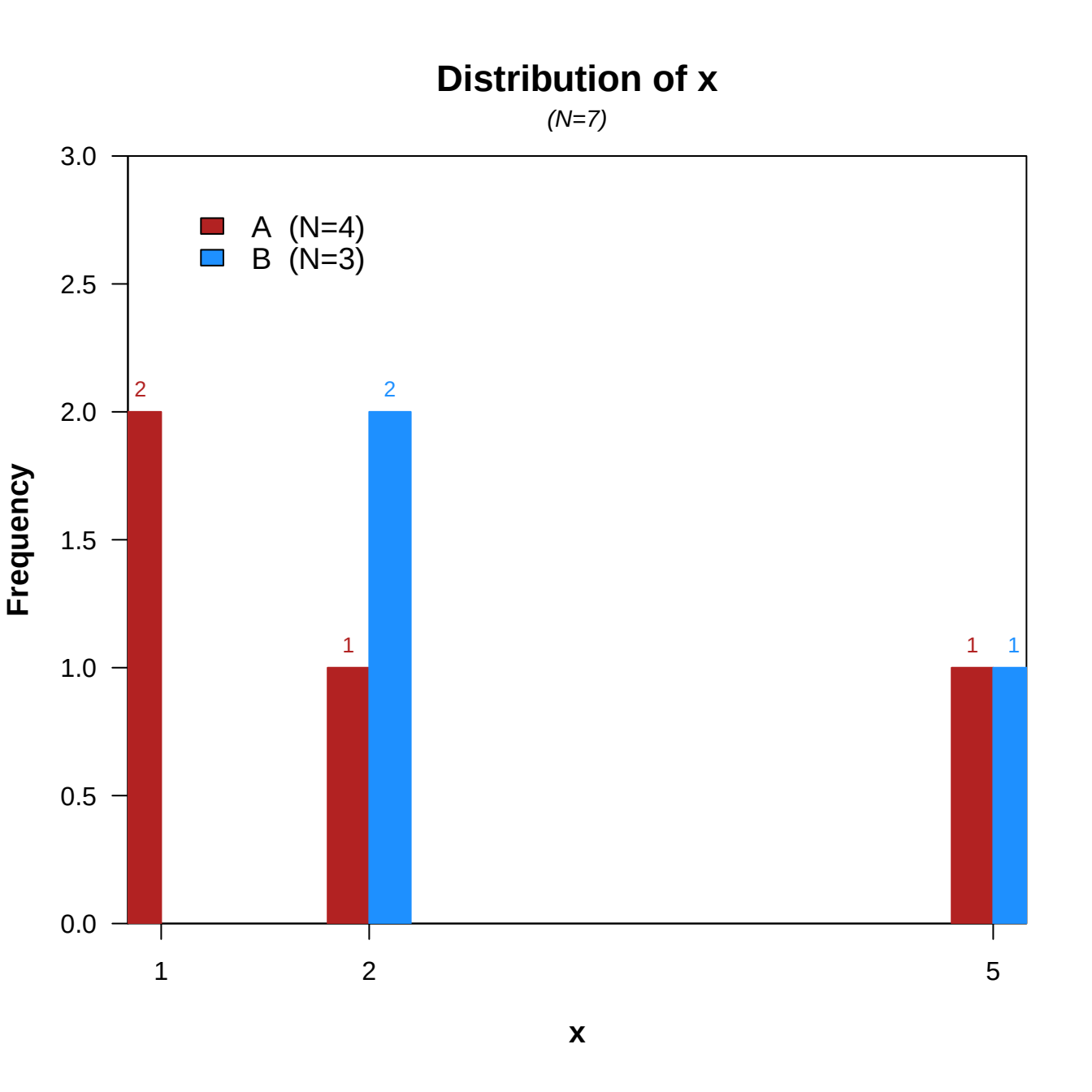

Distribution of x
(N=7)
Frequency
4
3
2
1
0
2
3
2
1
2
5
x

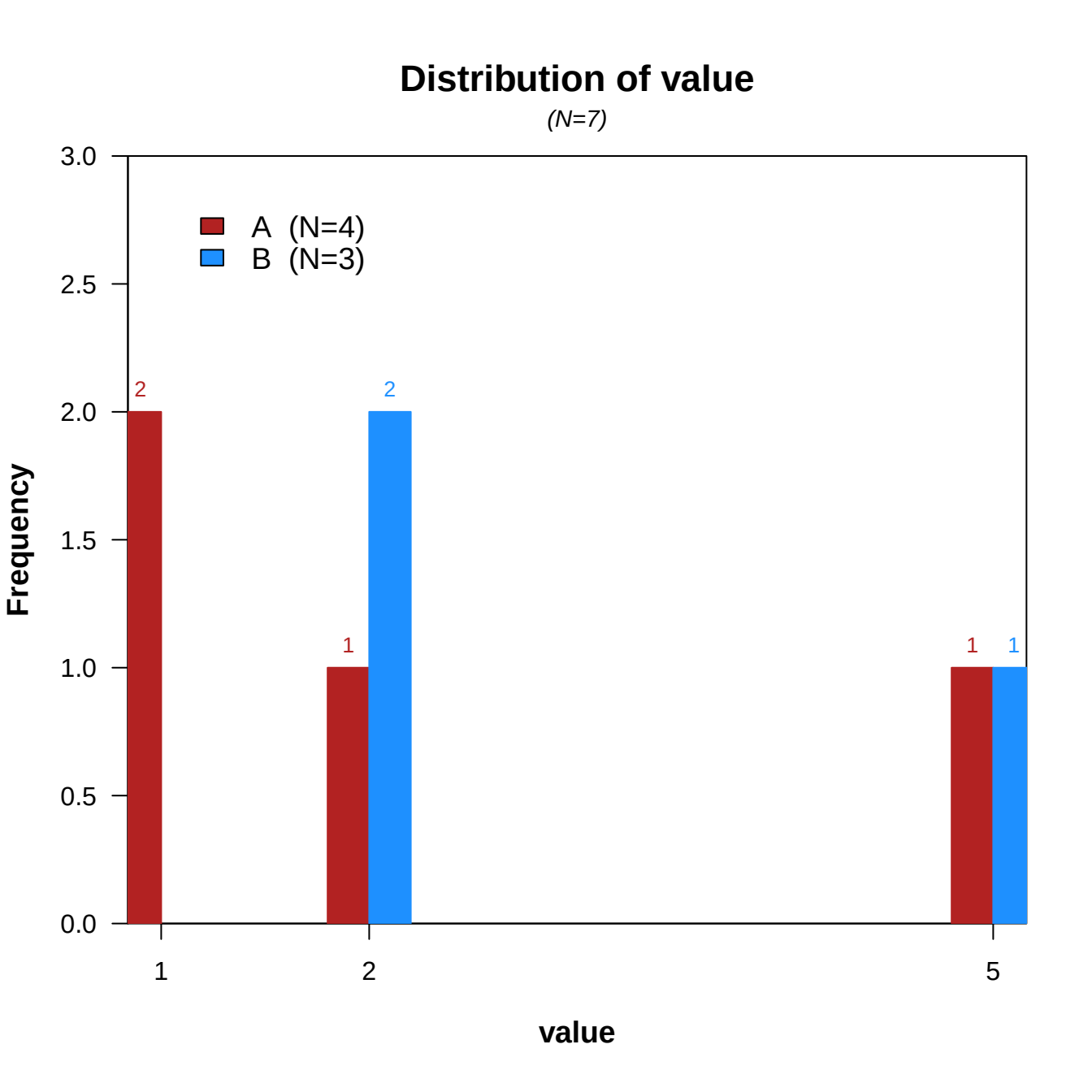

Distribution of x
(N=7)
Frequency
4
3
2
1
0
2
3
2
1
2
5
x

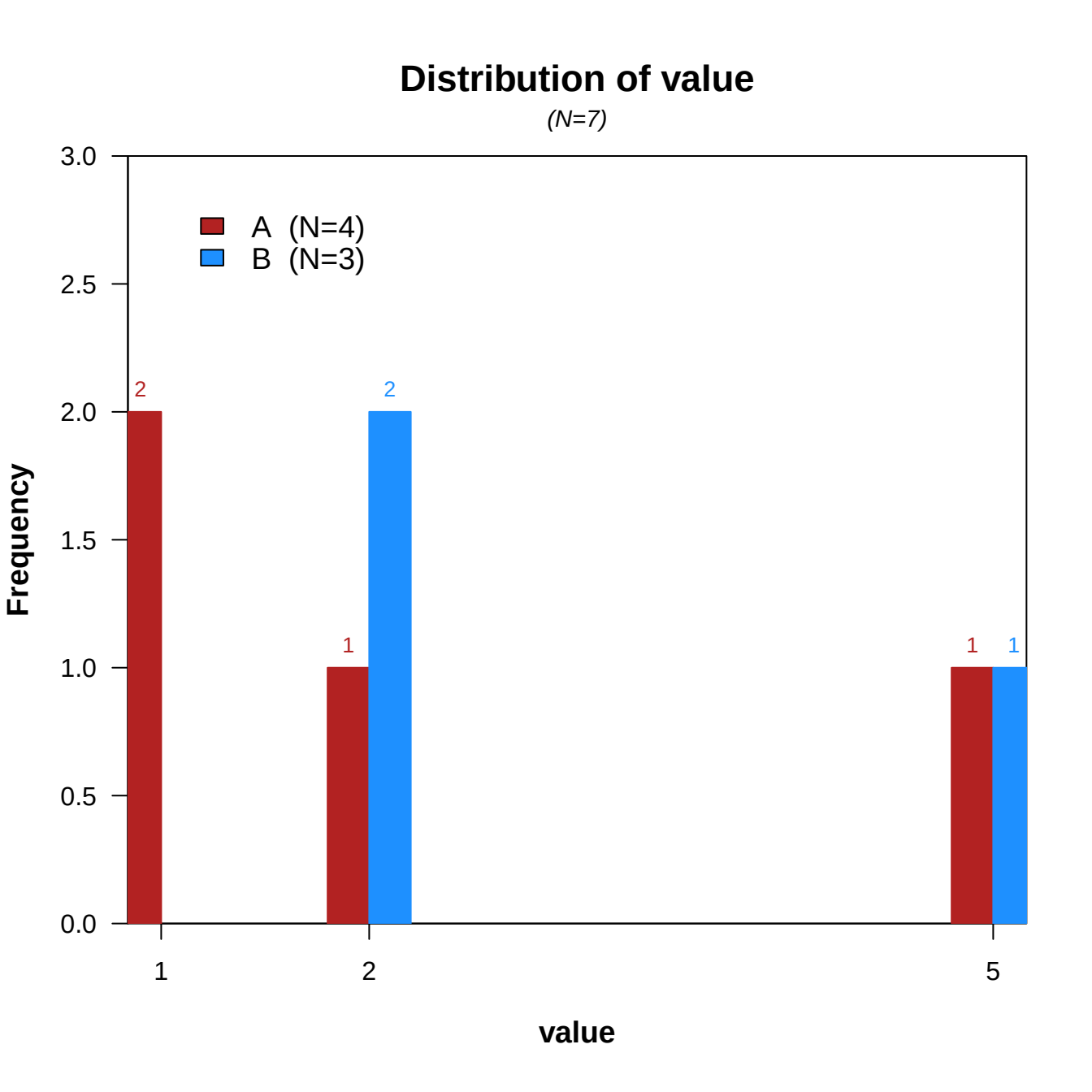

Distribution of value
(N=7)
Frequency
4
3
2
1
0
2
3
2
1
2
5
value

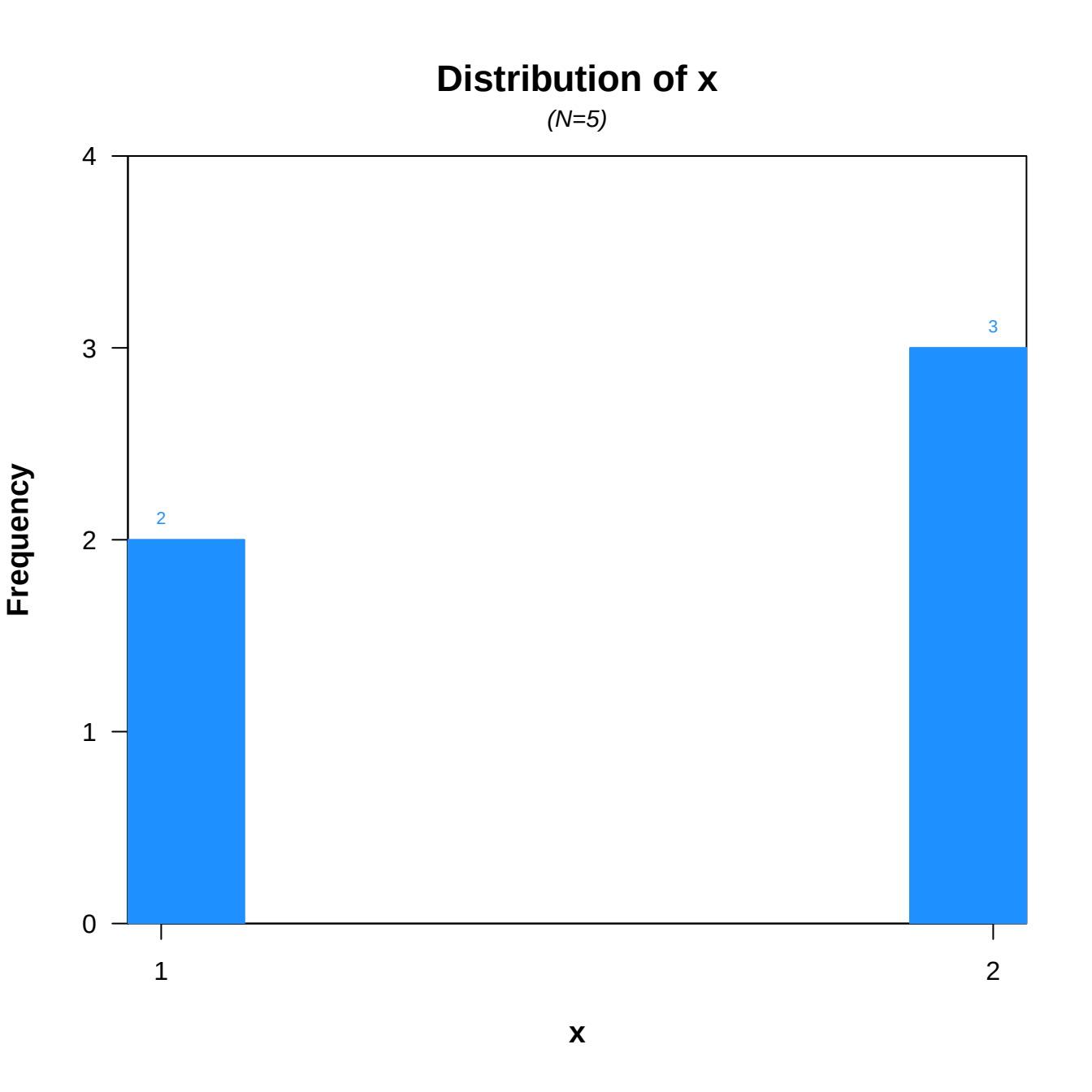

Distribution of value
(N=7)
Frequency
4
3
2
1
0
2
3
2
1
2
5
value

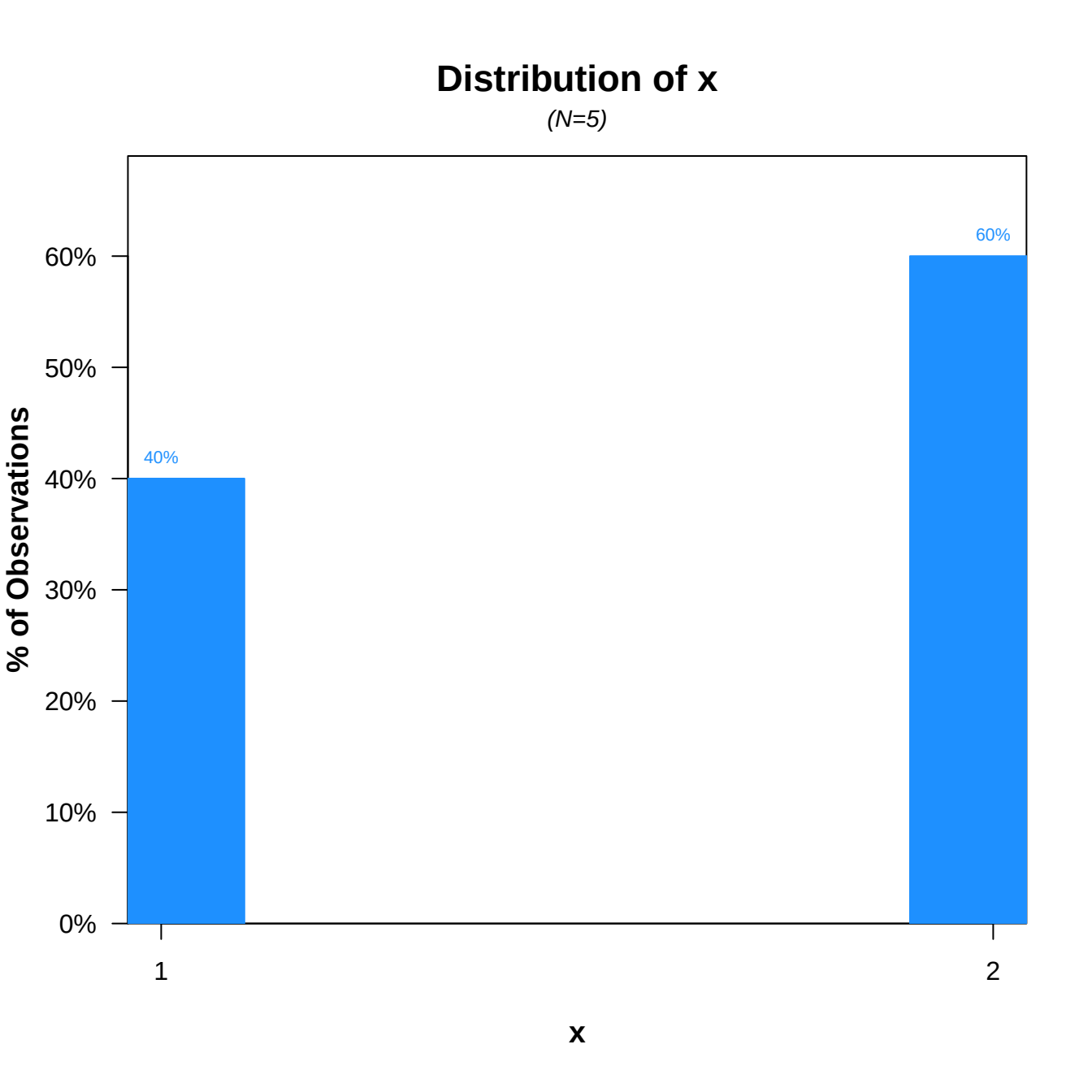

Distribution of x
(N=7)
A (N=4)
B (N=3)
Frequency
x
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1
2
5
2
2
1
1
1

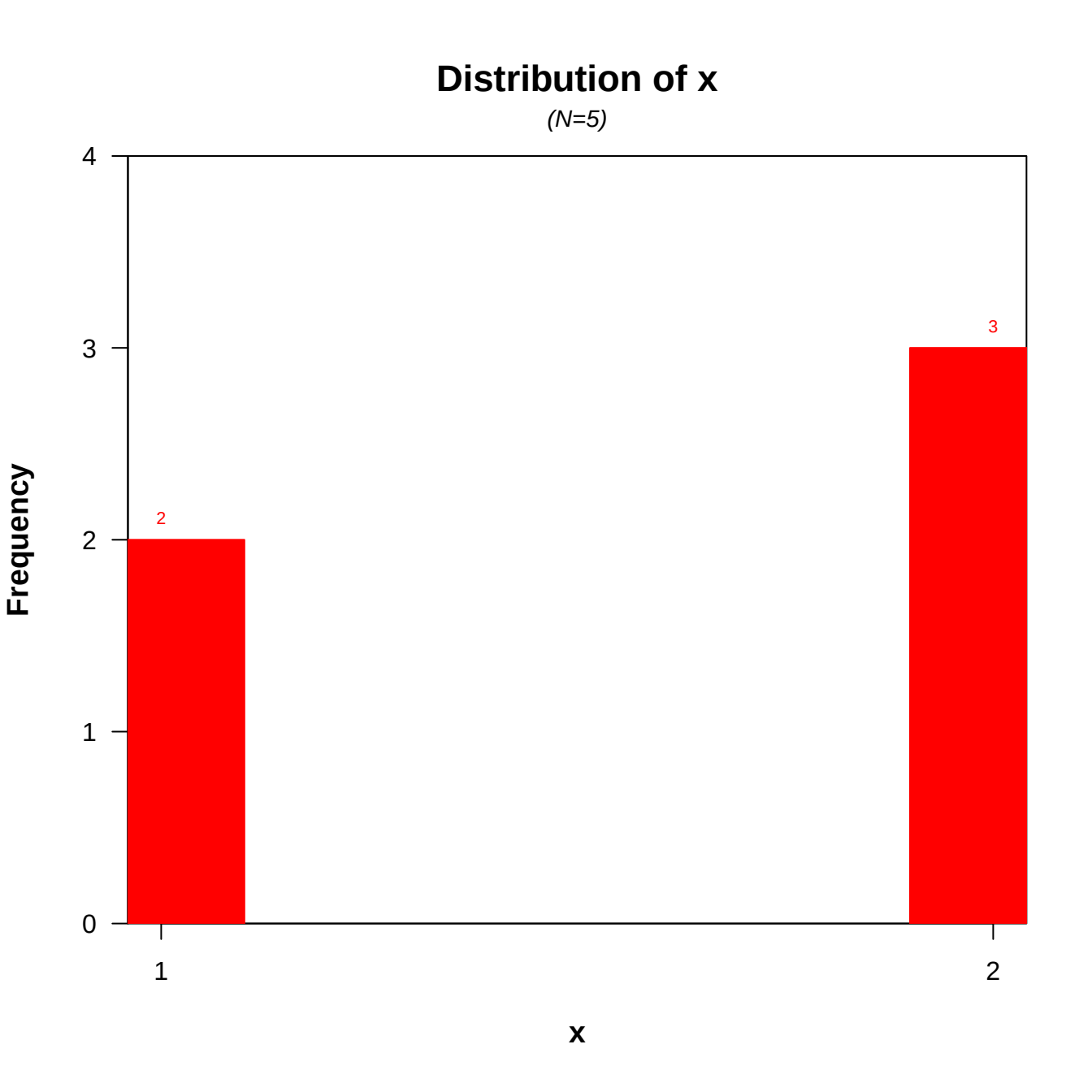

Distribution of x
(N=7)
A (N=4)
B (N=3)
Frequency
x
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1
2
5
2
2
1
1
1

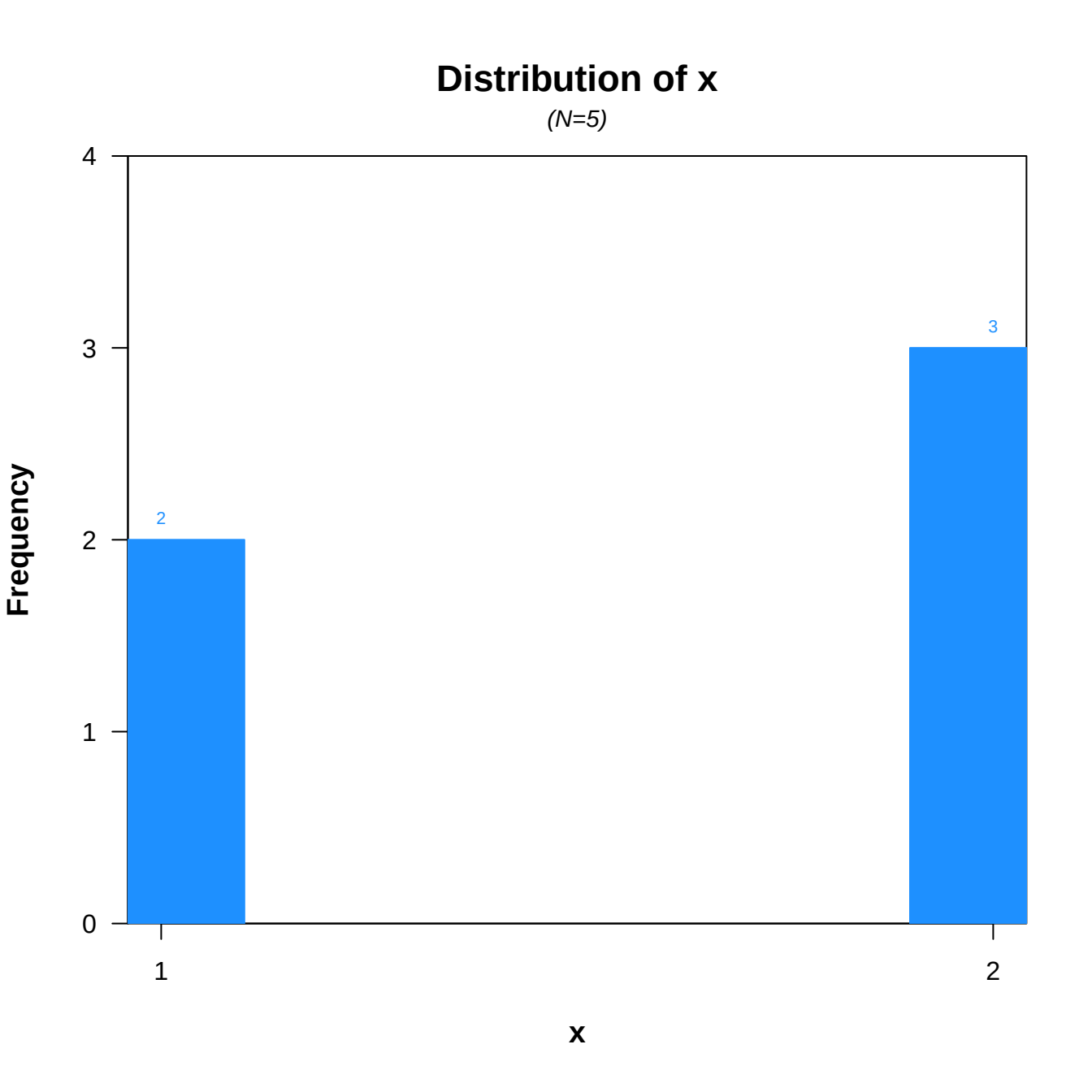

Distribution of value
(N=7)
A (N=4)
B (N=3)
Frequency
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2
2
1
1
1
1
2
5
value

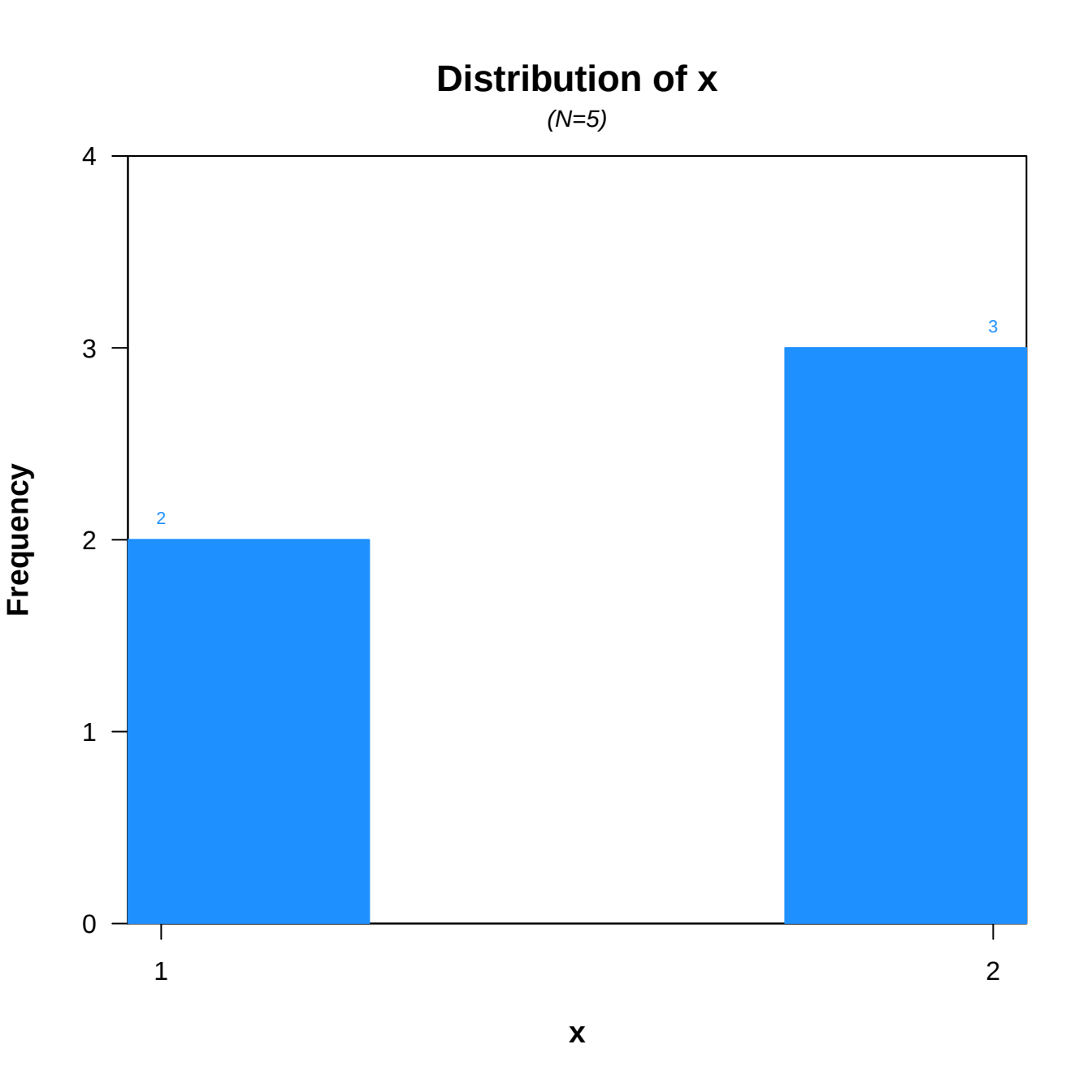

Distribution of value
(N=7)
A (N=4)
B (N=3)
Frequency
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2
2
1
1
1
1
2
5
value

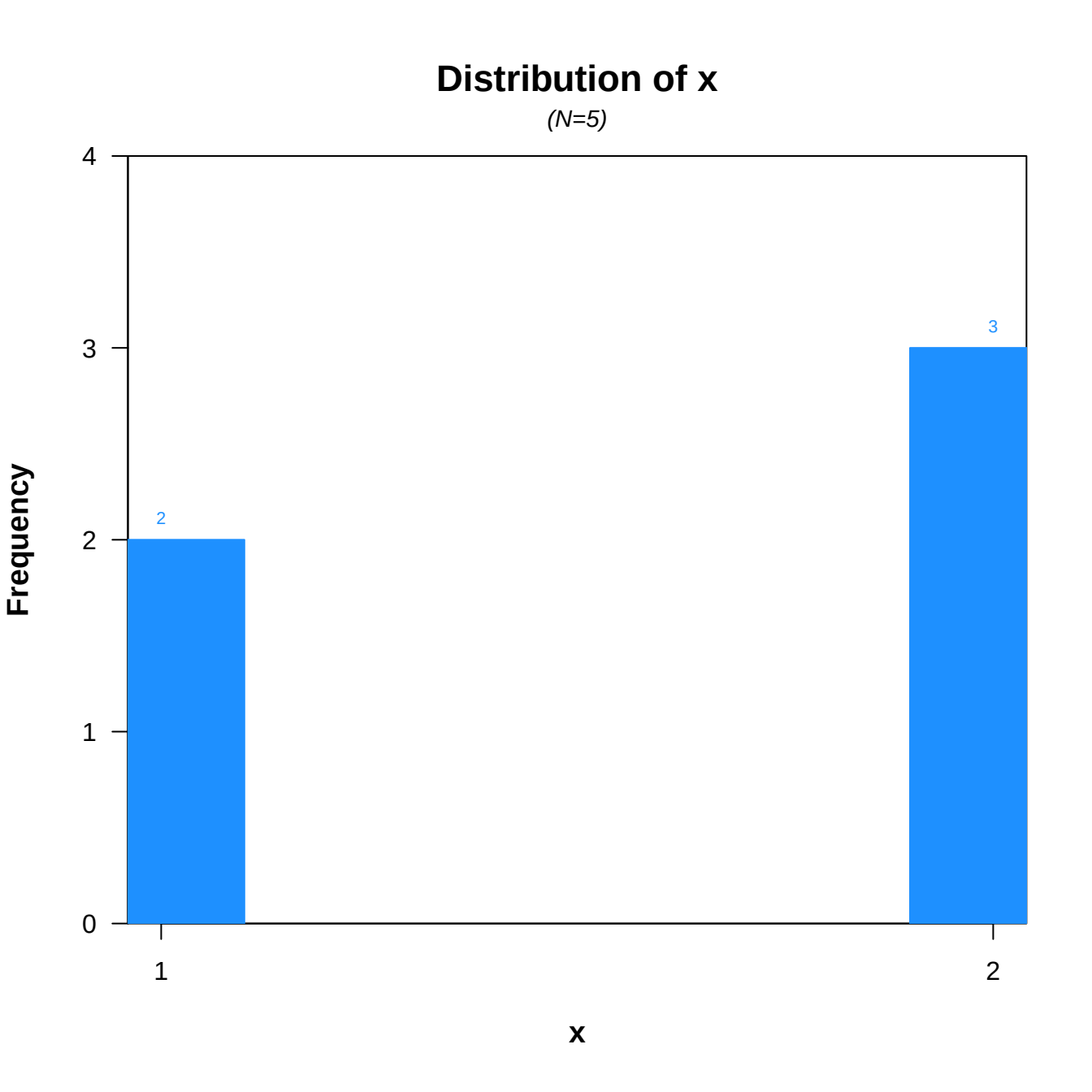

Distribution of x
(N=5)
Frequency
4
3
2
1
0
2
3
1
2
x

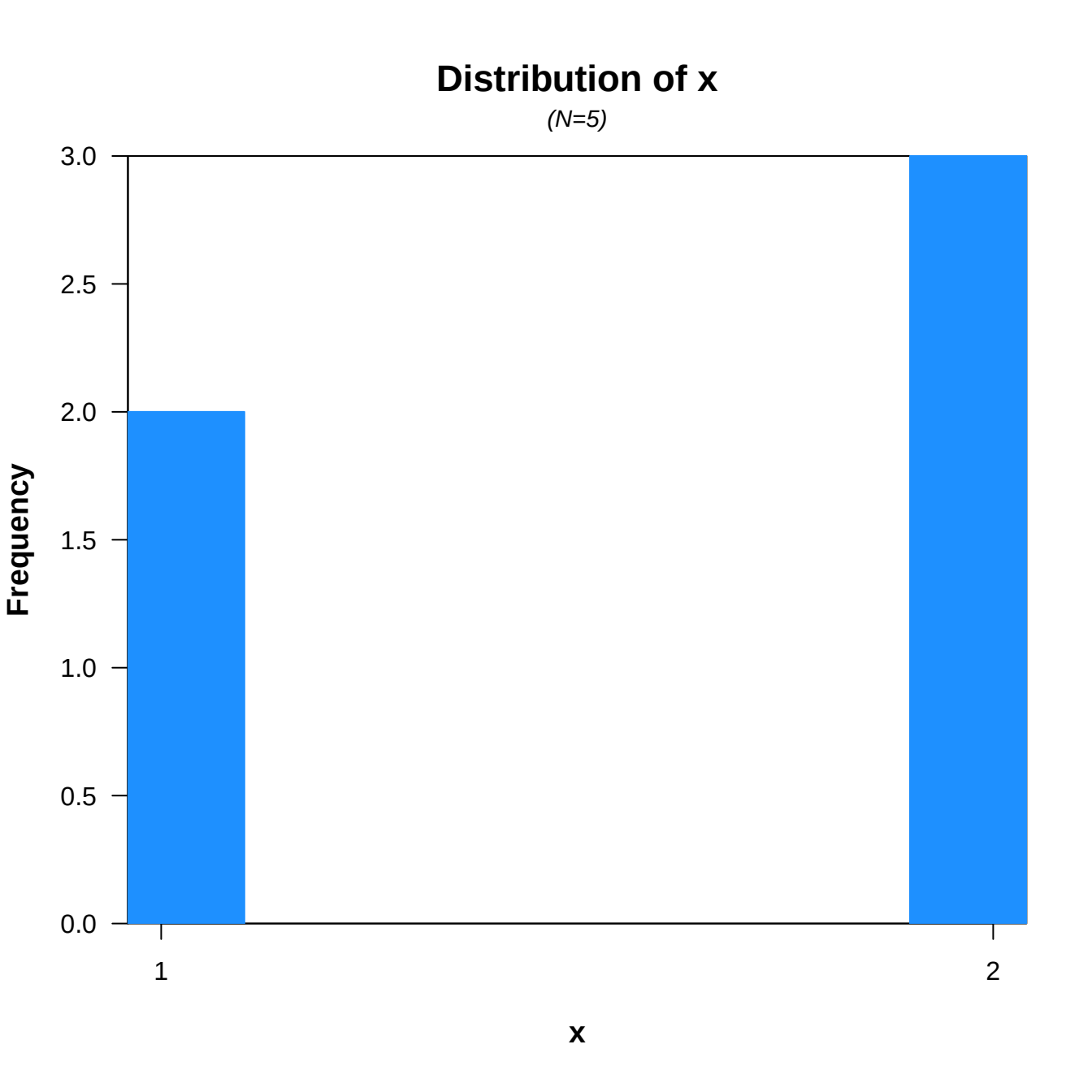

Distribution of x
(N=5)
% of Observations
60%
50%
40%
30%
20%
10%
0%
40%
60%
1
2
x

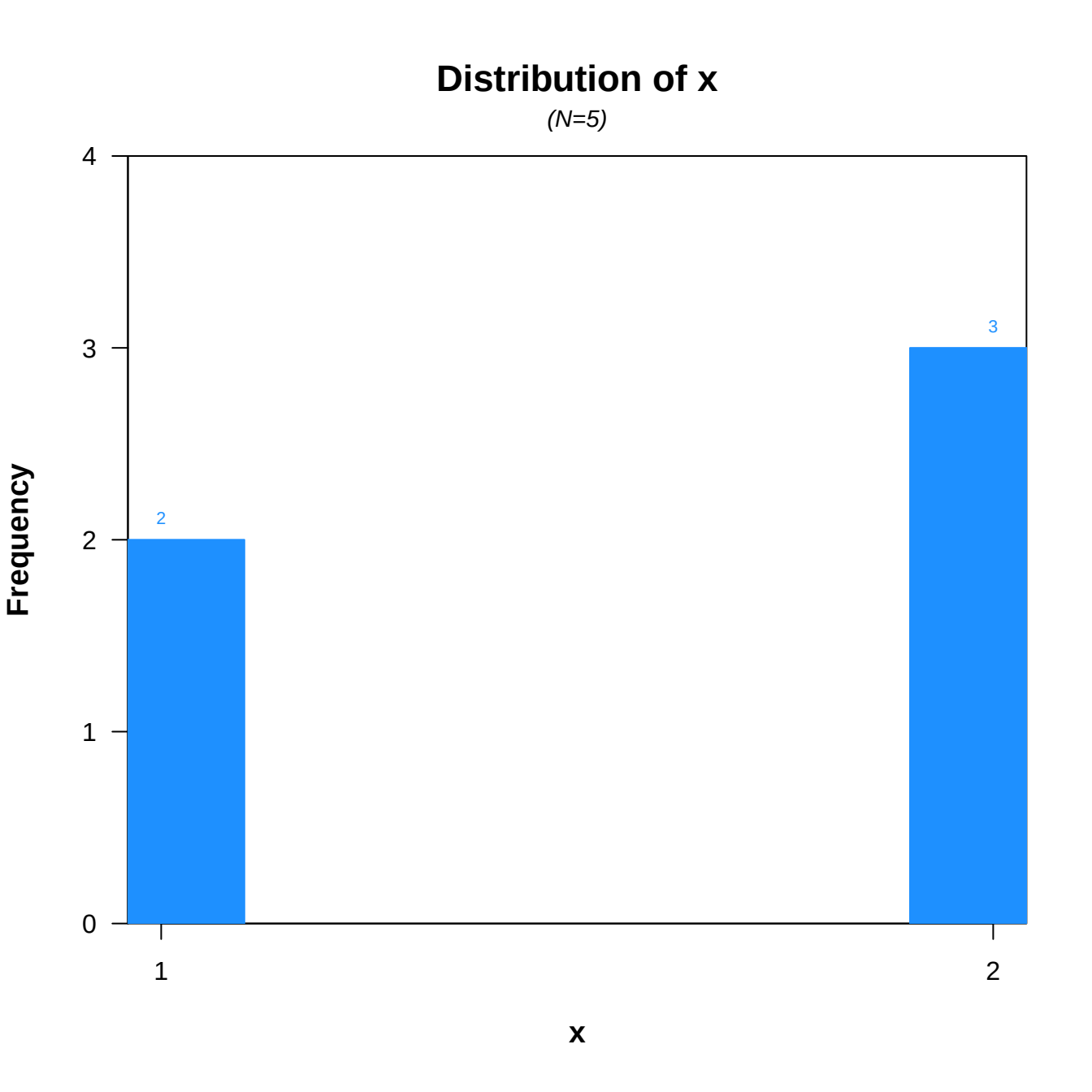

Distribution of x
(N=5)
Frequency
x
0
1
2
3
4
1
2
2
3

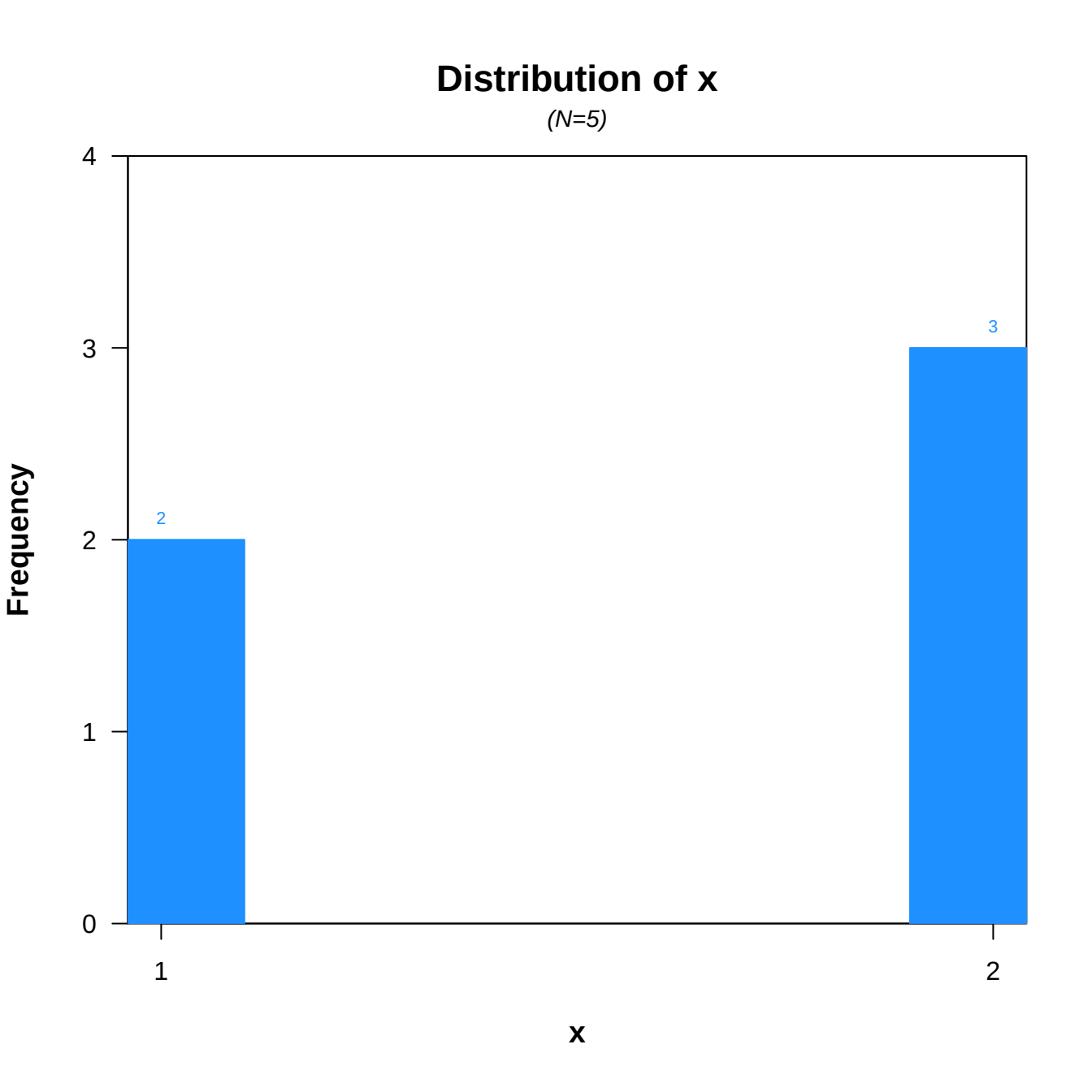

Distribution of x
(N=5)
Frequency
4
3
2
1
0
2
3
1
2
x

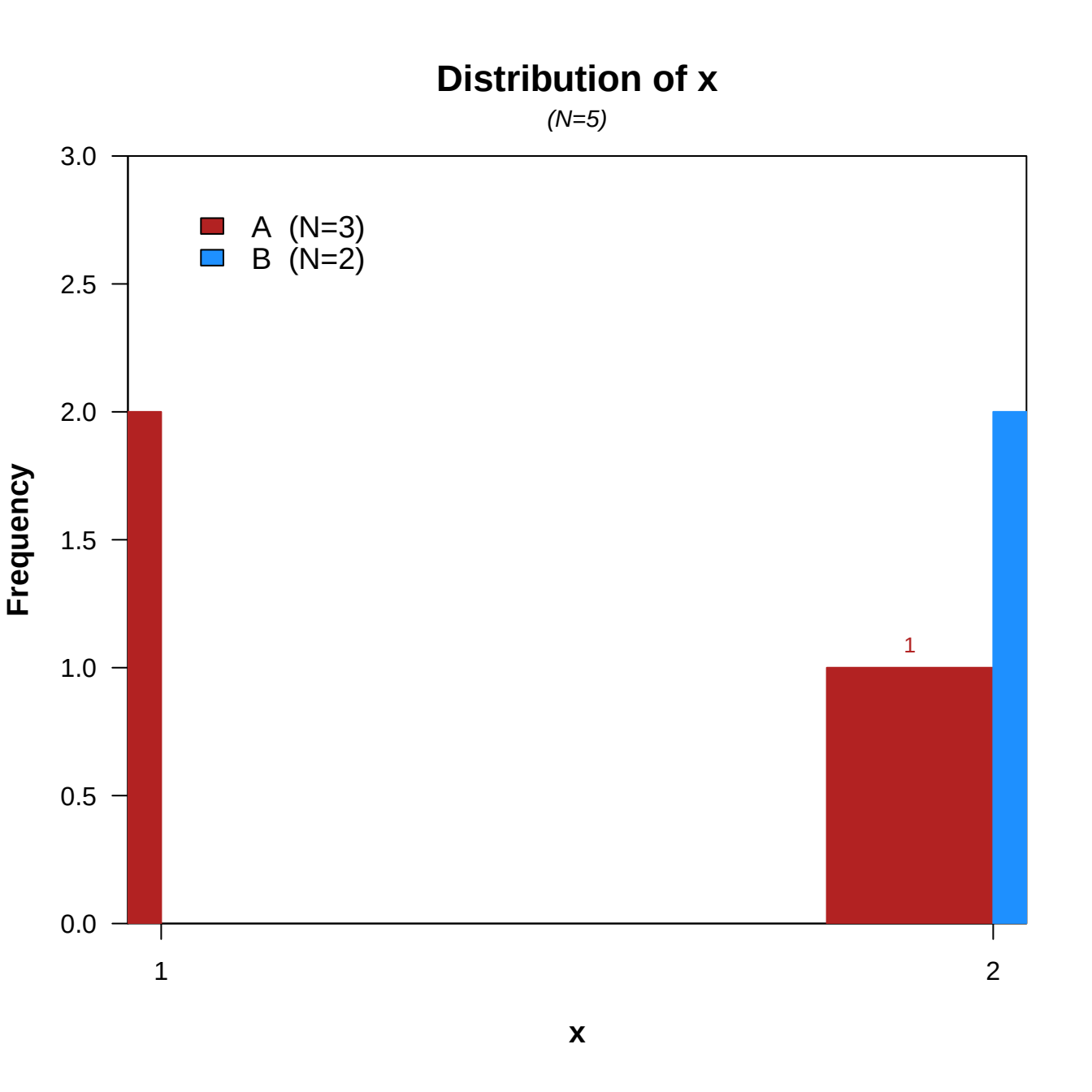

Distribution of x
(N=5)
Frequency
4
3
2
1
0
2
3
1
2
x

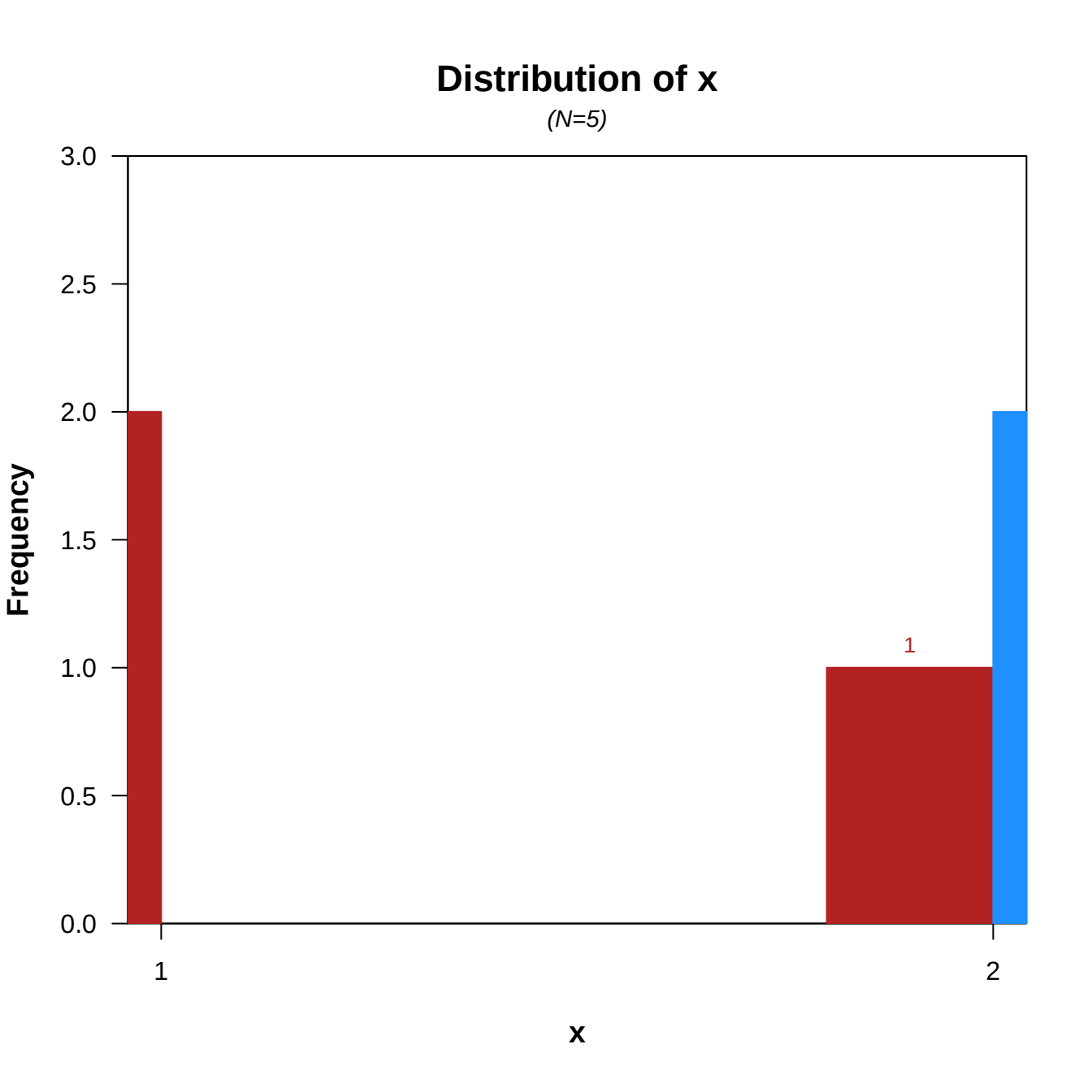

Distribution of x
(N=5)
Frequency
4
3
2
1
0
2
3
1
2
x

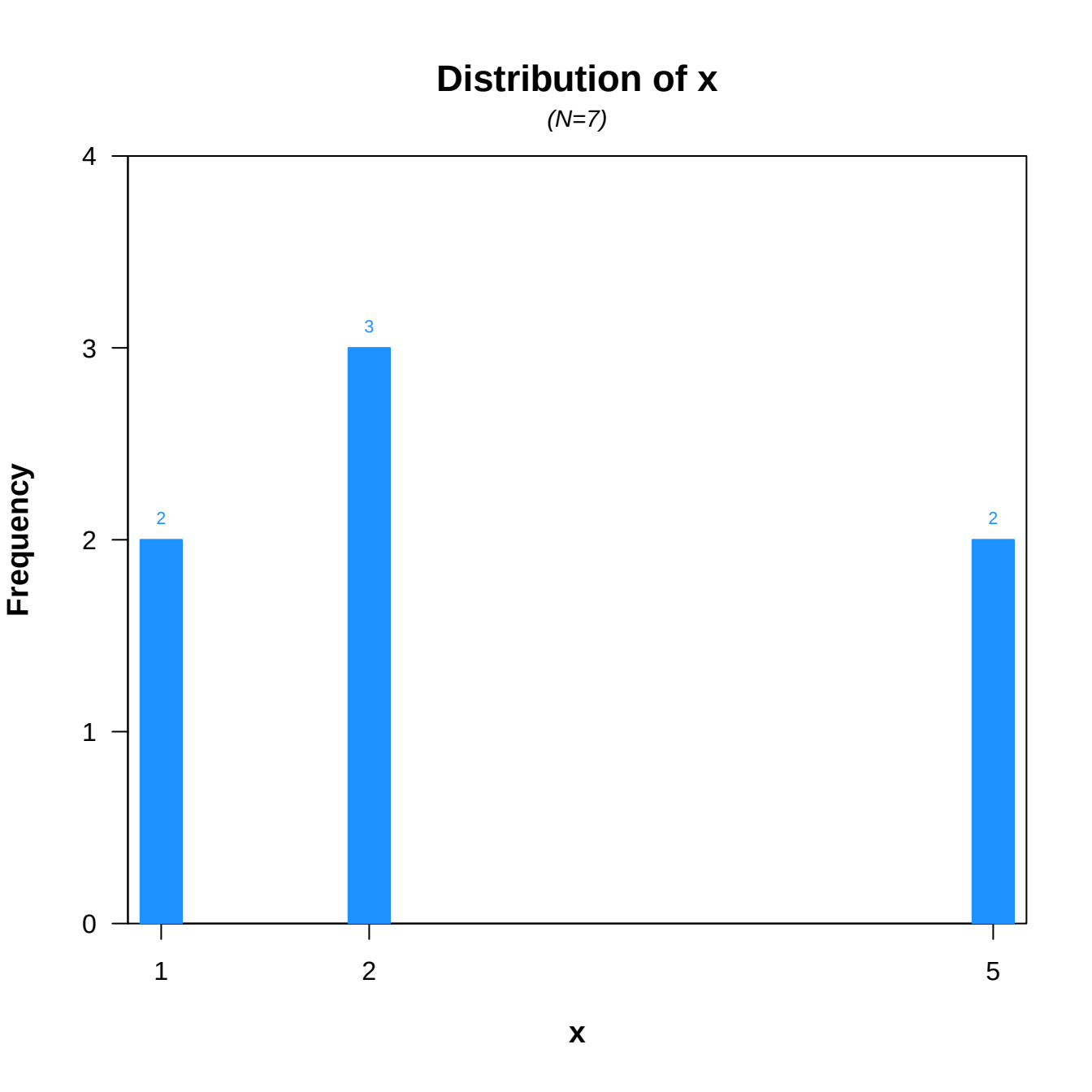

Distribution of x
(N=5)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Frequency
1
2
x

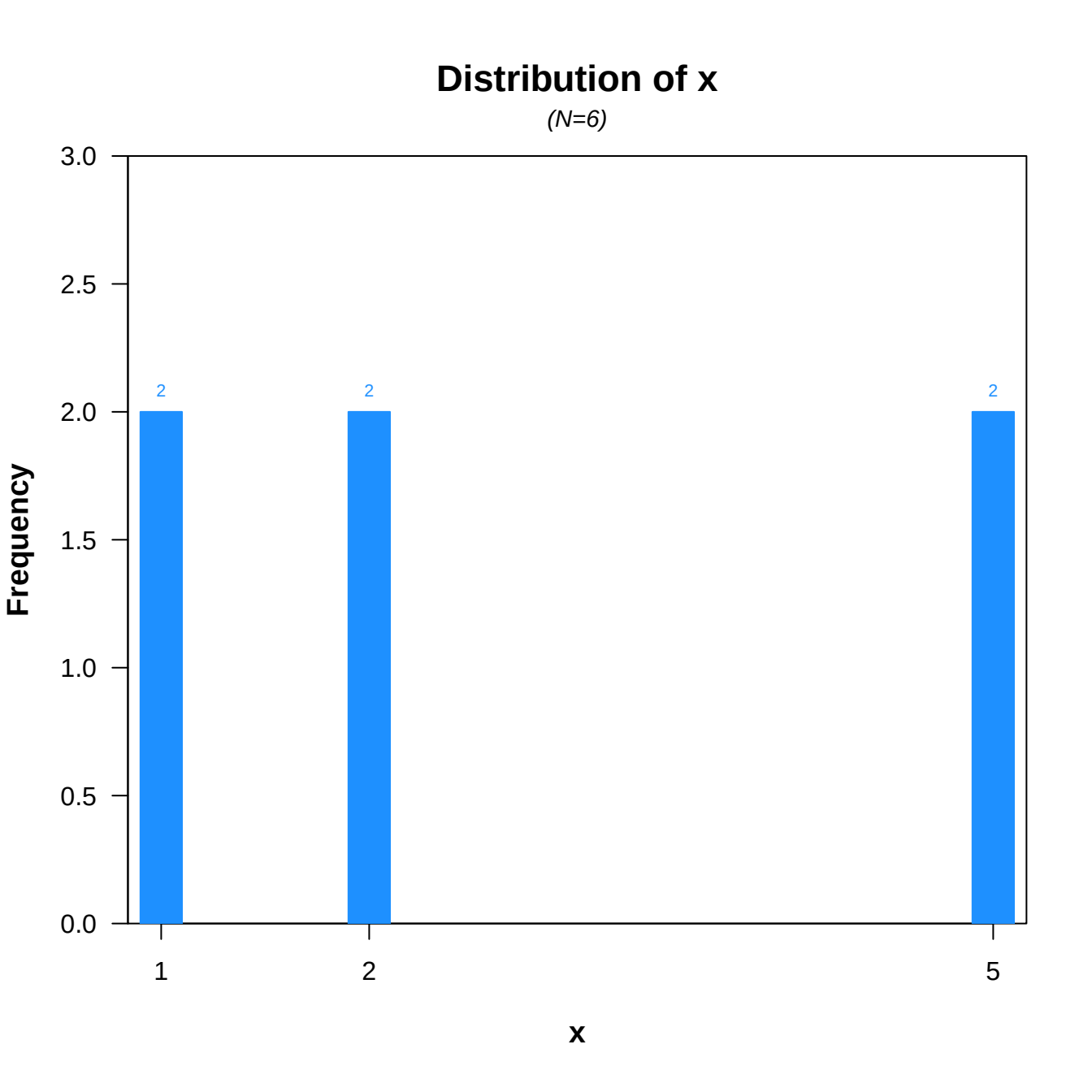

Distribution of x
(N=5)
Frequency
4
3
2
1
0
2
3
1
2
x

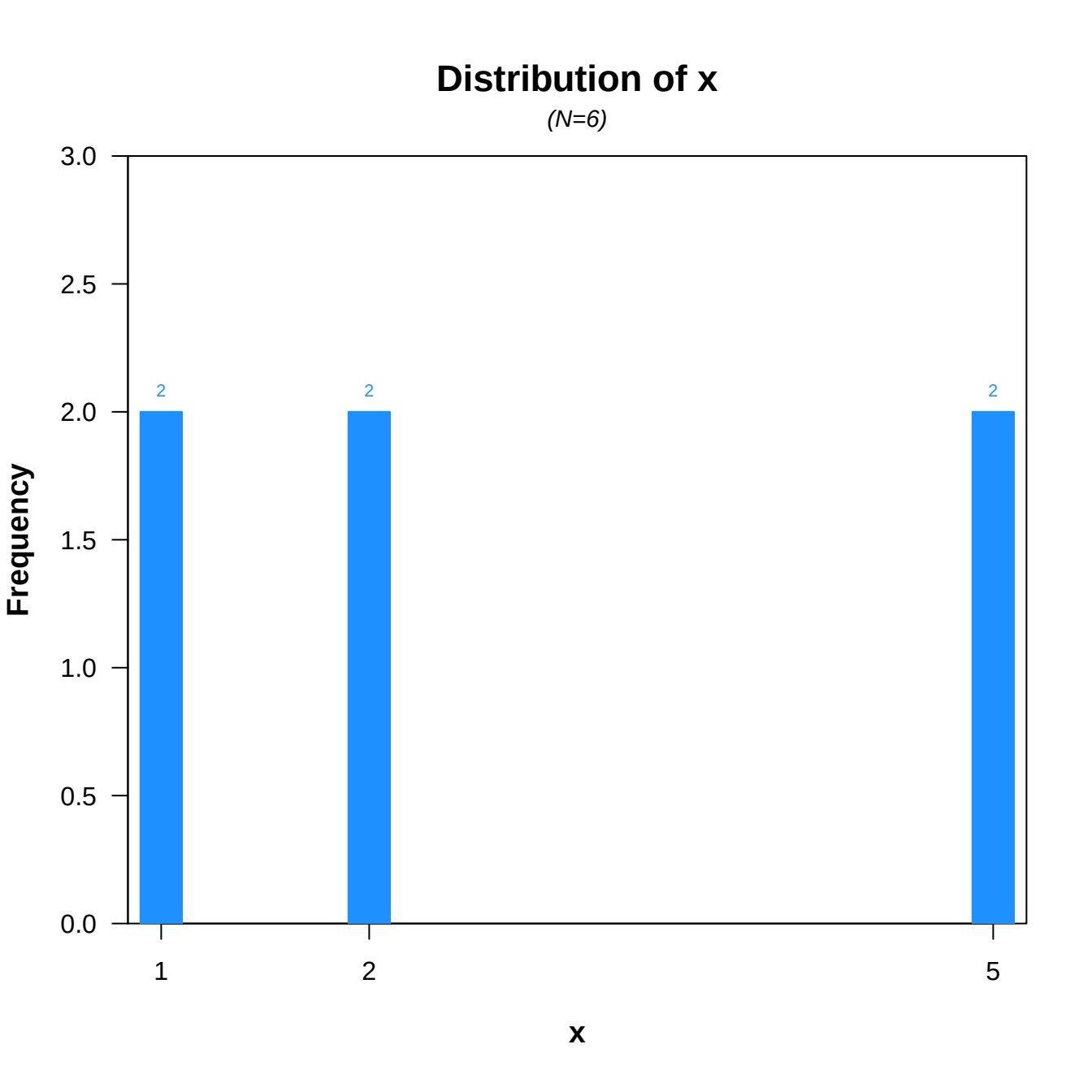

Distribution of x
(N=5)
Frequency
x
0
1
2
3
4
1
2
2
3

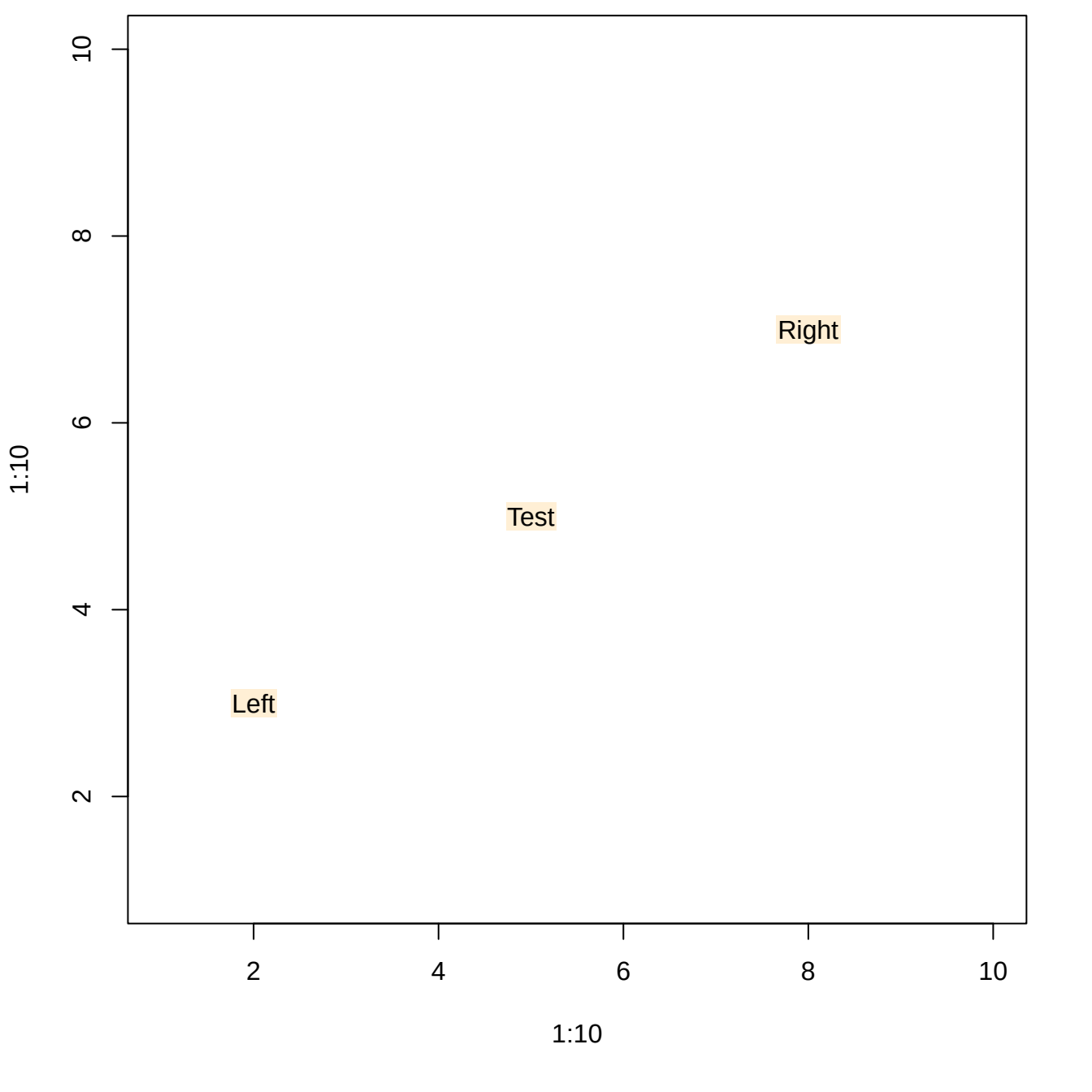

Distribution of x
(N=5)
A (N=3)
B (N=2)
Frequency
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1
1
2
x

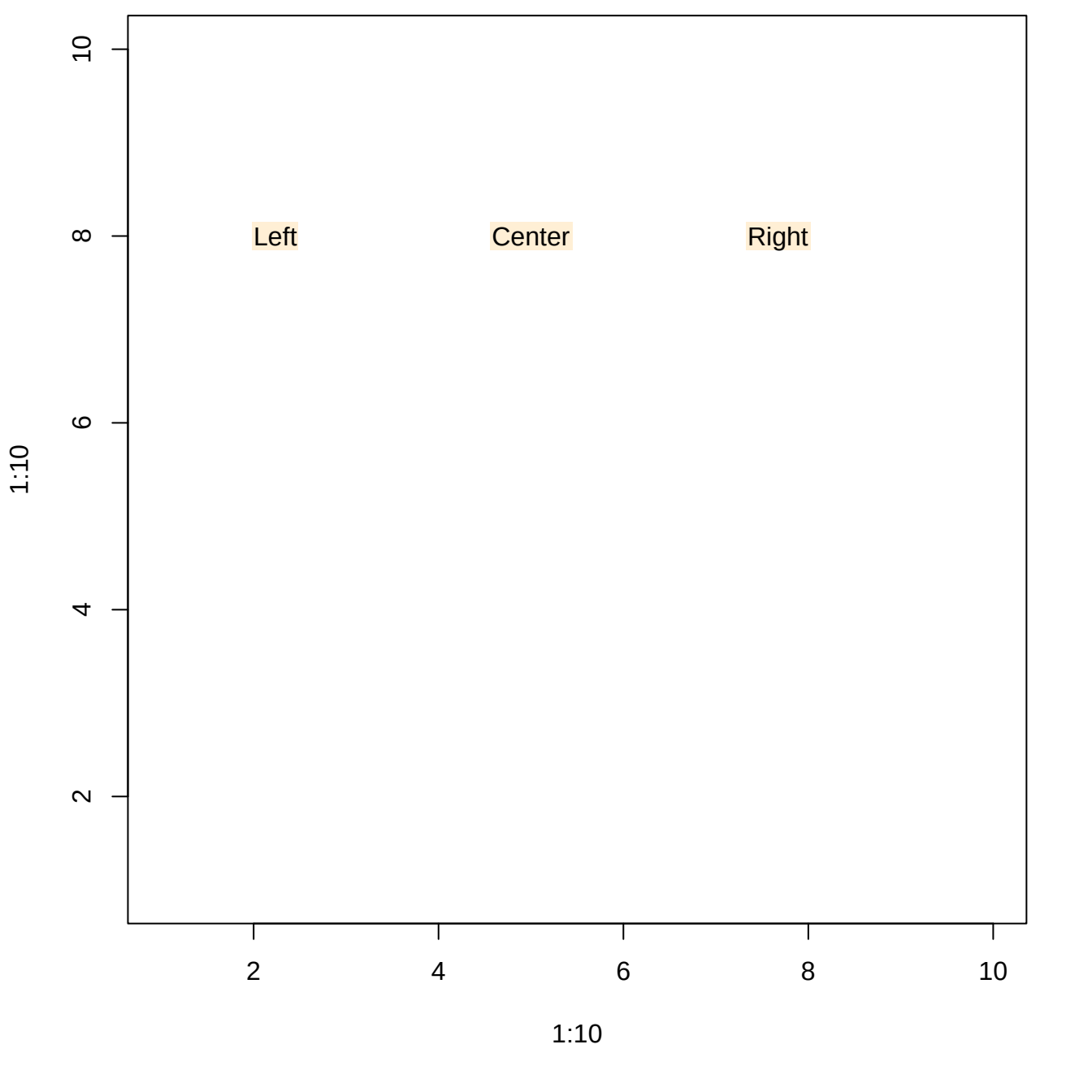

Distribution of x
(N=5)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Frequency
1
1
2
x

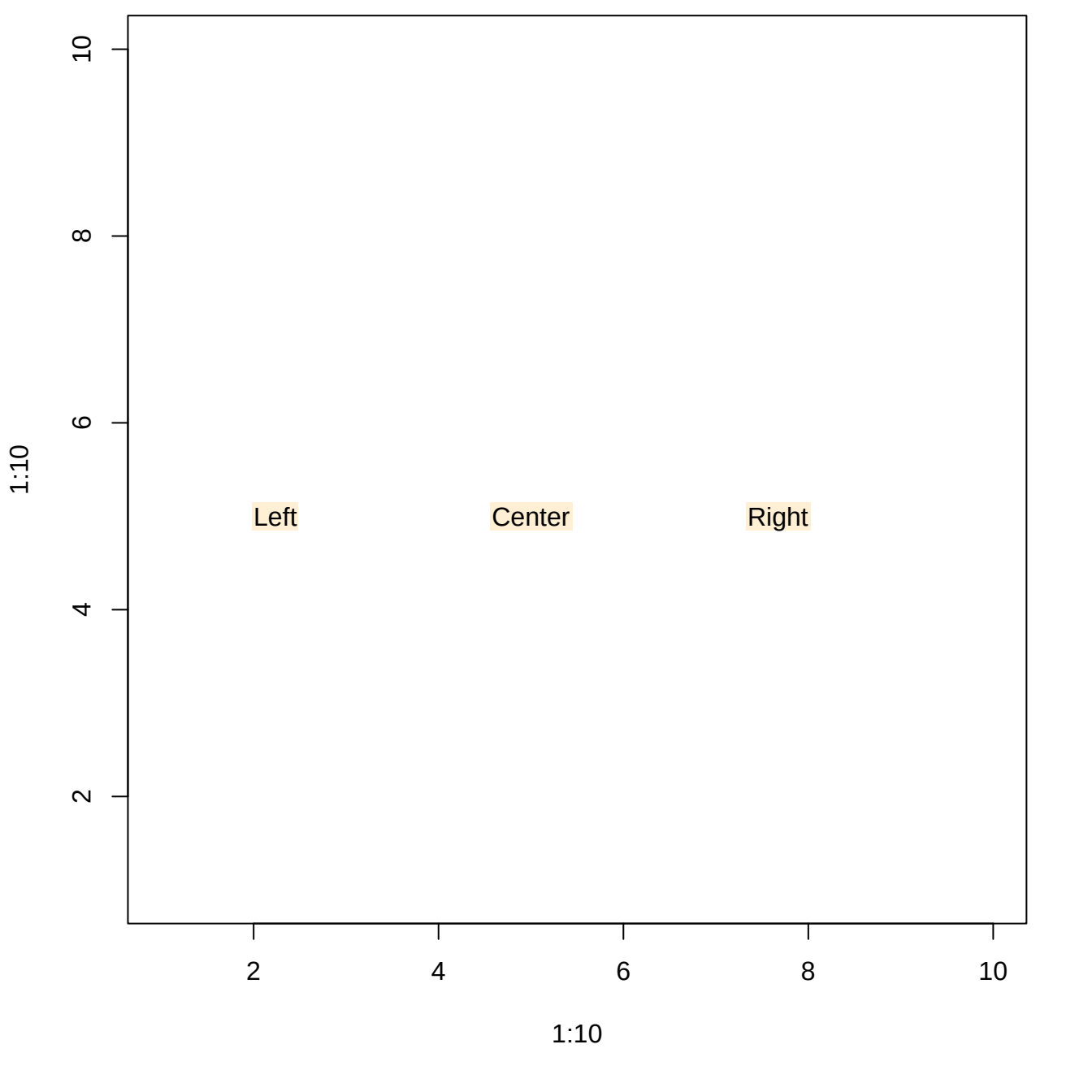

Distribution of x
(N=7)
Frequency
4
3
2
1
0
2
3
2
1
2
5
x

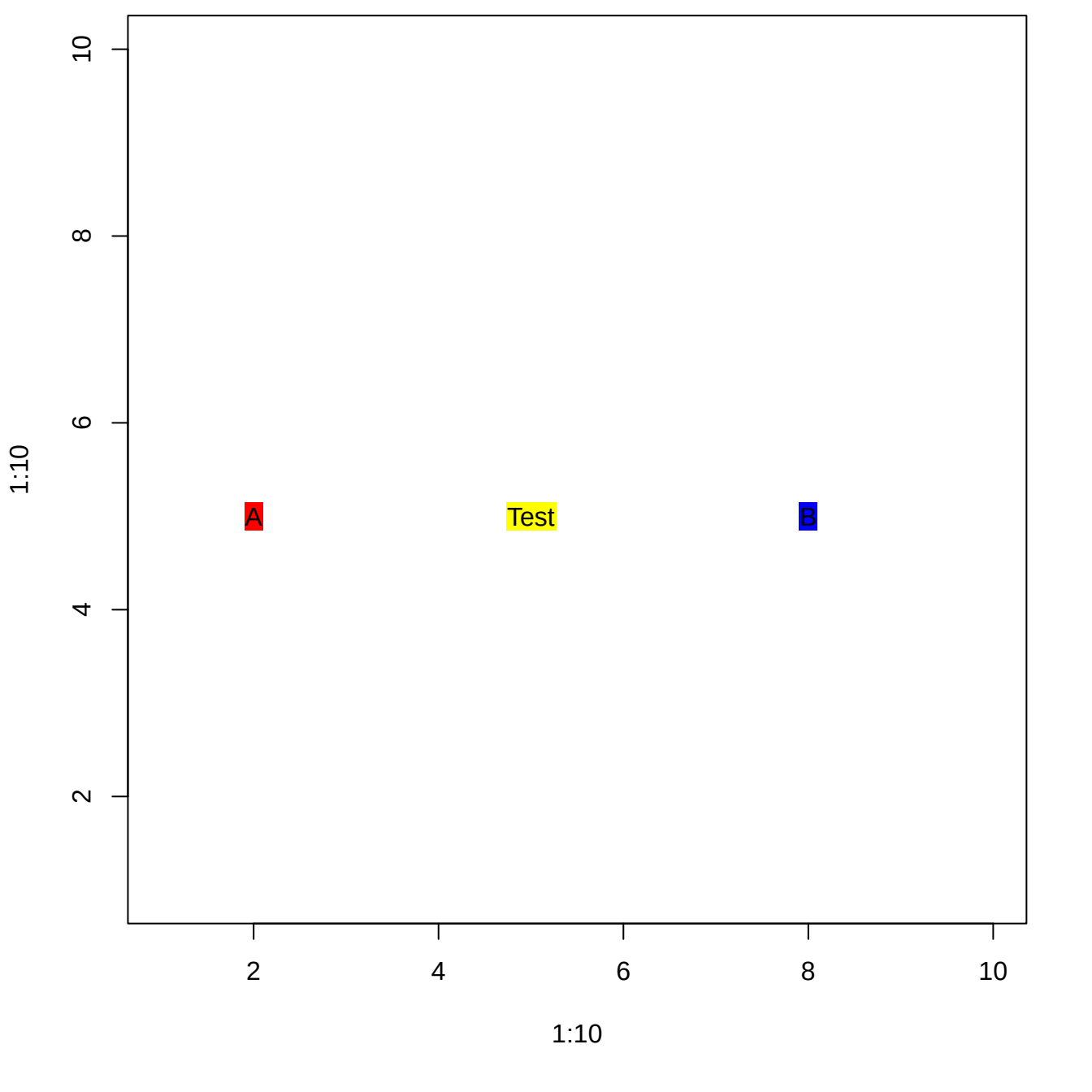

Distribution of x
(N=6)
Frequency
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2
2
2
1
2
5
x

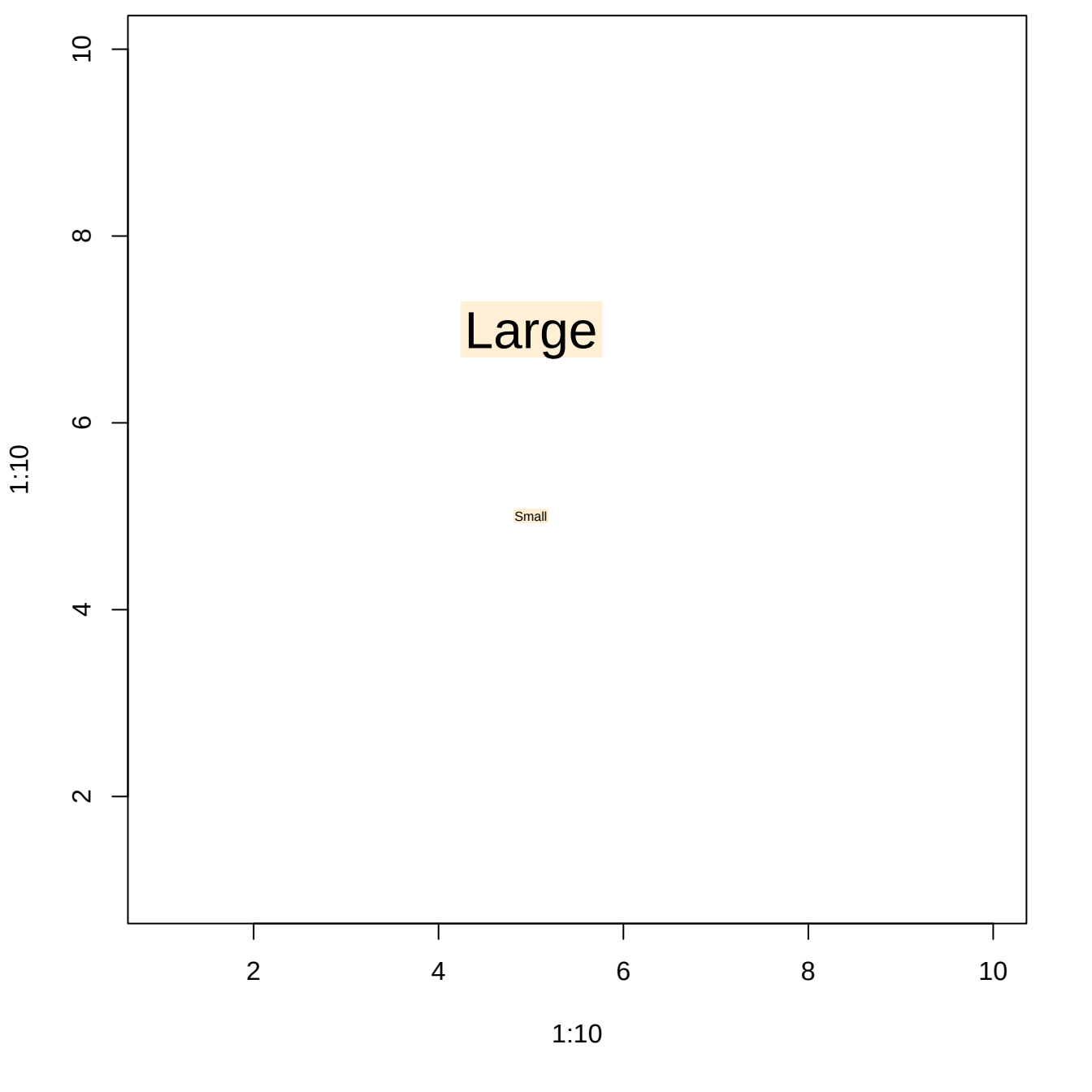

Distribution of x
(N=6)
Frequency
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2
2
2
1
2
5
x

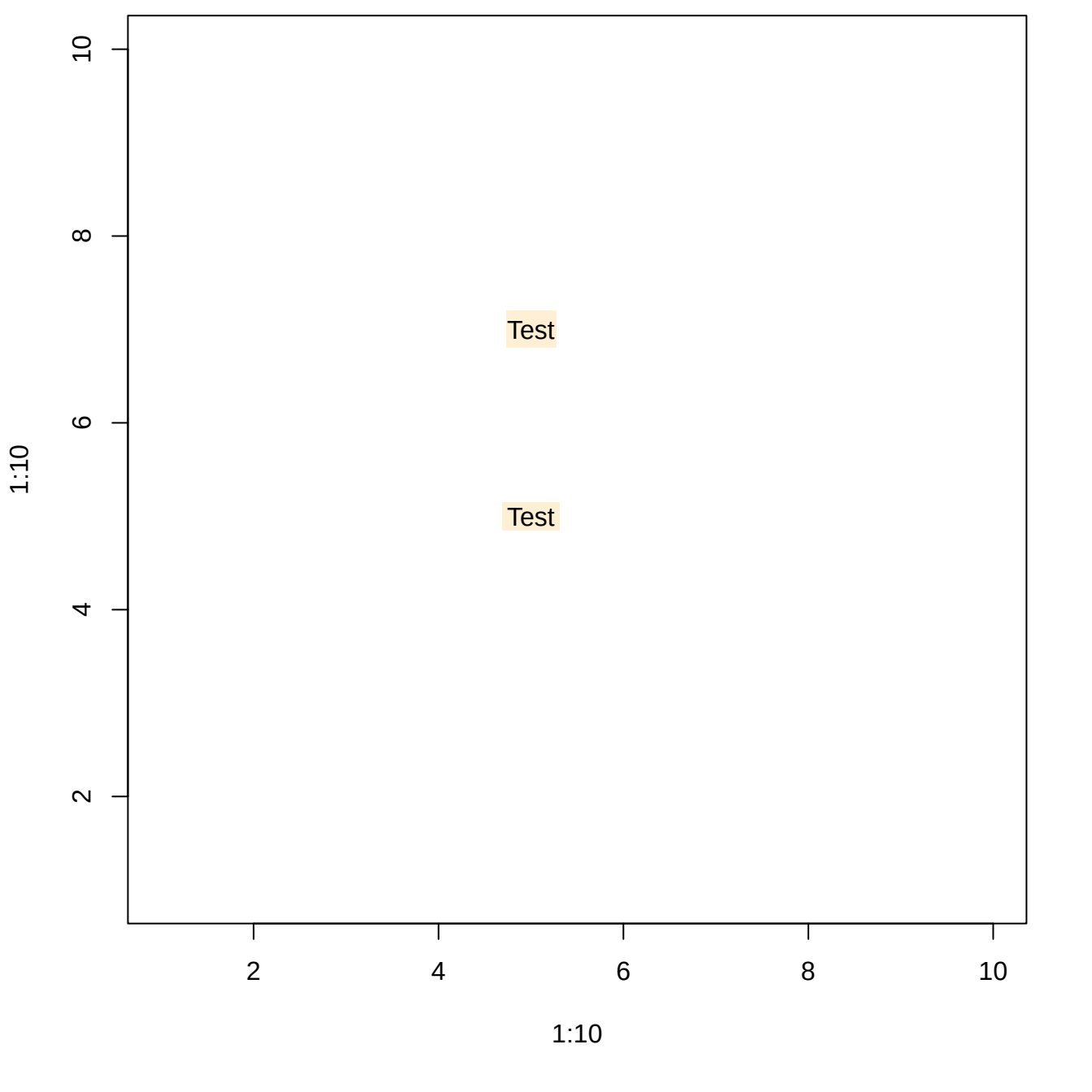

Right
Test
Left
1:10
2
4
6
8
10
1:10
2
4
6
8
10

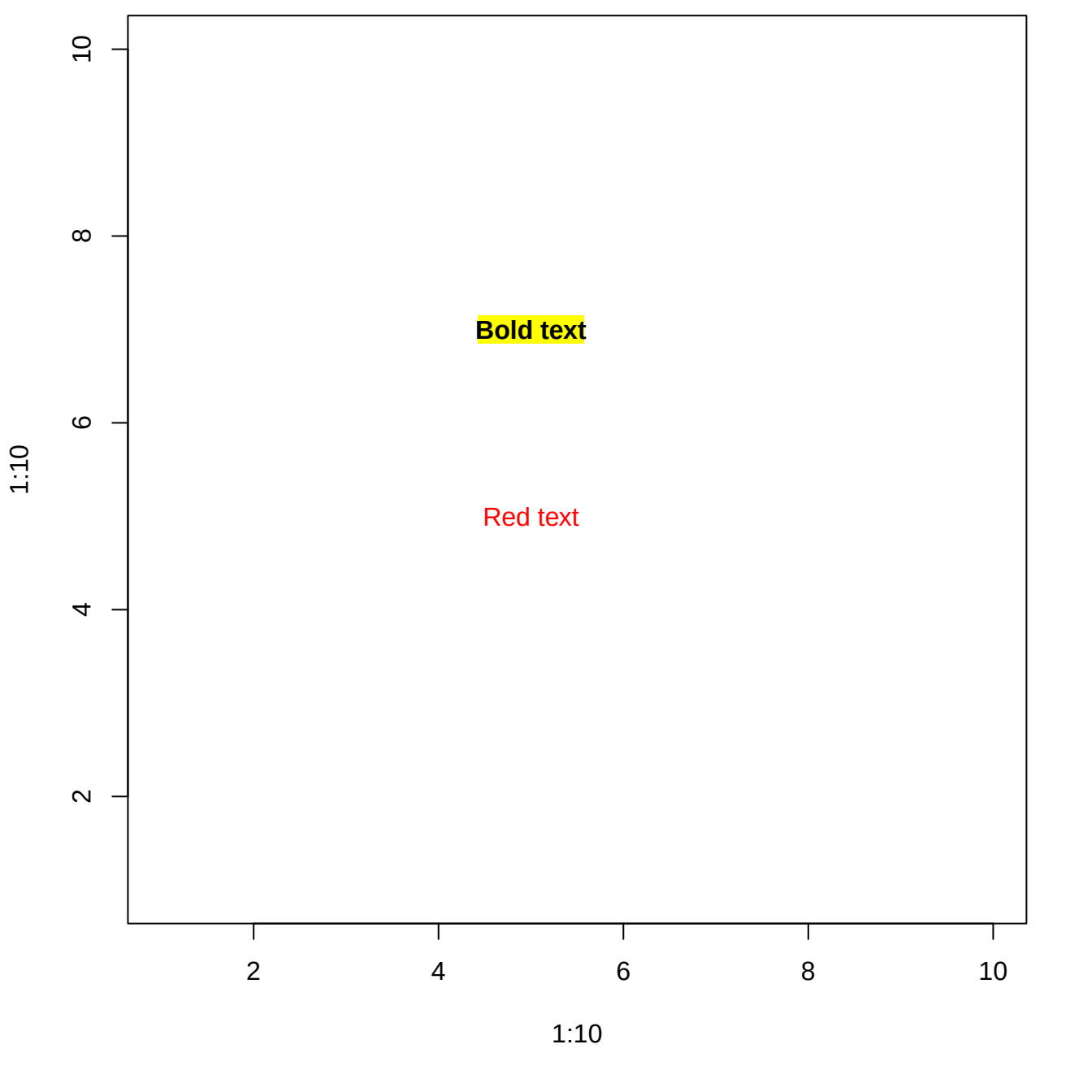

Left
Center
Right
1:10
2
4
6
8
10
1:10
2
4
6
8
10

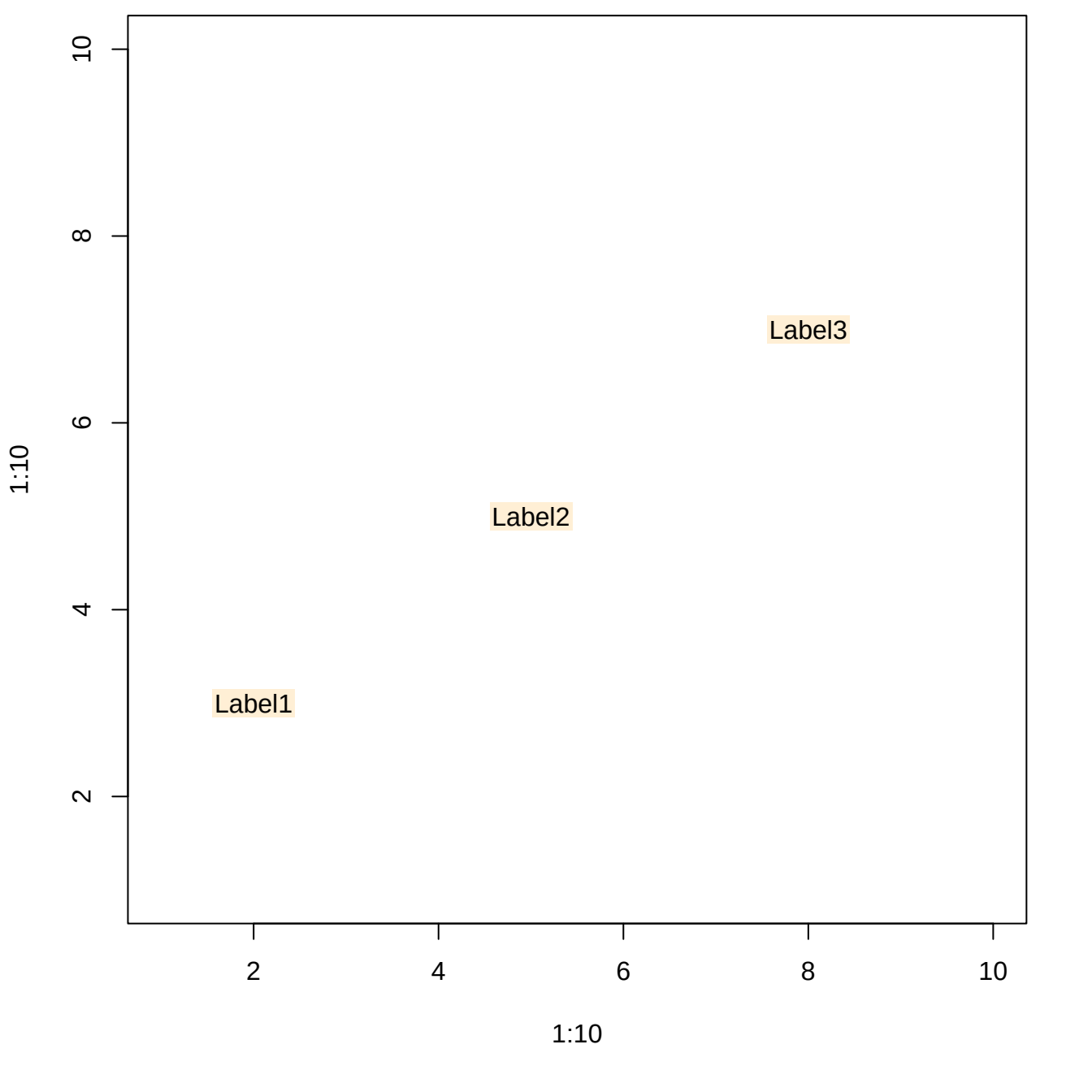

Left
Center
Right
1:10
1:10
2
4
6
8
10
2
4
6
8
10

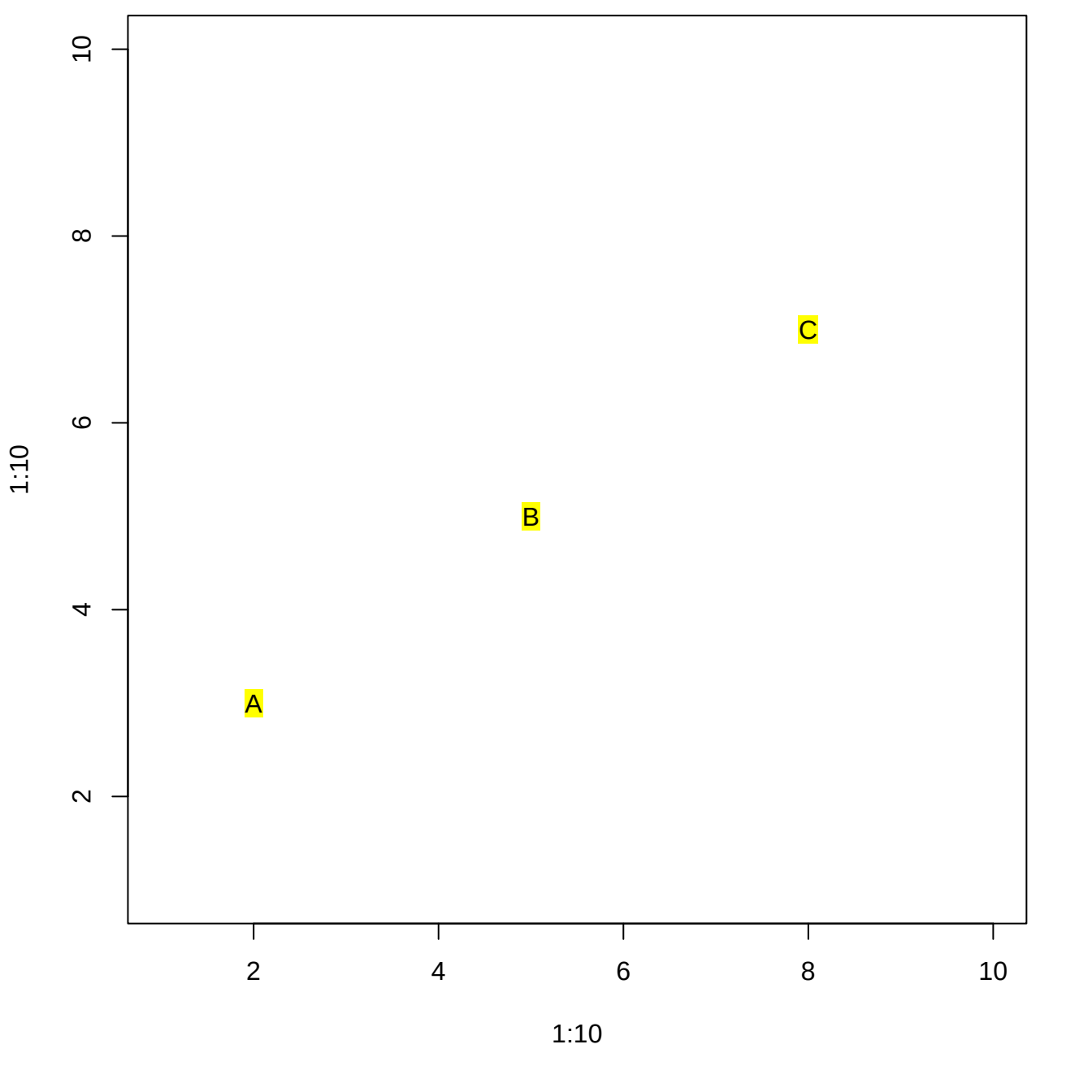

A
Test
B
1:10
1:10
2
4
6
8
10
2
4
6
8
10

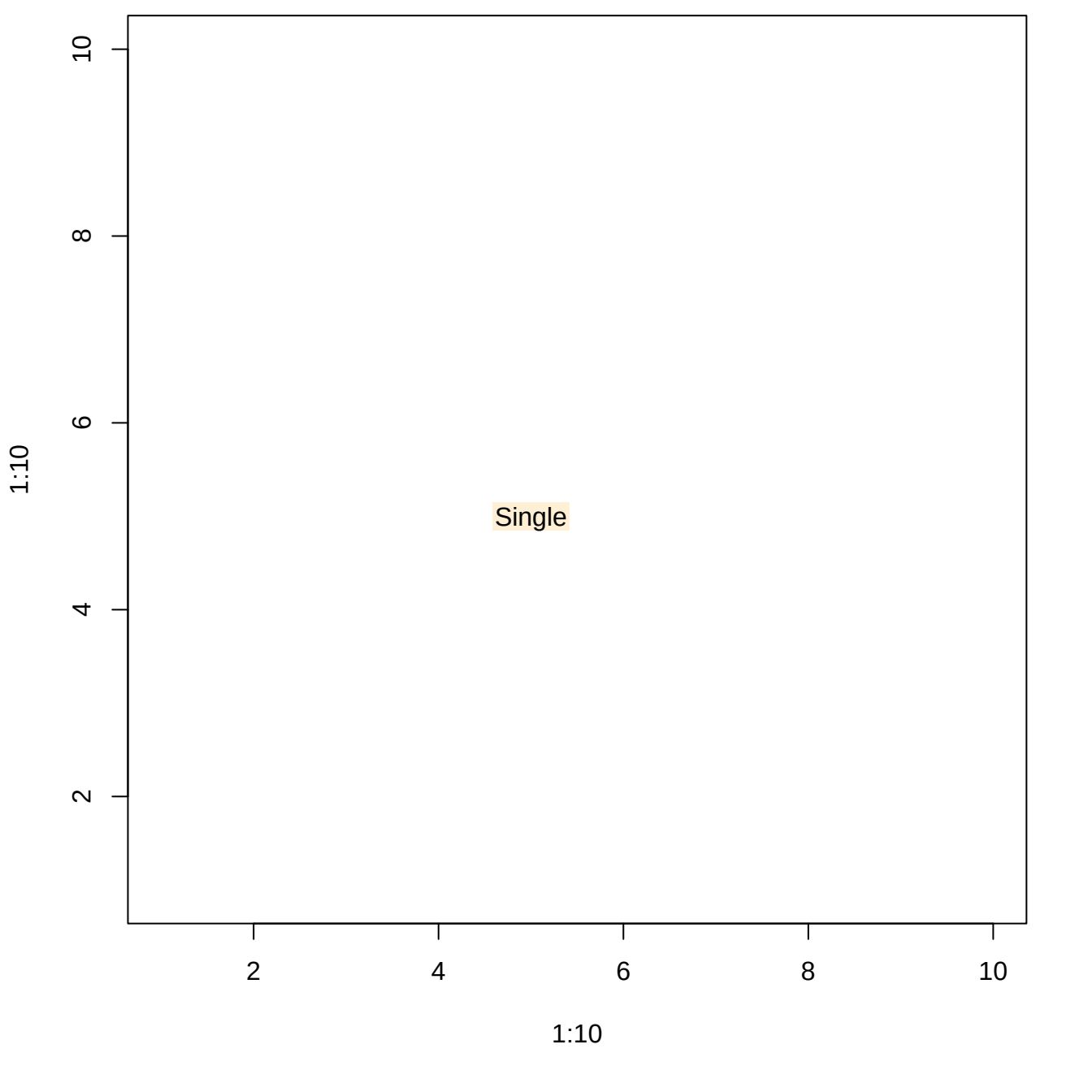

Large
Small
1:10
1:10
2
4
6
8
10
2
4
6
8
10


Test
Test
1:10
1:10
2
4
6
8
10
2
4
6
8
10


Bold text
Red text
1:10
1:10
2
4
6
8
10
2
4
6
8
10


Label3
Label2
Label1
1:10
1:10
2
4
6
8
10
2
4
6
8
10


10
8
6
4
2
1:10
A
B
C
2
4
6
8
10
1:10


Single
1:10
1:10
2
4
6
8
10
2
4
6
8
10