

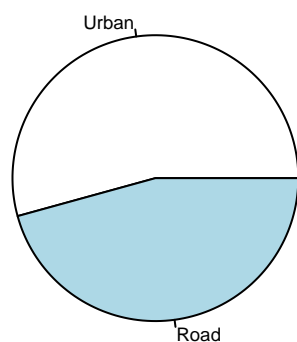
Basic statistical descriptive analysis about the accidents dataset

Group 5 MD

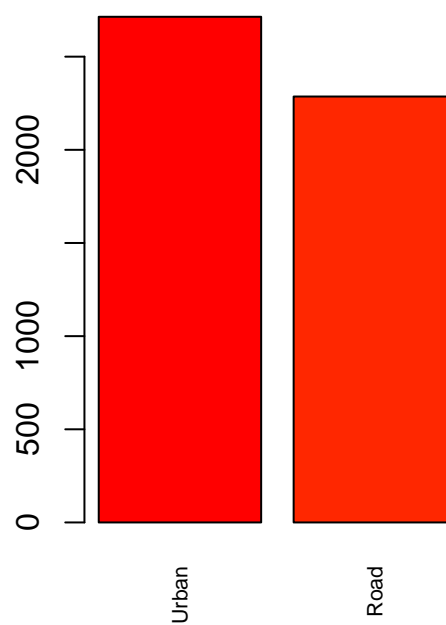
## Univariate analysis

Variable 1 : Zone

**Pie of Zone**



**Barplot of Zone**

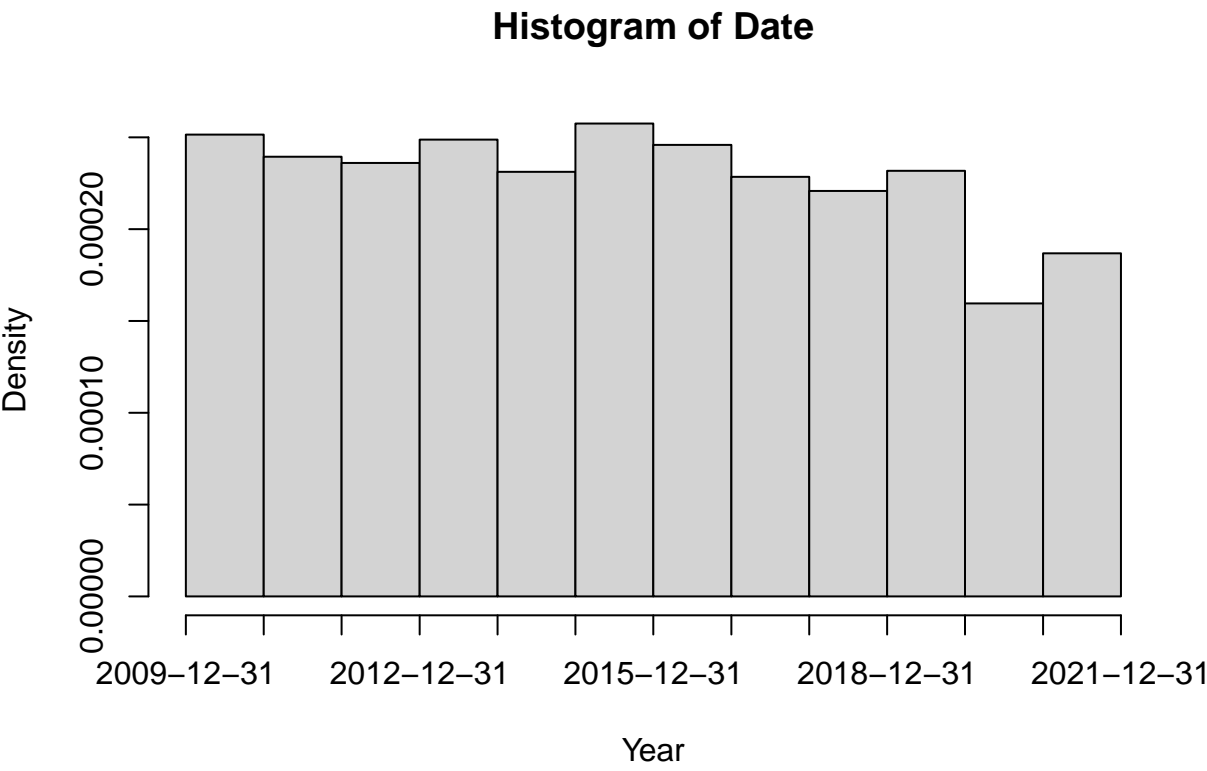


Number of modalities: 2

Zone	Frequency	Proportion
Urban	2714	0.5428
Road	2286	0.4572

**Table 6.3.** Zone frequency and proportion table (sorted).

Variable 2 : Date

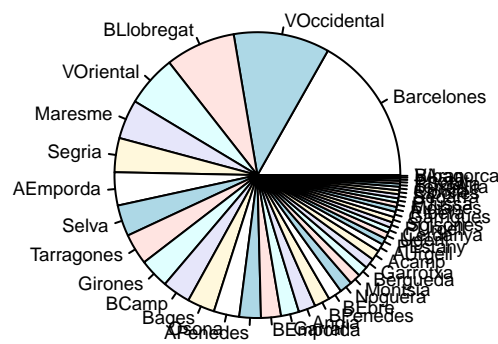


Min.	Max.	Missing values
2010-01-01	2021-12-30	0

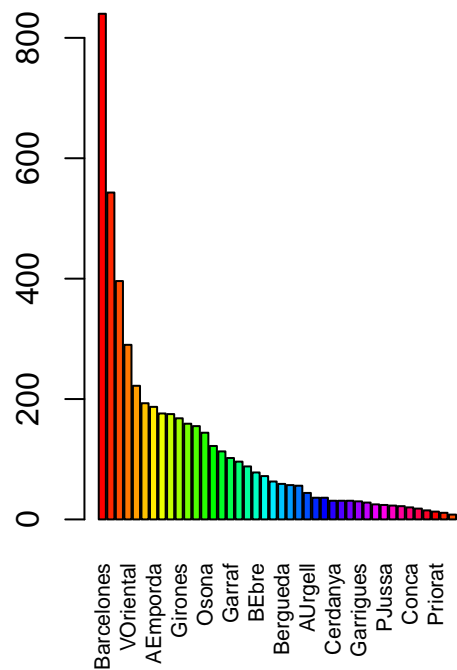
**Table 6.4.** Date summary.

Variable 3 : Region

Pie of Region



Barplot of Region



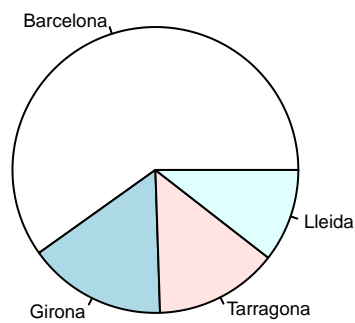
Number of modalities: 42

Region	Frequency	Proportion
Barcelones	840	0.1680
VOccidental	543	0.1086
BLlobregat	396	0.0792
VOriental	290	0.0580
Maresme	222	0.0444
Segria	193	0.0386
AEmporda	187	0.0374
Selva	176	0.0352
Tarragones	175	0.0350
Girones	168	0.0336
BCamp	159	0.0318
Bages	155	0.0310
Osona	144	0.0288
APenedes	122	0.0244
BEmporda	113	0.0226
Garraf	102	0.0204
Anoia	96	0.0192
BPenedes	88	0.0176
BEbre	78	0.0156
Noguera	72	0.0144
Montsia	63	0.0126
Bergueda	59	0.0118
Garrotxa	57	0.0114
Acamp	56	0.0112
AUrgell	44	0.0088
PEstany	36	0.0072
Ugerll	36	0.0072
Cerdanya	31	0.0062
PUrgell	31	0.0062
Solsones	31	0.0062
Garrigues	30	0.0060
Ribera	28	0.0056
Moianes	25	0.0050
PJussa	24	0.0048
Segarra	23	0.0046
Ripolles	22	0.0044
Conca	20	0.0040
TerraAlta	18	0.0036
PSobira	15	0.0030
Priorat	13	0.0026
Ribagorca	11	0.0022
VAran	8	0.0016

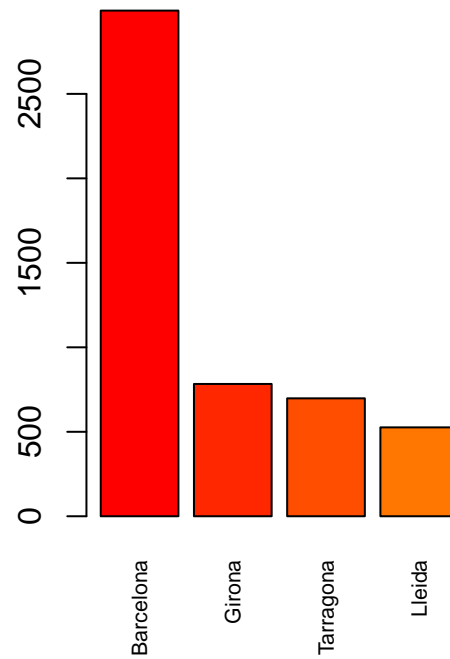
**Table 6.5.** Region frequency and proportion table (sorted).

Variable 4 : Prov

**Pie of Prov**



**Barplot of Prov**

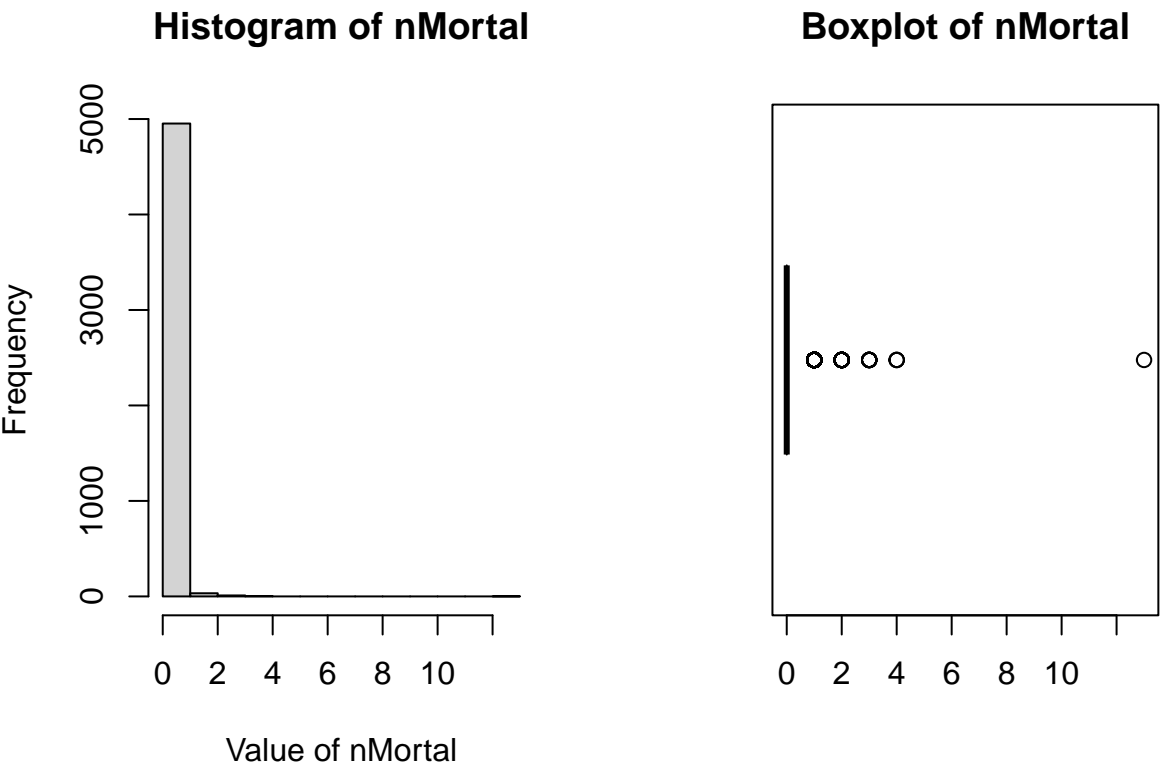


Number of modalities: 4

Prov	Frequency	Proportion
Barcelona	2993	0.5986
Girona	783	0.1566
Tarragona	698	0.1396
Lleida	526	0.1052

**Table 6.6.** Prov frequency and proportion table (sorted).

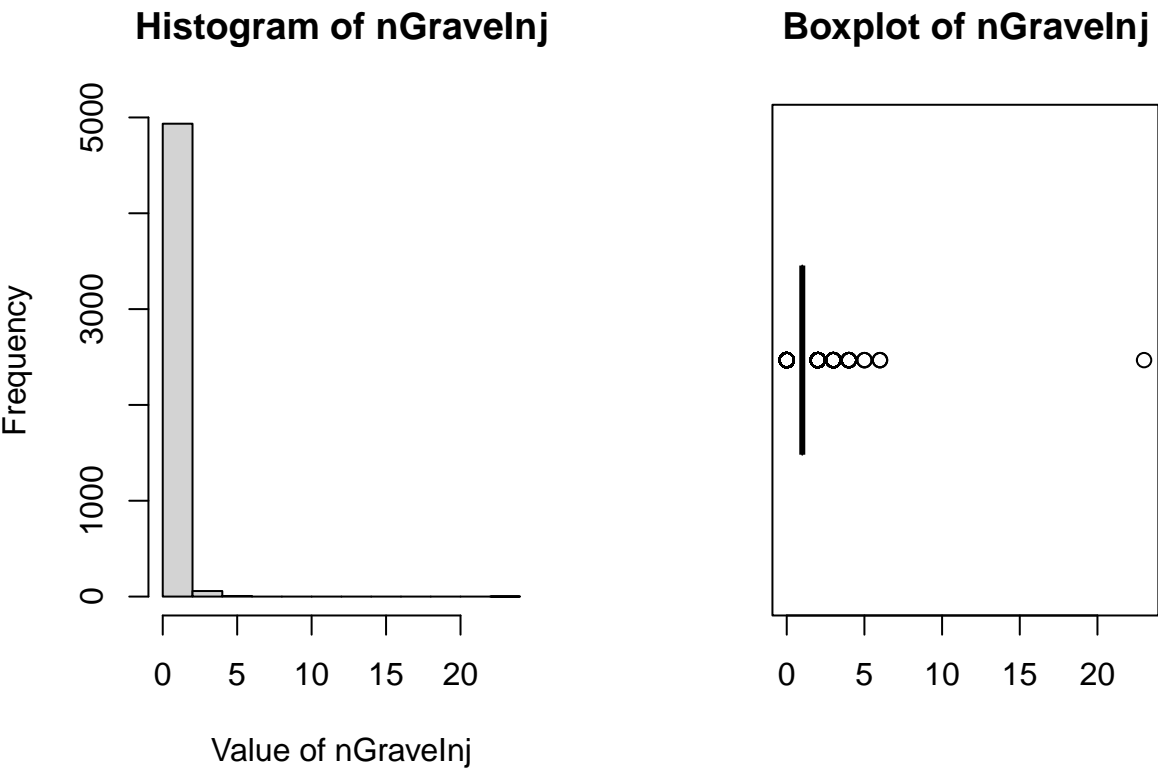
Variable 5 : nMortal



Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	sd	vc.	Missing
0	0	0	0.14	0	13	0.4289951	3.064251	0

Table 6.7. nMortal extended Summary Statistics.

Variable 6 : nGraveInj

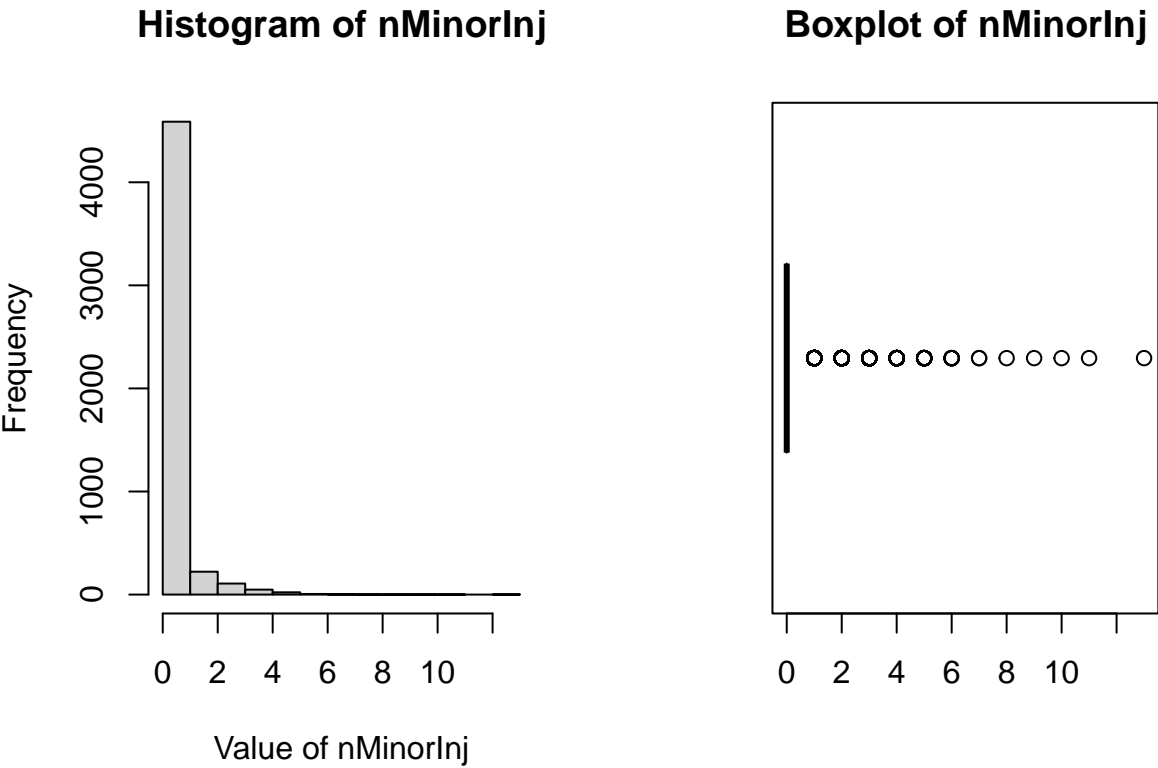


Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	sd	vc.	Missing
0	1	1	1.0034	1	23	0.5904728	0.588472	0

Table 6.8. nGraveInj extended Summary Statistics.



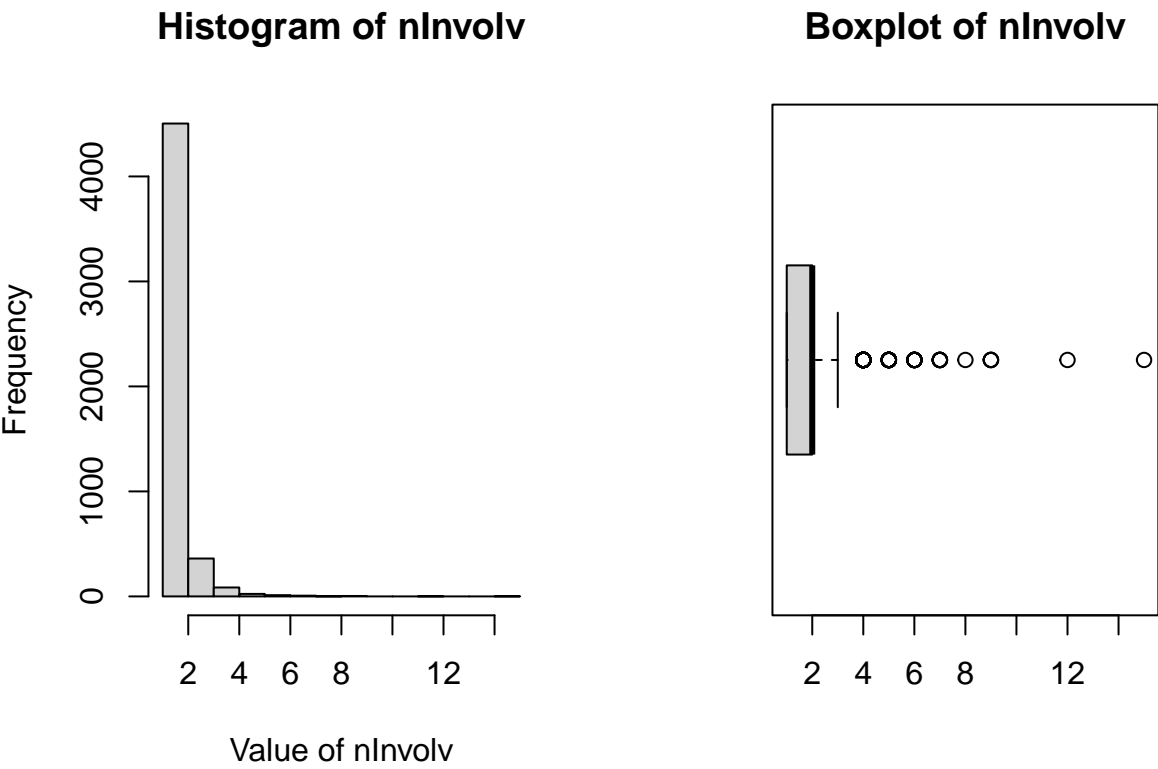
Variable 7 : nMinorInj



Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	sd	vc.	Missing
0	0	0	0.3924	0	13	0.899213	2.291572	0

**Table 6.9.** nMinorInj extended Summary Statistics.

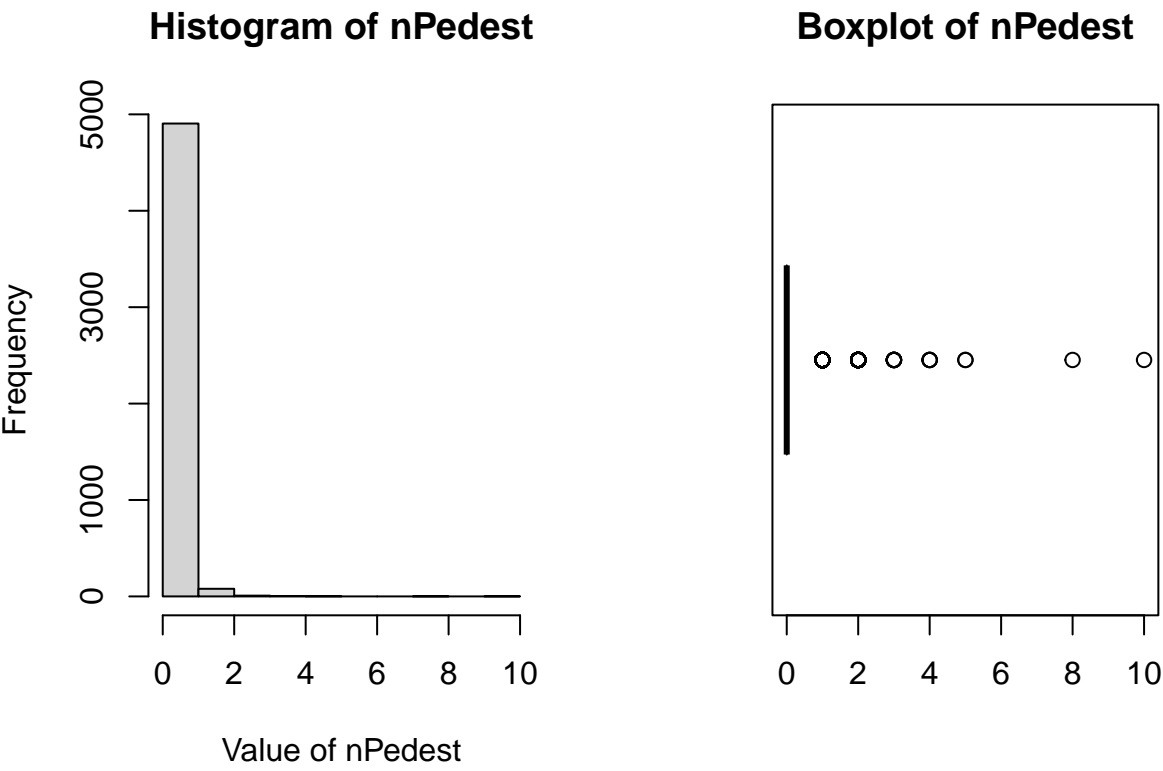
Variable 8 : nInvolv



Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	sd	vc.	Missing
1	1	2	1.8806	2	15	0.7815791	0.4156009	0

**Table 6.10.** nInvolv extended Summary Statistics.

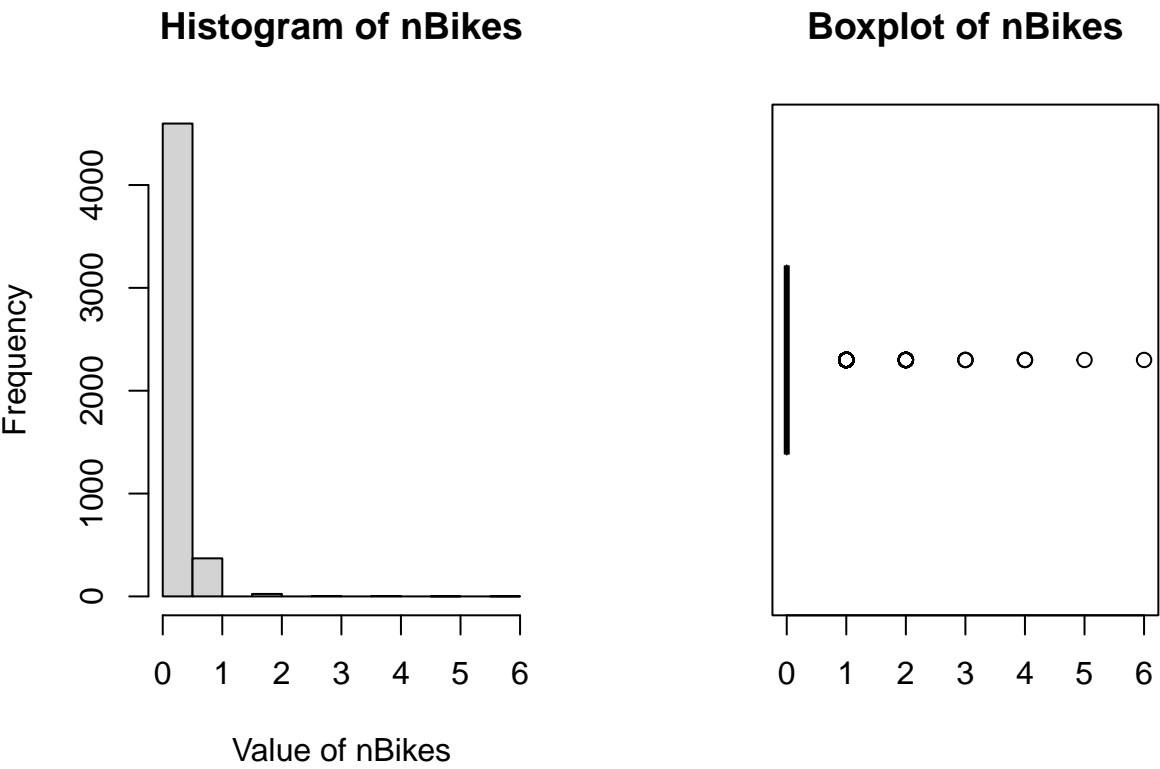
Variable 9 : nPedest



Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	sd	vc.	Missing
0	0	0	0.2456	0	10	0.5228148	2.128725	0

Table 6.11. nPedest extended Summary Statistics.

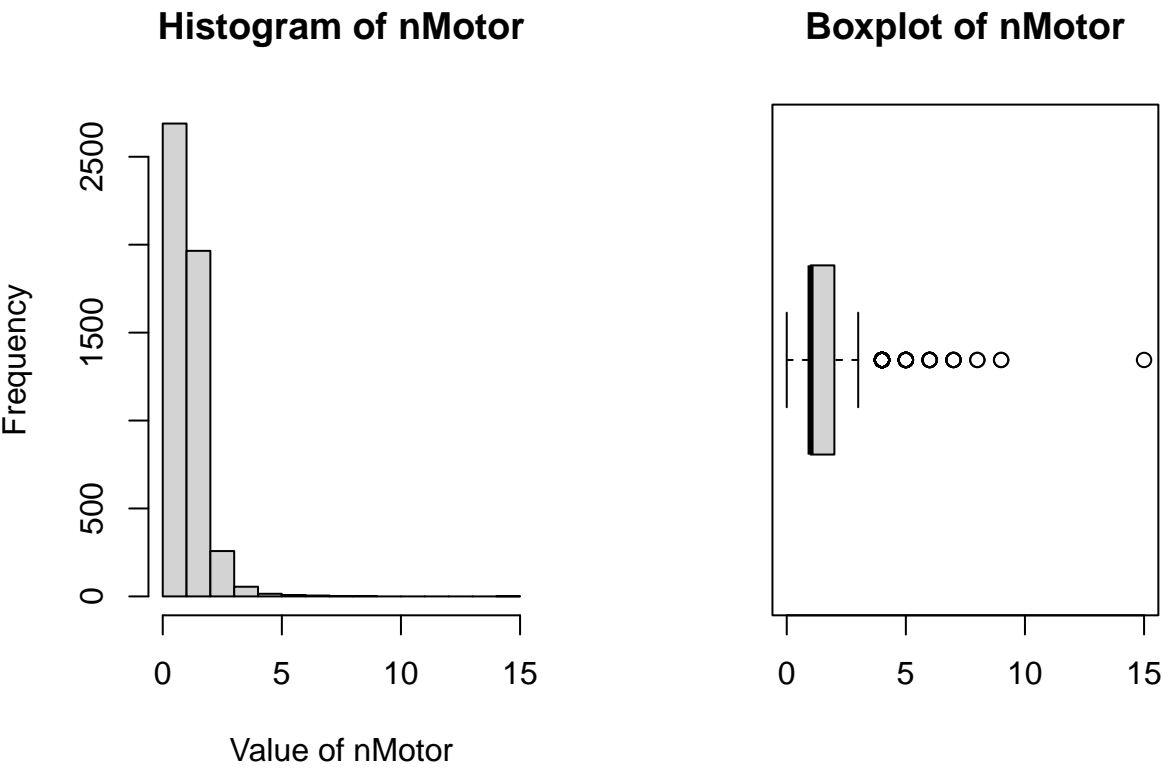
Variable 10 : nBikes



Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	sd	vc.	Missing
0	0	0	0.09	0	6	0.3351454	3.723838	0

**Table 6.12.** nBikes extended Summary Statistics.

Variable 11 : nMotor

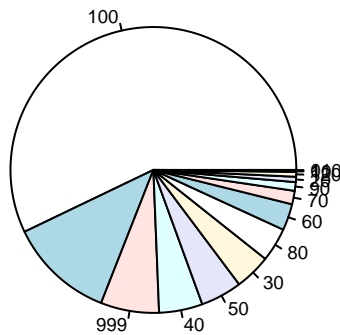


Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	sd	vc.	Missing
0	1	1	1.5214	2	15	0.8232117	0.5410883	0

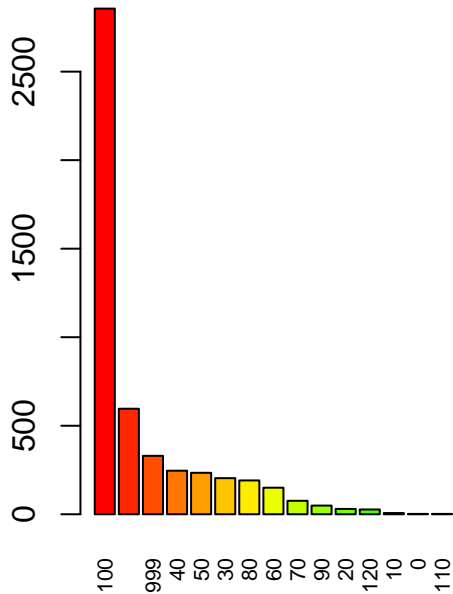
Table 6.13. nMotor extended Summary Statistics.

Variable 12 : Vel

**Pie of Vel**



**Barplot of Vel**

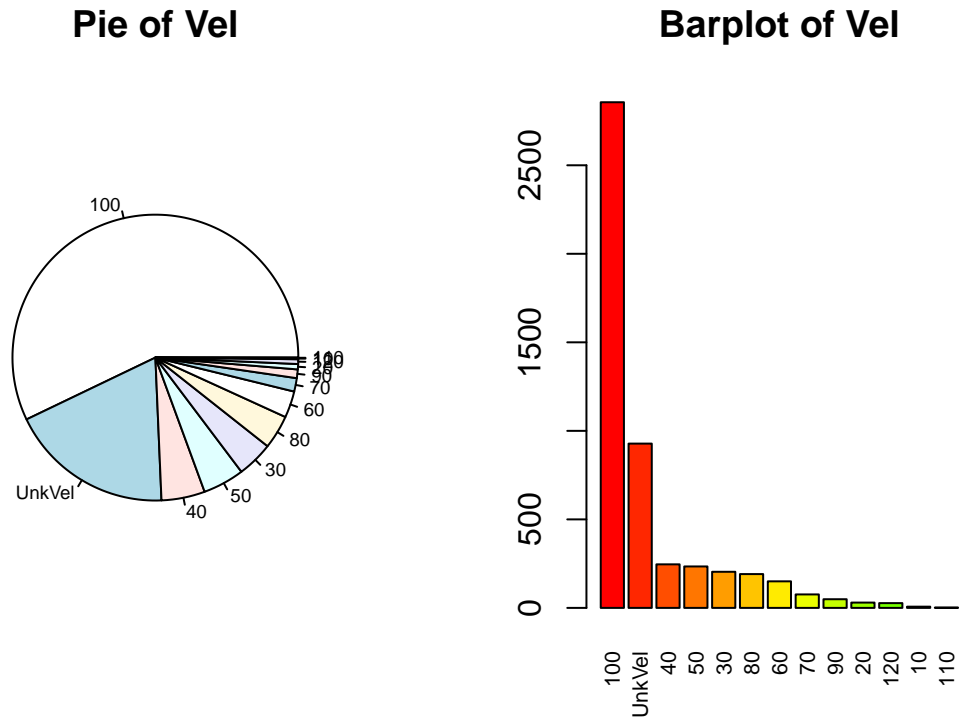


Number of modalities: 15

Vel	Frequency	Proportion
100	2856	0.5712
NA	596	0.1192
999	330	0.0660
40	246	0.0492
50	234	0.0468
30	204	0.0408
80	191	0.0382
60	150	0.0300
70	76	0.0152
90	49	0.0098
20	30	0.0060
120	27	0.0054
10	7	0.0014
0	2	0.0004
110	2	0.0004

**Table 6.14.** Vel frequency and proportion table (sorted).

Variable 12 : Vel (CHANGED in preprocessing)

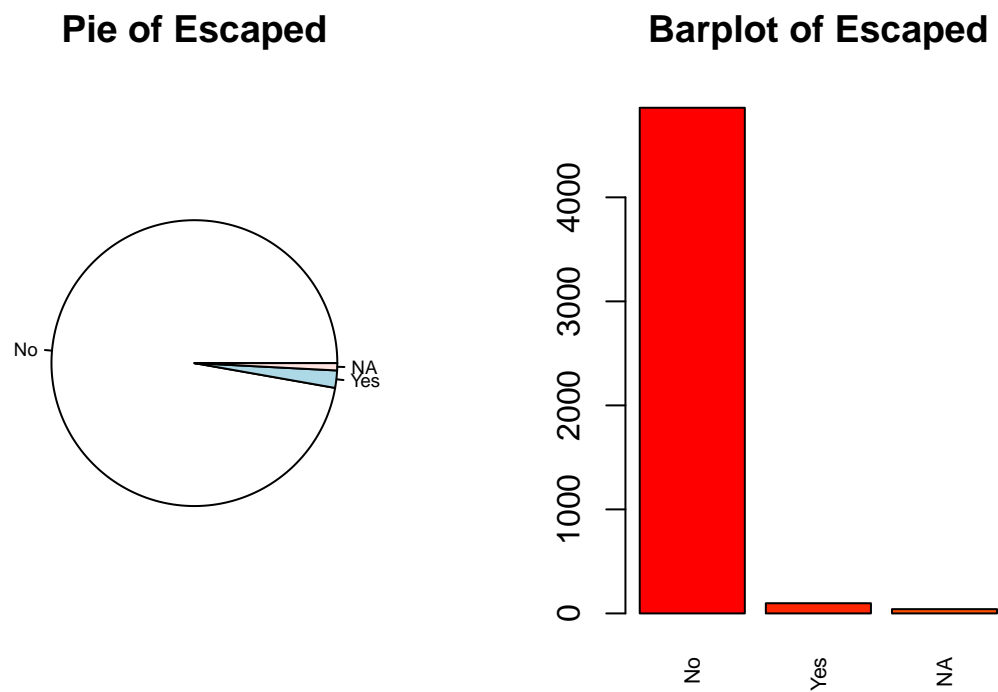


Number of modalities: 13

Vel	Frequency	Proportion
100	2856	0.5712
UnkVel	928	0.1856
40	246	0.0492
50	234	0.0468
30	204	0.0408
80	191	0.0382
60	150	0.0300
70	76	0.0152
90	49	0.0098
20	30	0.0060
120	27	0.0054
10	7	0.0014
110	2	0.0004

**Table 6.15.** Vel frequency and proportion table (sorted).

Variable 13 : Escaped



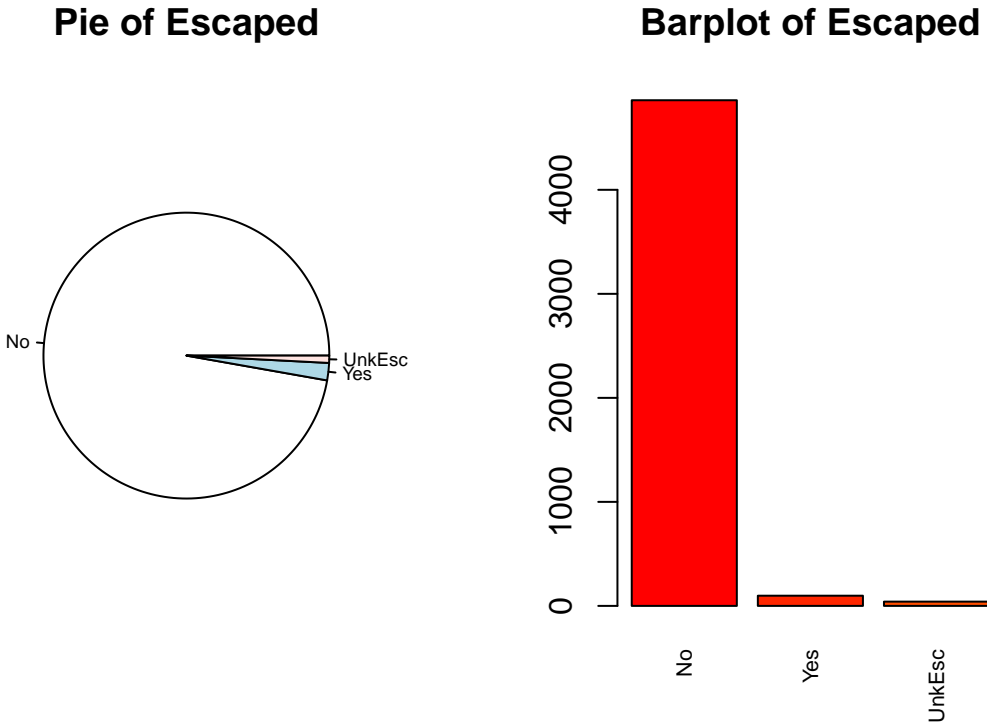
Number of modalities: 3

Escaped	Frequency	Proportion
No	4861	0.9722
Yes	98	0.0196
NA	41	0.0082

**Table 6.16.** Escaped frequency and proportion table (sorted).



Variable 13 : Escaped (CHANGED in preprocessing)

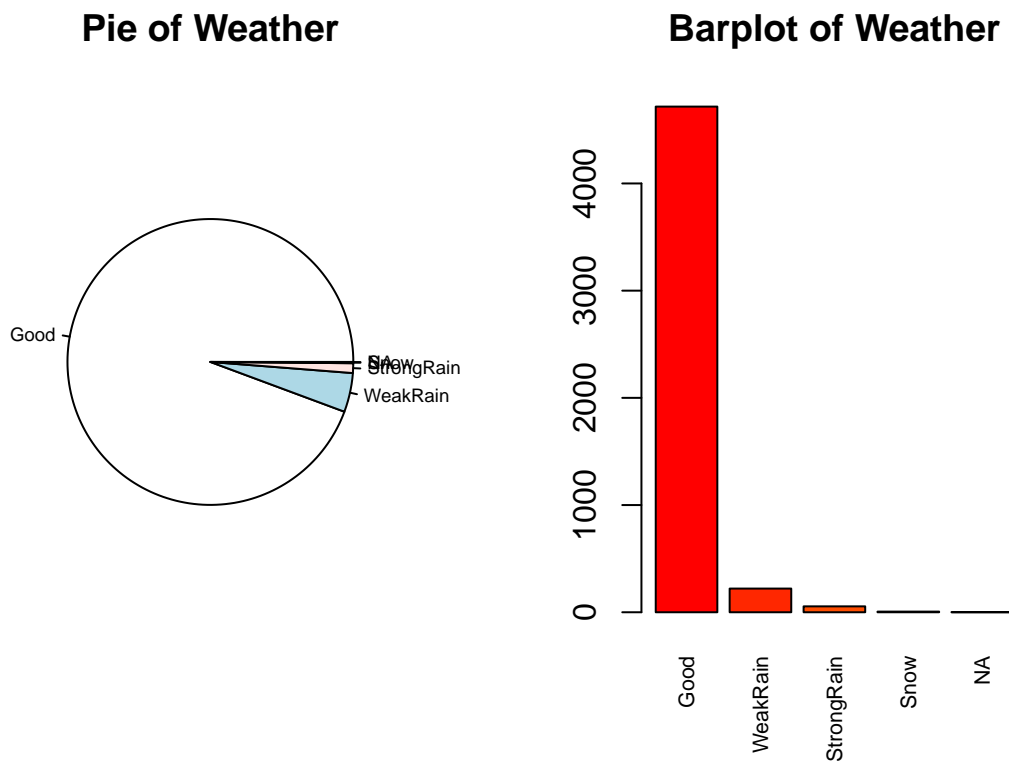


Number of modalities: 3

Escaped	Frequency	Proportion
No	4861	0.9722
Yes	98	0.0196
UnkEsc	41	0.0082

**Table 6.17.** Escaped frequency and proportion table (sorted).

Variable 14 : Weather

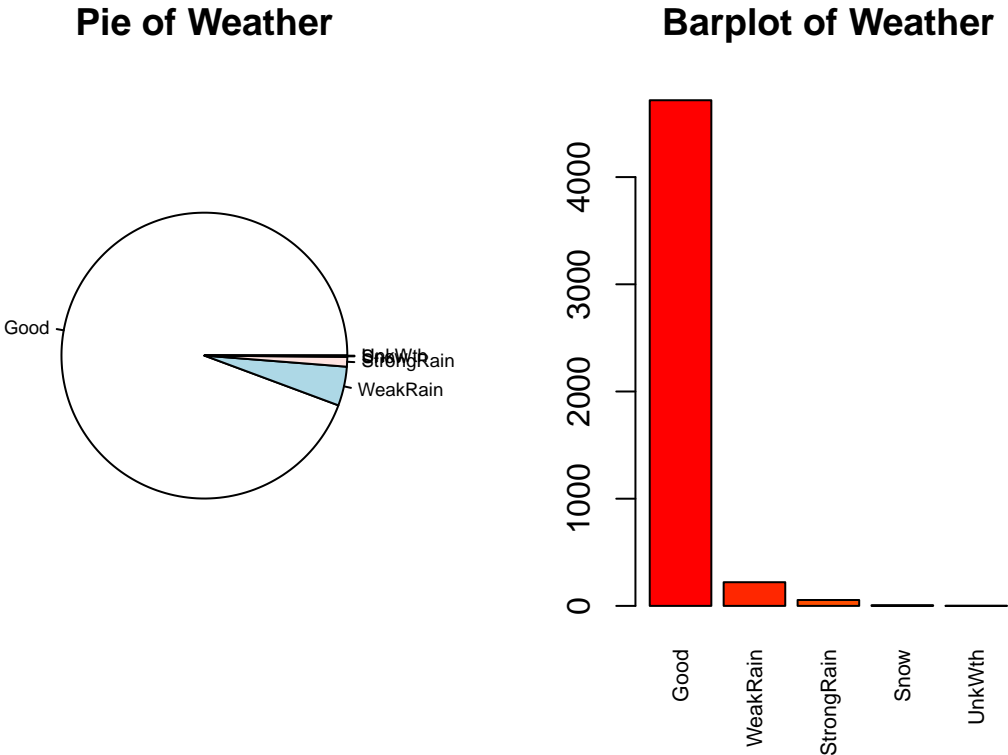


Number of modalities: 5

Weather	Frequency	Proportion
Good	4717	0.9434
WeakRain	221	0.0442
StrongRain	55	0.0110
Snow	6	0.0012
NA	1	0.0002

**Table 6.18.** Weather frequency and proportion table (sorted).

Variable 14 : Weather (CHANGED in preprocessing)

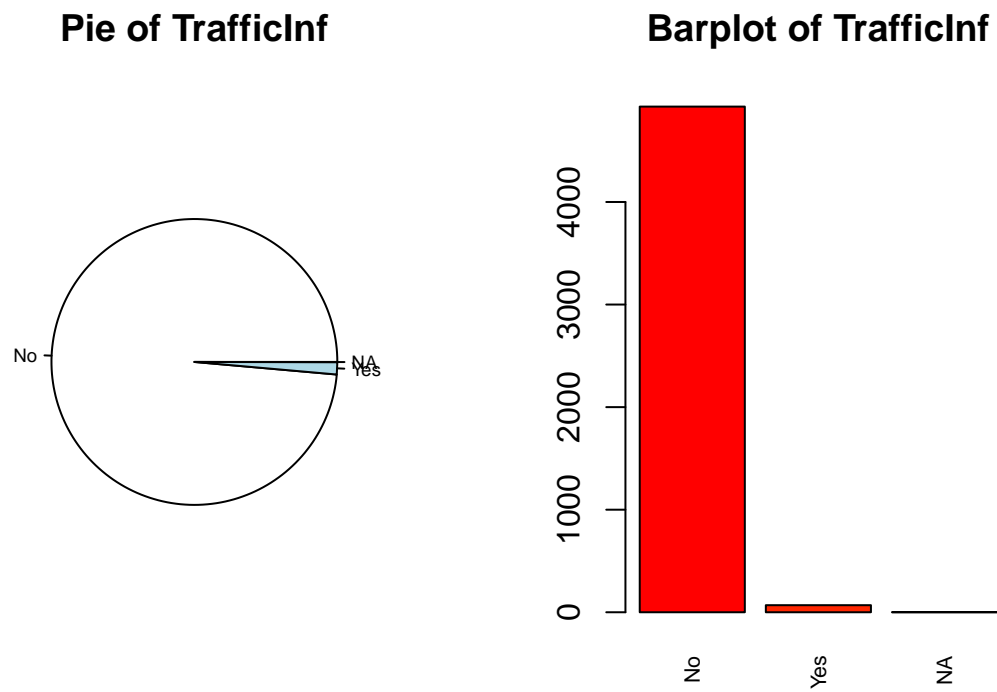


Number of modalities: 5

Weather	Frequency	Proportion
Good	4717	0.9434
WeakRain	221	0.0442
StrongRain	55	0.0110
Snow	6	0.0012
UnkWth	1	0.0002

**Table 6.19.** Weather frequency and proportion table (sorted).

Variable 15 : TrafficInf

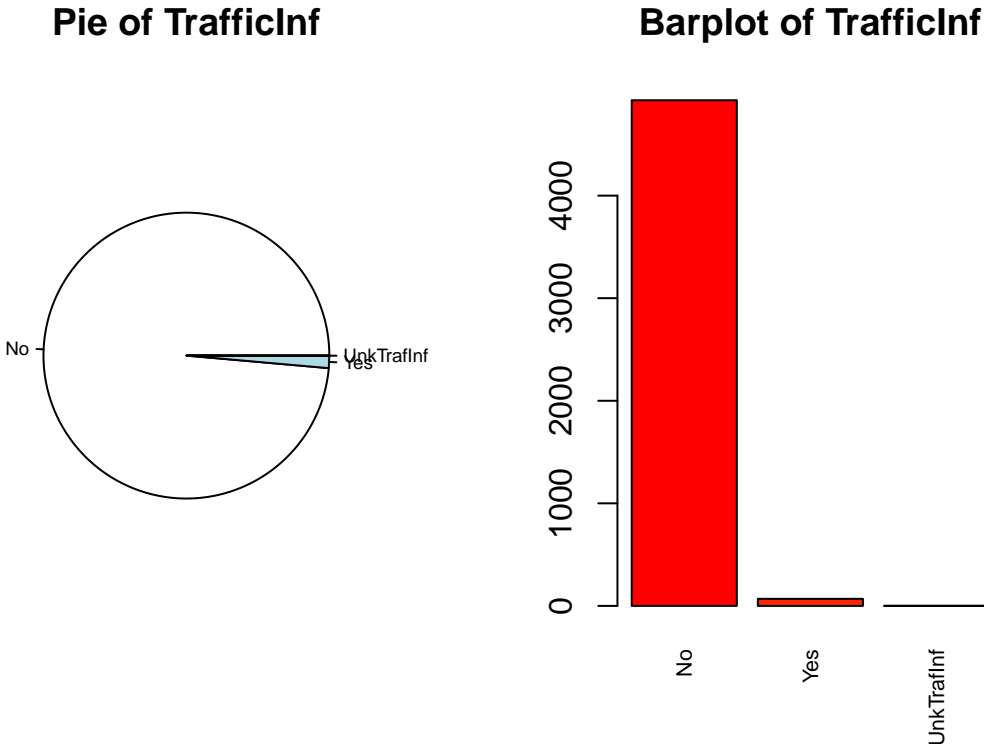


Number of modalities: 3

TrafficInf	Frequency	Proportion
No	4930	0.9860
Yes	69	0.0138
NA	1	0.0002

**Table 6.20.** TrafficInf frequency and proportion table (sorted).

Variable 15 : TrafficInf (CHANGED in preprocessing)



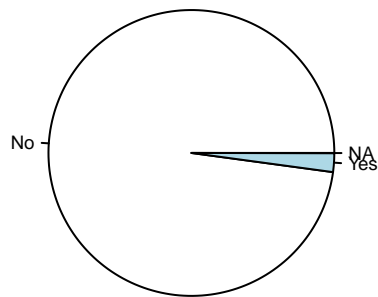
Number of modalities: 3

TrafficInf	Frequency	Proportion
No	4930	0.9860
Yes	69	0.0138
UnkTraInf	1	0.0002

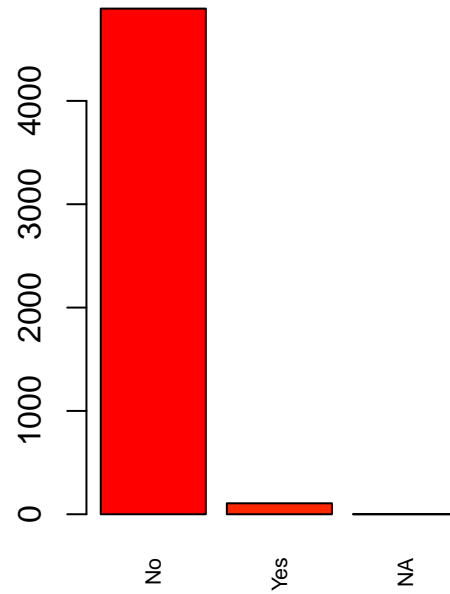
**Table 6.21.** TrafficInf frequency and proportion table (sorted).

Variable 16 : WeatherInf

**Pie of WeatherInf**



**Barplot of WeatherInf**

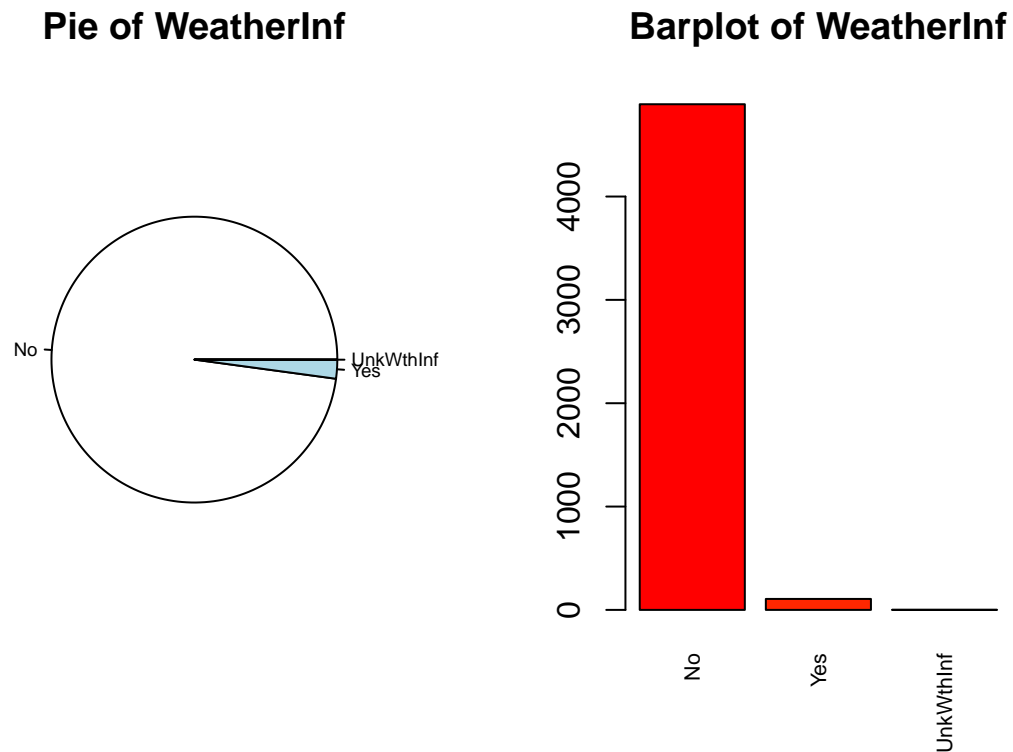


Number of modalities: 3

WeatherInf	Frequency	Proportion
No	4893	0.9786
Yes	106	0.0212
NA	1	0.0002

**Table 6.22.** WeatherInf frequency and proportion table (sorted).

Variable 16 : WeatherInf (CHANGED in preprocessing)



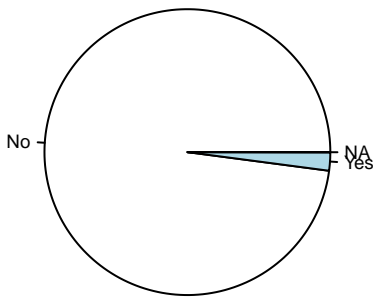
Number of modalities: 3

WeatherInf	Frequency	Proportion
No	4893	0.9786
Yes	106	0.0212
UnkWthInf	1	0.0002

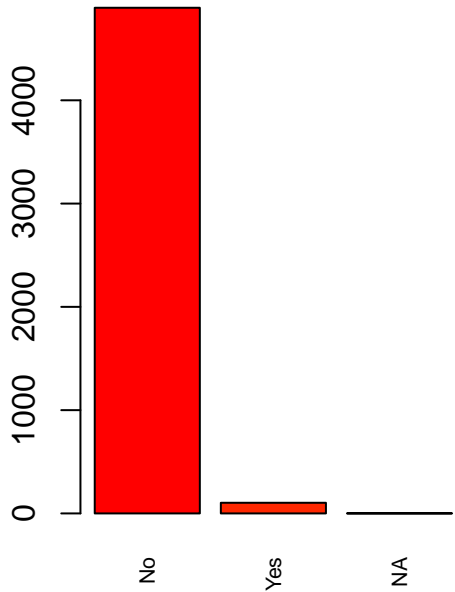
**Table 6.23.** WeatherInf frequency and proportion table (sorted).

Variable 17 : LightInf

Pie of LightInf



Barplot of LightInf



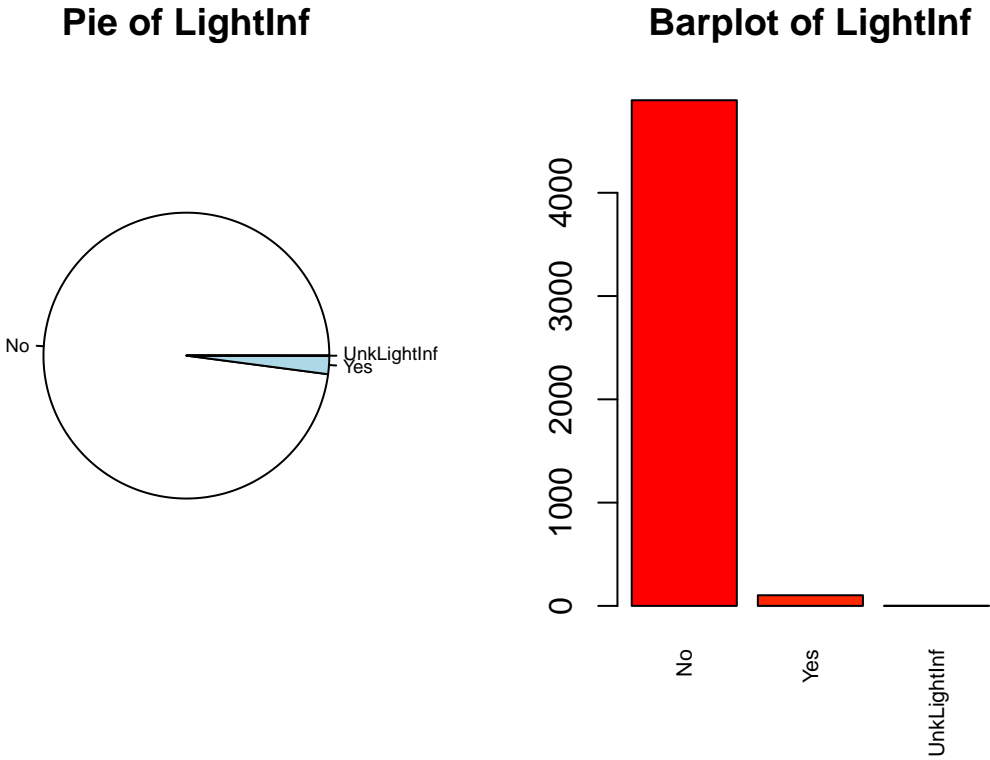
Number of modalities: 3

LightInf	Frequency	Proportion
No	4896	0.9792
Yes	103	0.0206
NA	1	0.0002

Table 6.24. LightInf frequency and proportion table (sorted).



Variable 17 : LightInf (CHANGED in preprocessing)

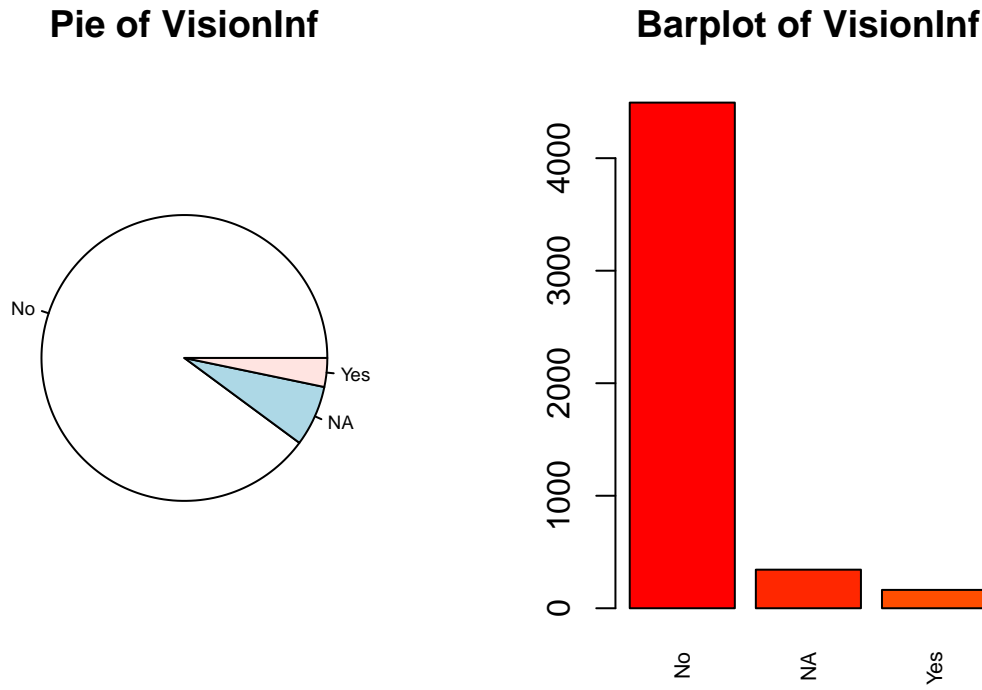


Number of modalities: 3

LightInf	Frequency	Proportion
No	4896	0.9792
Yes	103	0.0206
UnkLightInf	1	0.0002

**Table 6.25.** LightInf frequency and proportion table (sorted).

Variable 18 : VisionInf

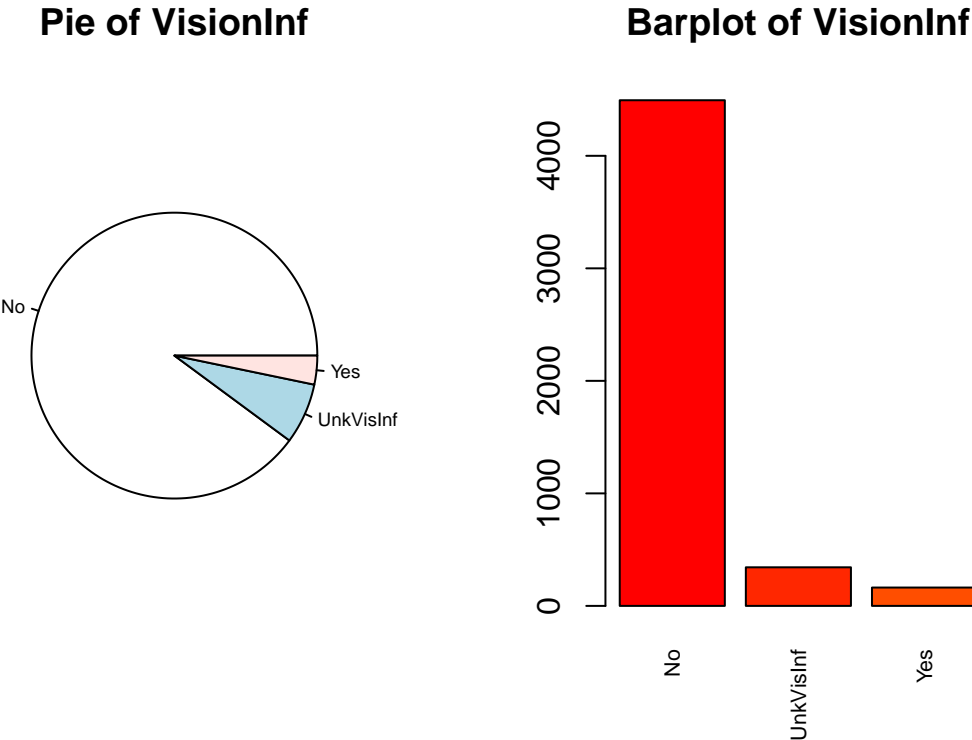


Number of modalities: 3

VisionInf	Frequency	Proportion
No	4494	0.8988
NA	343	0.0686
Yes	163	0.0326

**Table 6.26.** VisionInf frequency and proportion table (sorted).

Variable 18 : VisionInf (CHANGED in preprocessing)



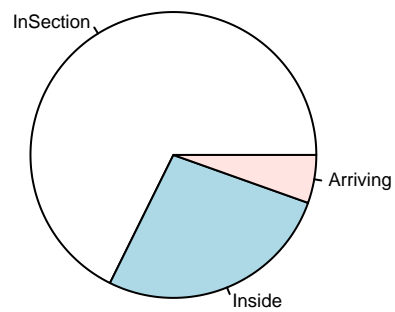
Number of modalities: 3

VisionInf	Frequency	Proportion
No	4494	0.8988
UnkVisInf	343	0.0686
Yes	163	0.0326

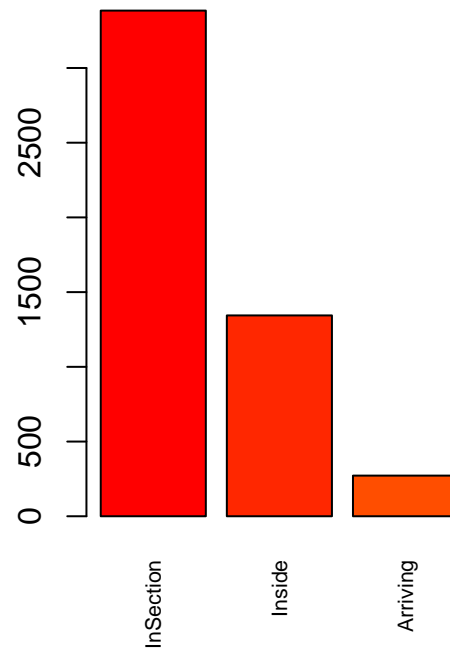
**Table 6.27.** VisionInf frequency and proportion table (sorted).

Variable 19 : Intersect

**Pie of Intersect**



**Barplot of Intersect**

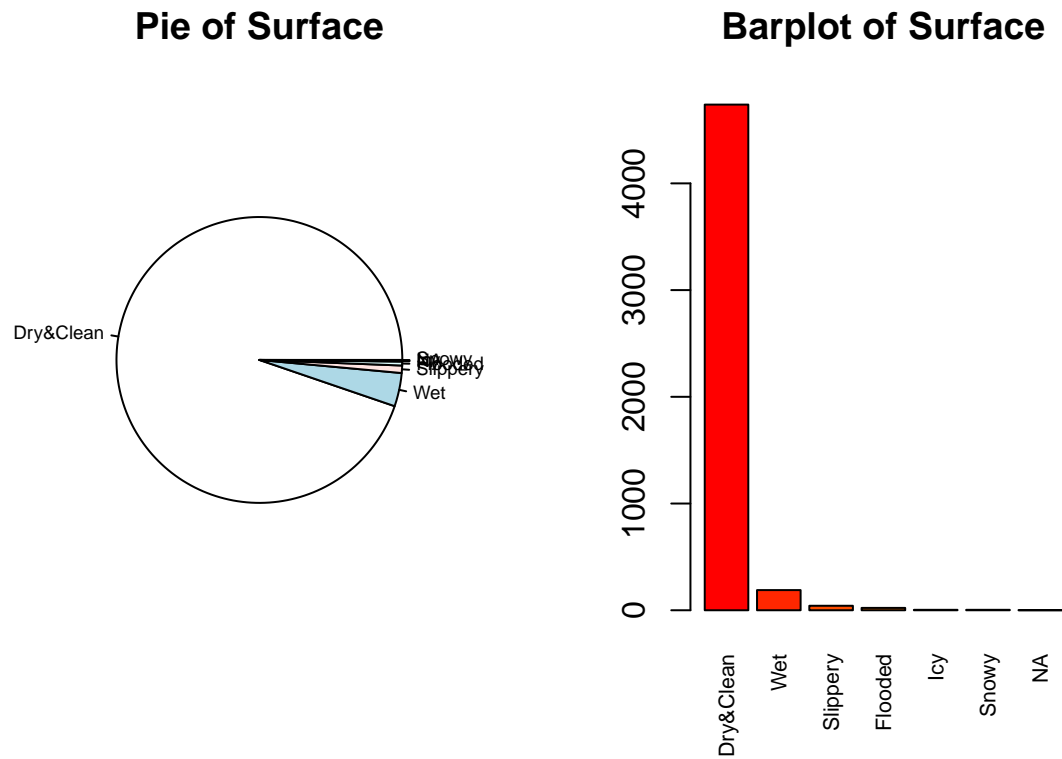


Number of modalities: 3

Intersect	Frequency	Proportion
InSection	3384	0.6768
Inside	1344	0.2688
Arriving	272	0.0544

**Table 6.28.** Intersect frequency and proportion table (sorted).

Variable 20 : Surface

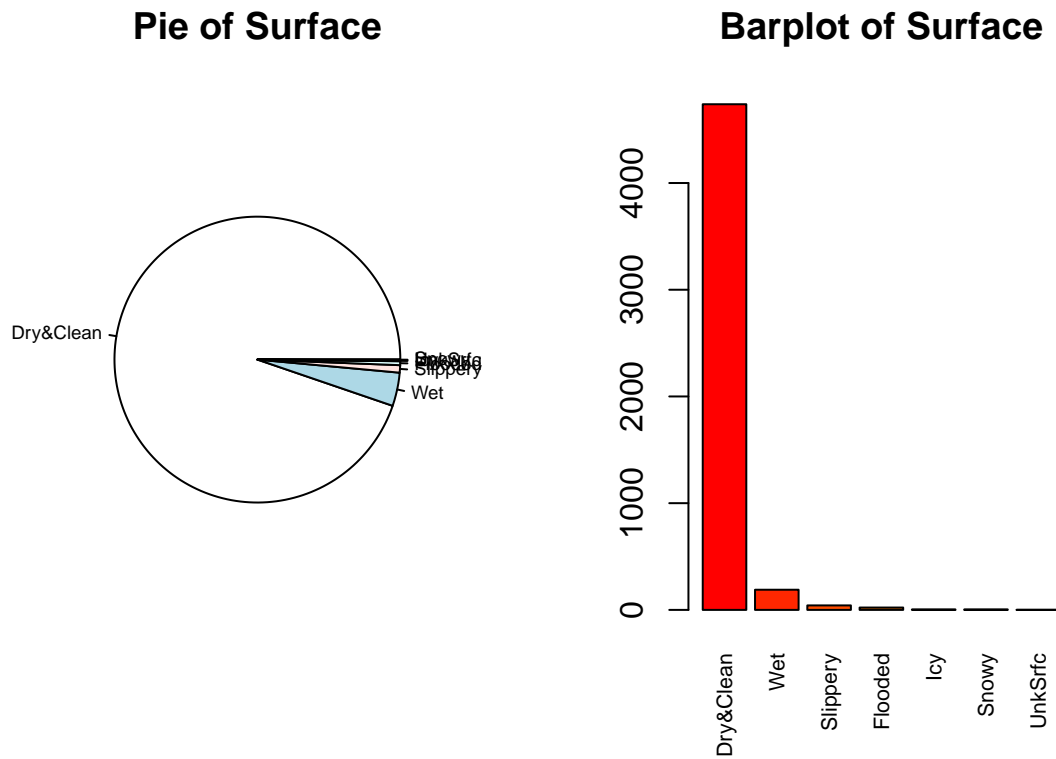


Number of modalities: 7

Surface	Frequency	Proportion
Dry&Clean	4738	0.9476
Wet	189	0.0378
Slippery	42	0.0084
Flooded	22	0.0044
Icy	4	0.0008
Snowy	4	0.0008
NA	1	0.0002

**Table 6.29.** Surface frequency and proportion table (sorted).

Variable 20 : Surface (CHANGED in preprocessing)



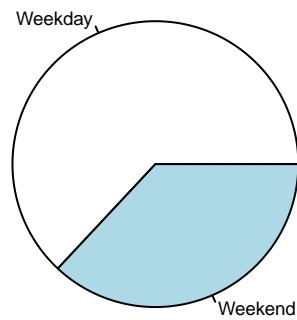
Number of modalities: 7

Surface	Frequency	Proportion
Dry&Clean	4738	0.9476
Wet	189	0.0378
Slippery	42	0.0084
Flooded	22	0.0044
Icy	4	0.0008
Snowy	4	0.0008
UnkSrfe	1	0.0002

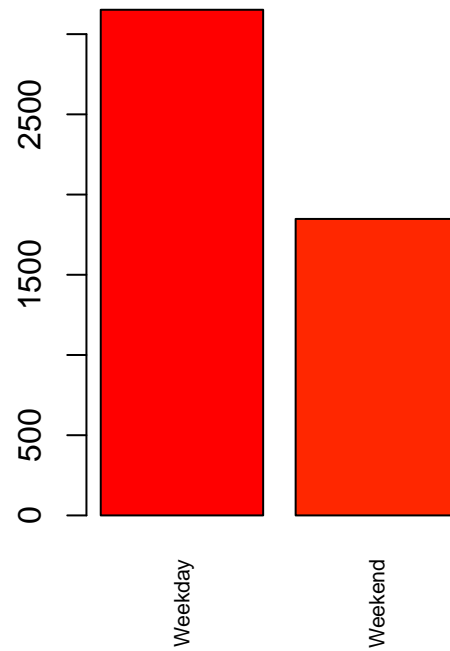
**Table 6.30.** Surface frequency and proportion table (sorted).

Variable 21 : DayGroup

**Pie of DayGroup**



**Barplot of DayGroup**



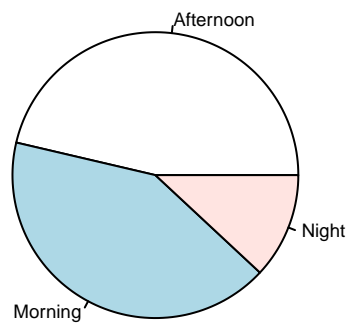
Number of modalities: 2

DayGroup	Frequency	Proportion
Weekday	3152	0.6304
Weekend	1848	0.3696

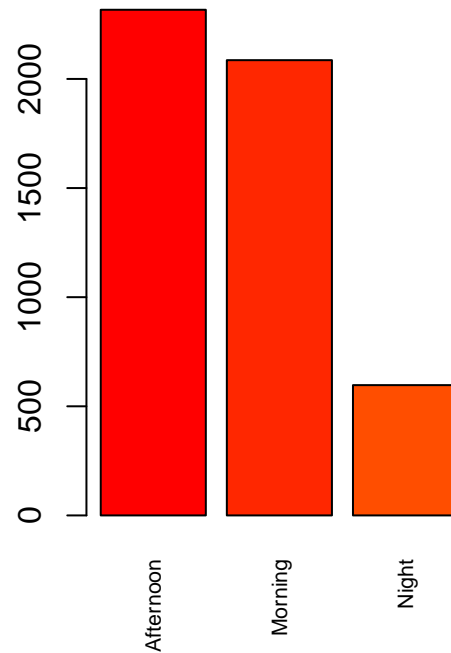
**Table 6.31.** DayGroup frequency and proportion table (sorted).

Variable 22 : HourGroup

**Pie of HourGroup**



**Barplot of HourGroup**



Number of modalities: 3

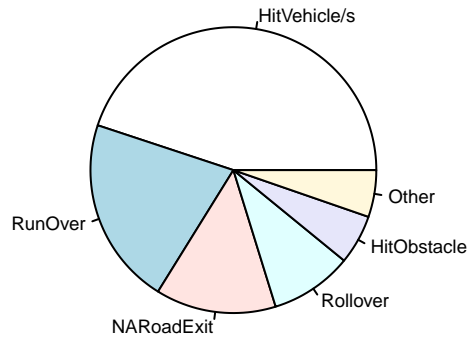
HourGroup	Frequency	Proportion
Afternoon	2317	0.4634
Morning	2086	0.4172
Night	597	0.1194

**Table 6.32.** HourGroup frequency and proportion table (sorted).

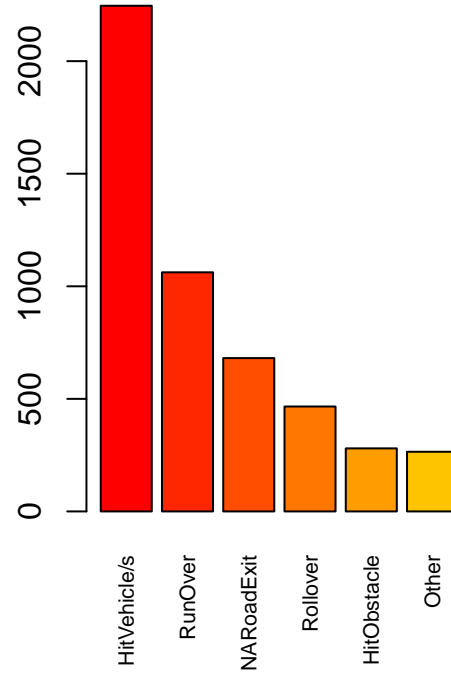


Variable 23 : AccType

**Pie of AccType**



**Barplot of AccType**

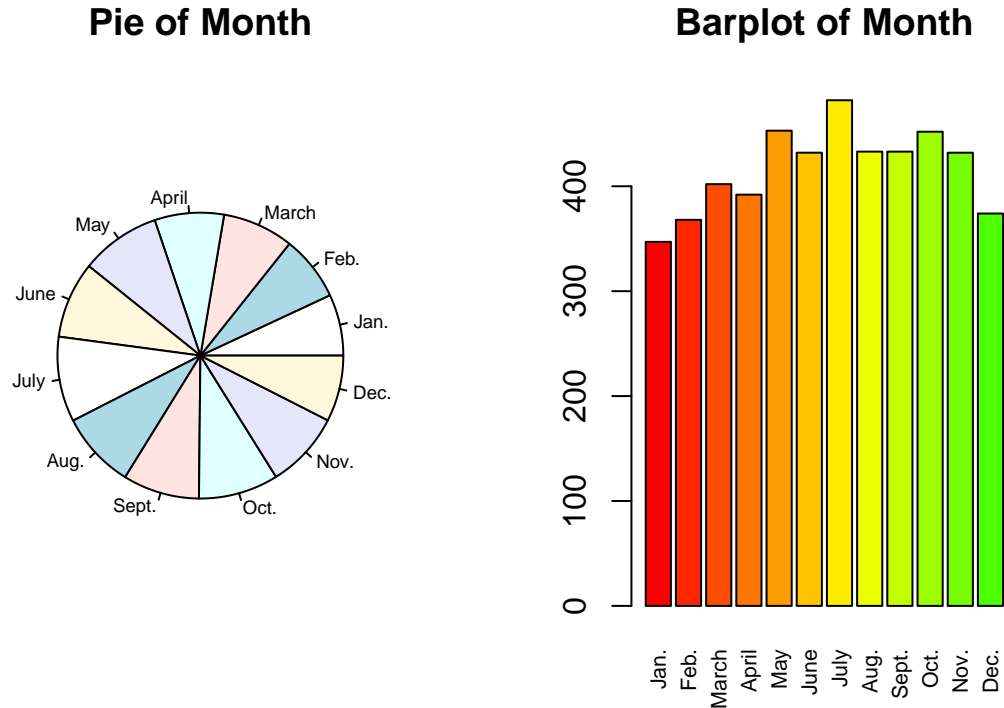


Number of modalities: 6

AccType	Frequency	Proportion
HitVehicle/s	2246	0.4492
RunOver	1062	0.2124
NARoadExit	681	0.1362
Rollover	466	0.0932
HitObstacle	280	0.0560
Other	265	0.0530

**Table 6.33.** AccType frequency and proportion table (sorted).

Variable 24 : Month (ADDED in preprocessing)

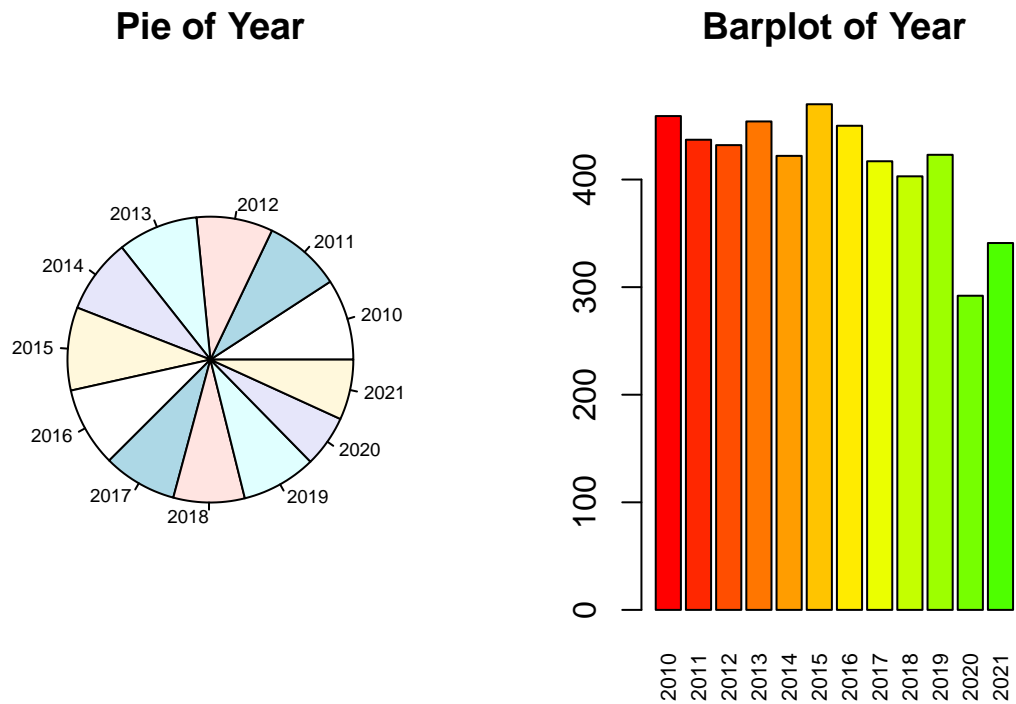


Number of modalities: 12

Month	Frequency	Proportion
Jan.	347	0.0694
Feb.	368	0.0736
March	402	0.0804
April	392	0.0784
May	453	0.0906
June	432	0.0864
July	482	0.0964
Aug.	433	0.0866
Sept.	433	0.0866
Oct.	452	0.0904
Nov.	432	0.0864
Dec.	374	0.0748

**Table 6.34.** Month frequency and proportion table (sorted chronologically).

Variable 25 : Year (ADDED in preprocessing)

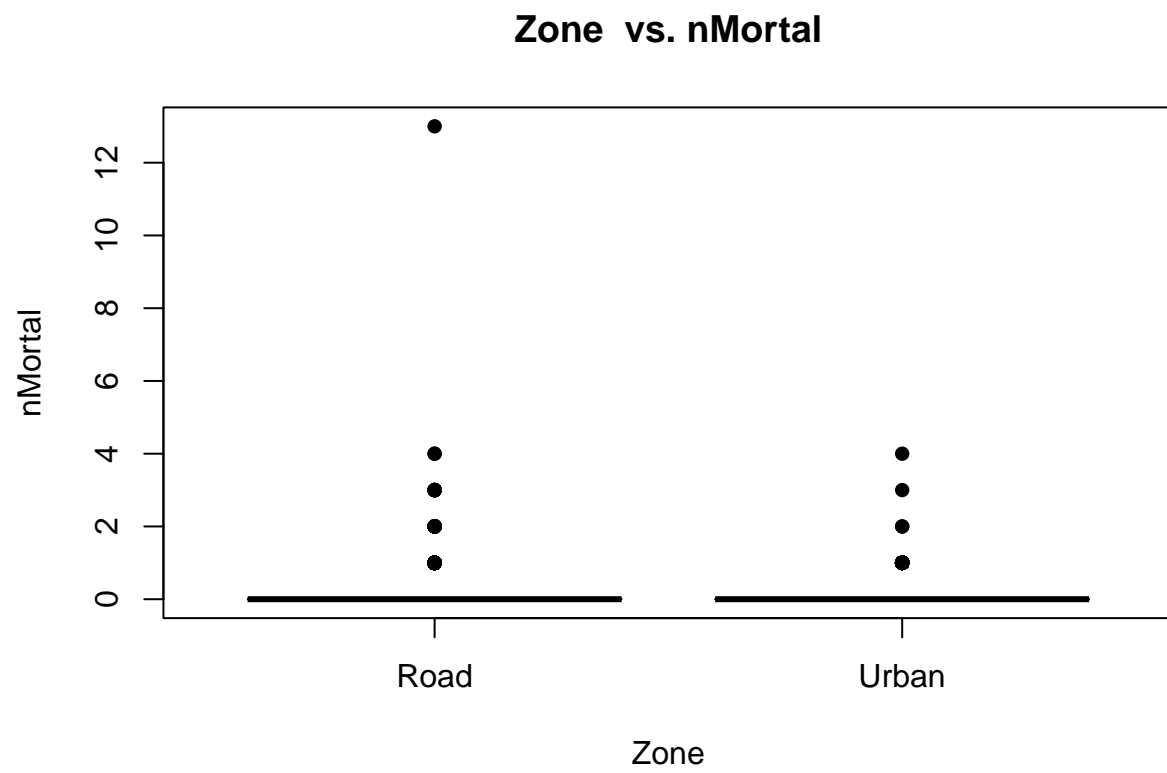


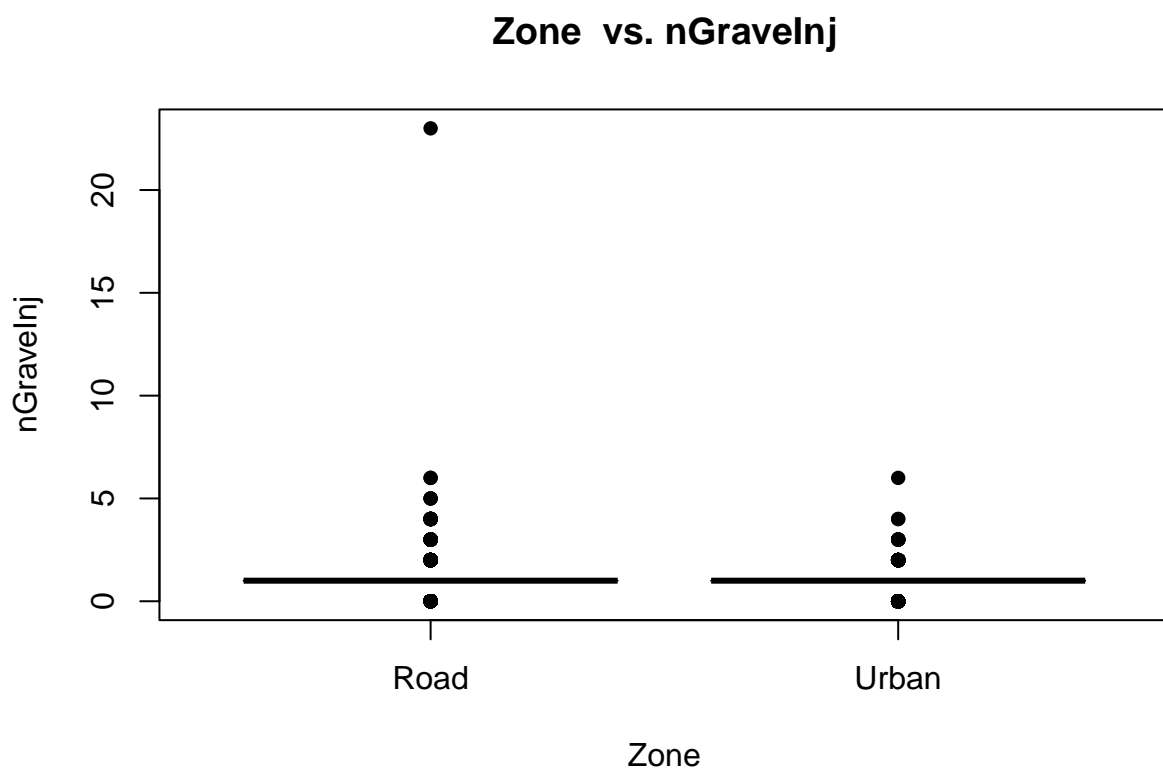
Number of modalities: 12

Year	Frequency	Proportion
2010	459	0.0918
2011	437	0.0874
2012	432	0.0864
2013	454	0.0908
2014	422	0.0844
2015	470	0.0940
2016	450	0.0900
2017	417	0.0834
2018	403	0.0806
2019	423	0.0846
2020	292	0.0584
2021	341	0.0682

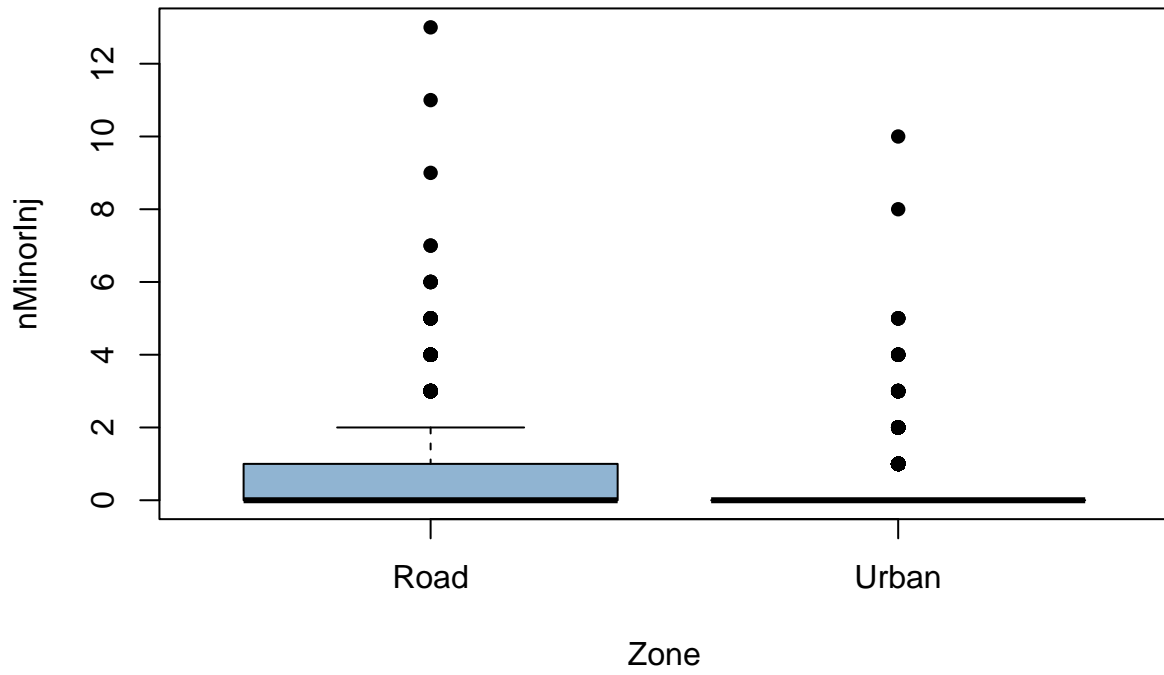
**Table 6.35.** Year frequency and proportion table (sorted chronologically).

## Bivariate analysis

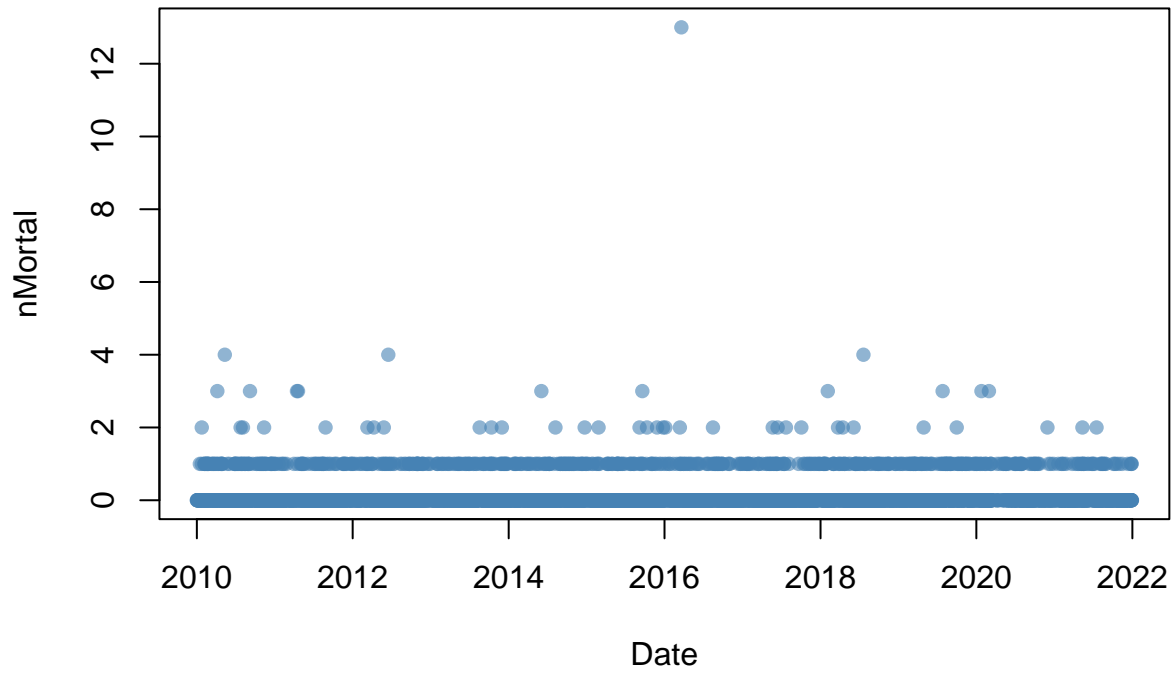




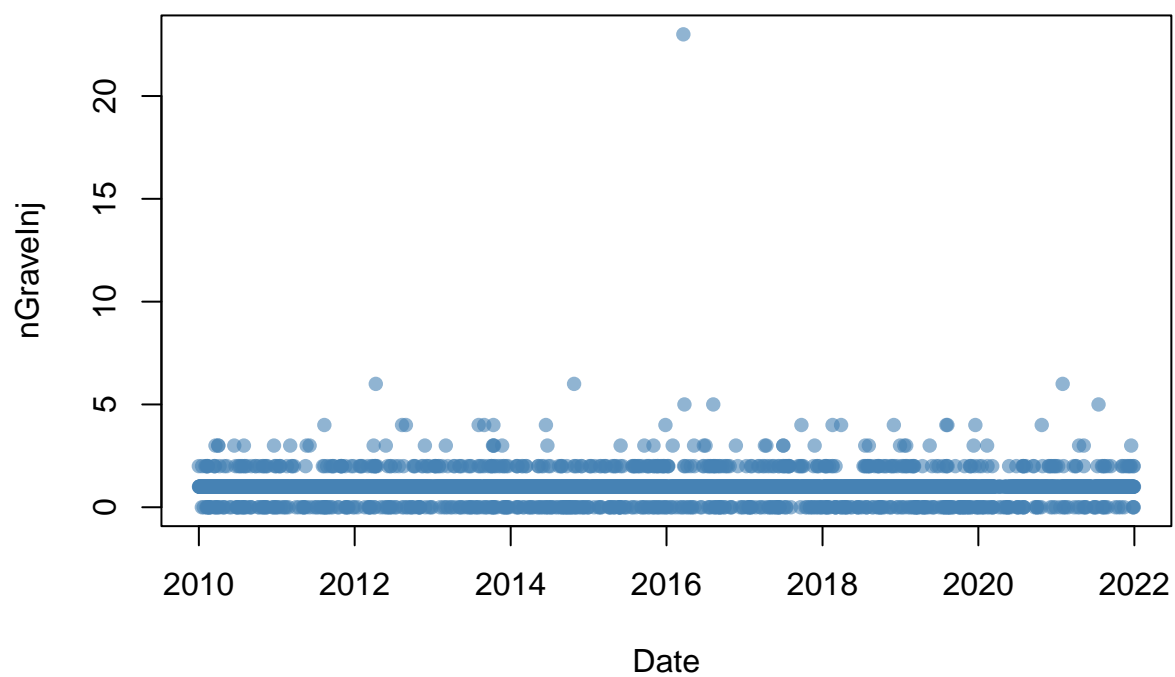
**Zone vs. nMinorInj**



Date vs. nMortal

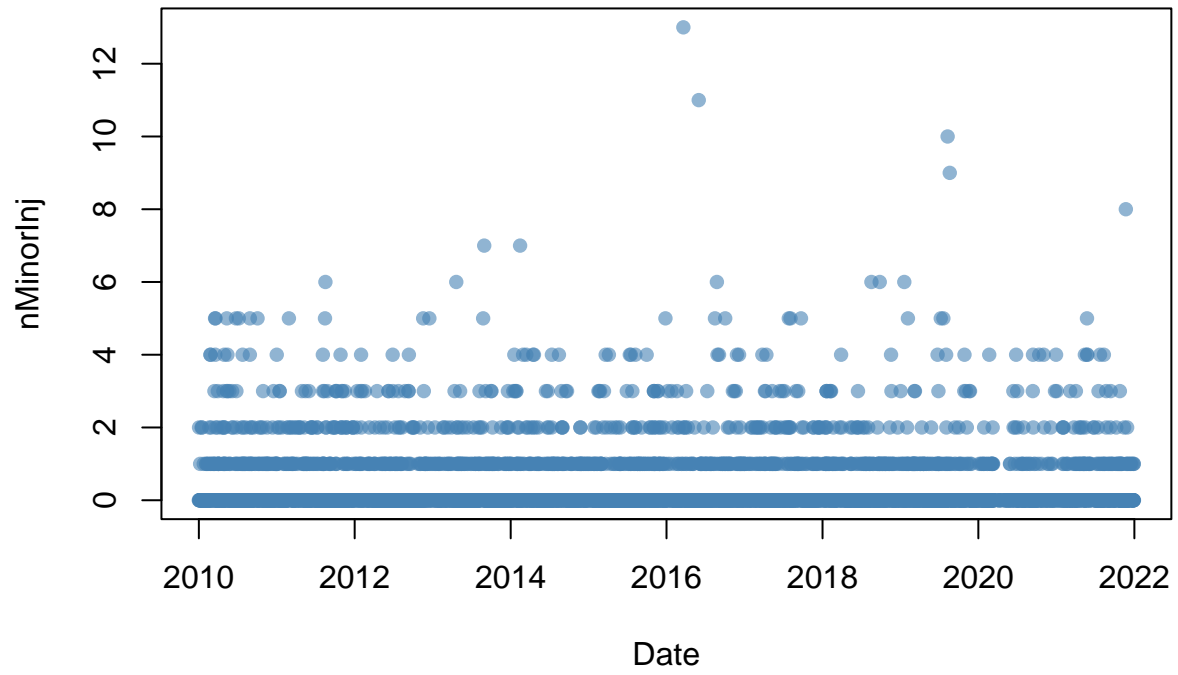


Date vs. nGravelInj

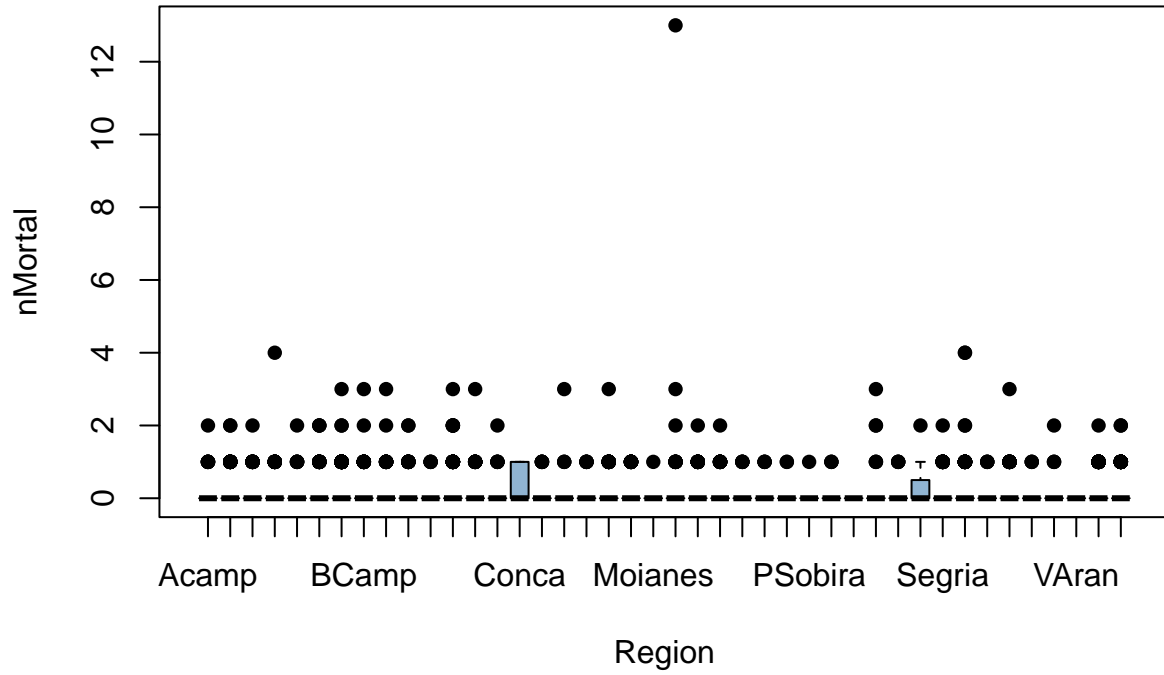


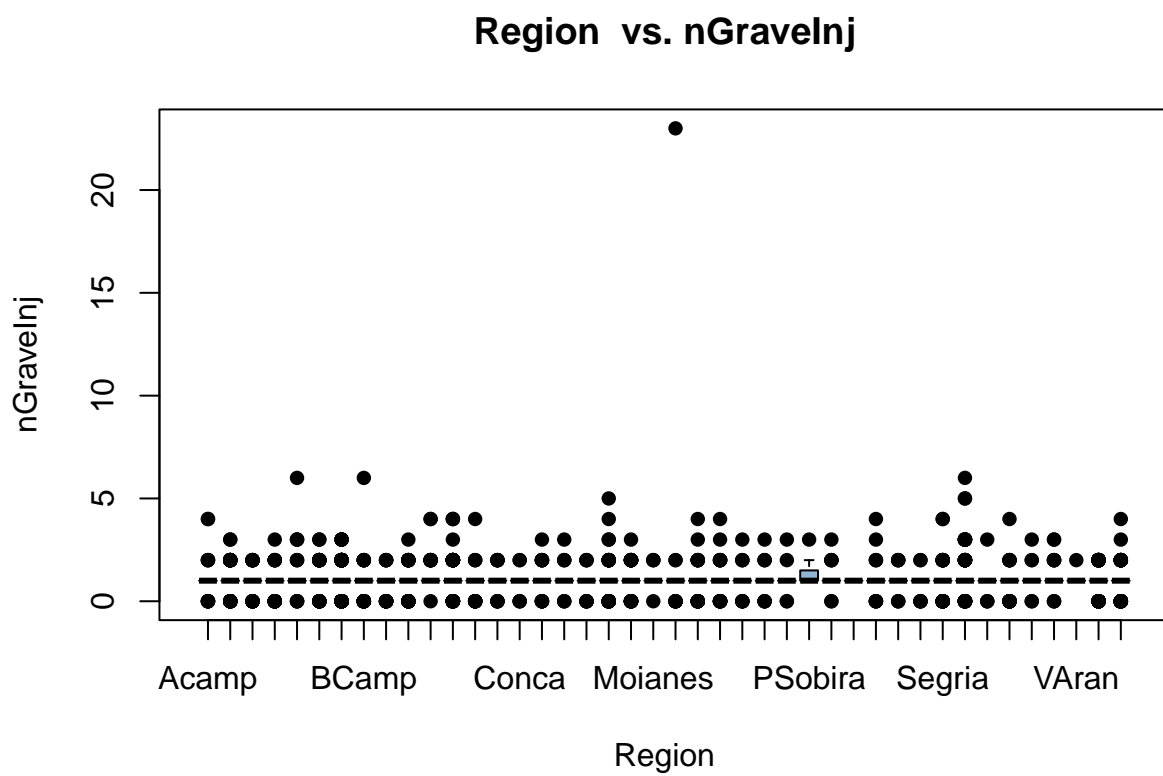


Date vs. nMinorInj

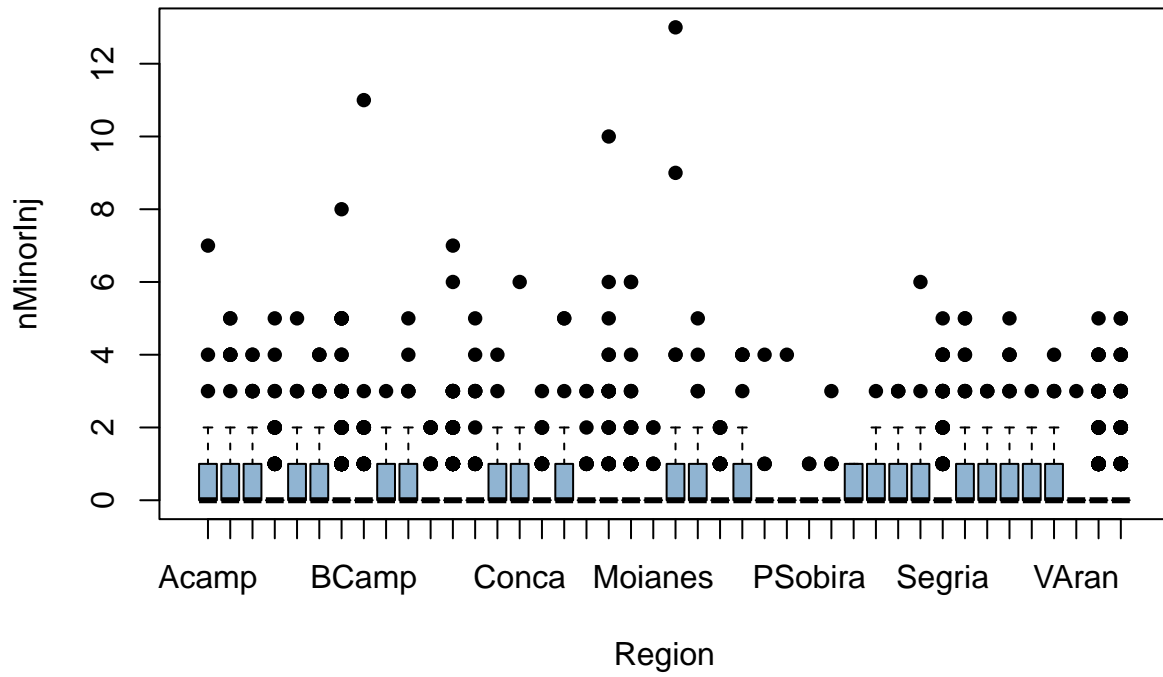


## Region vs. nMortal

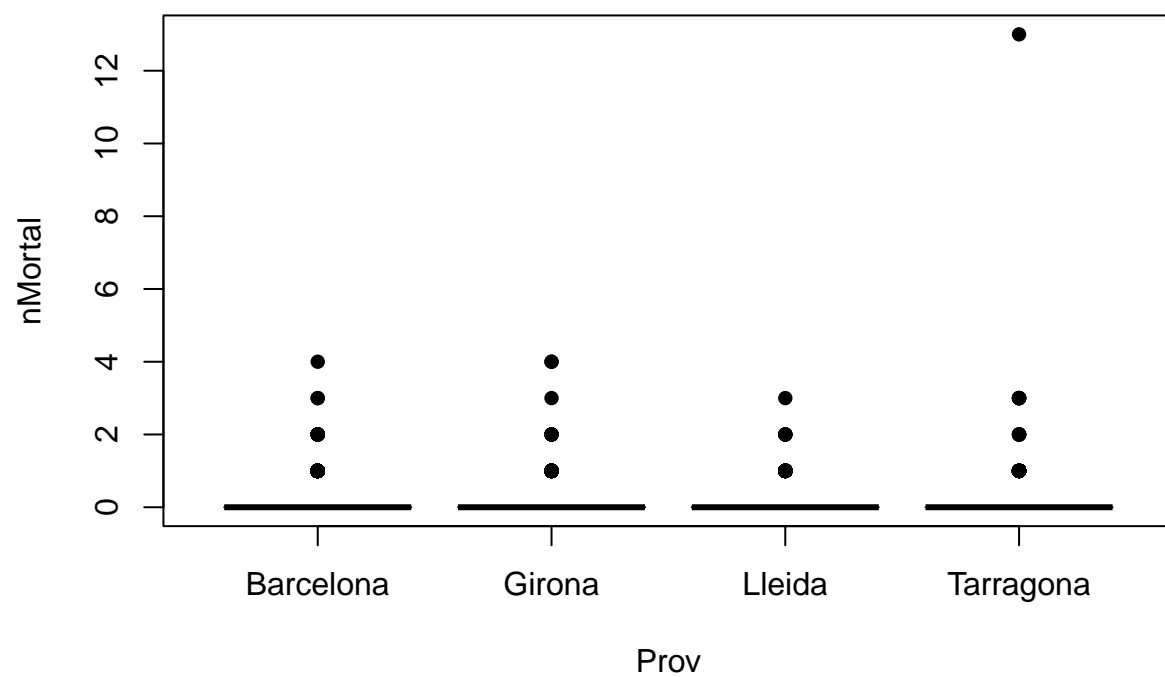




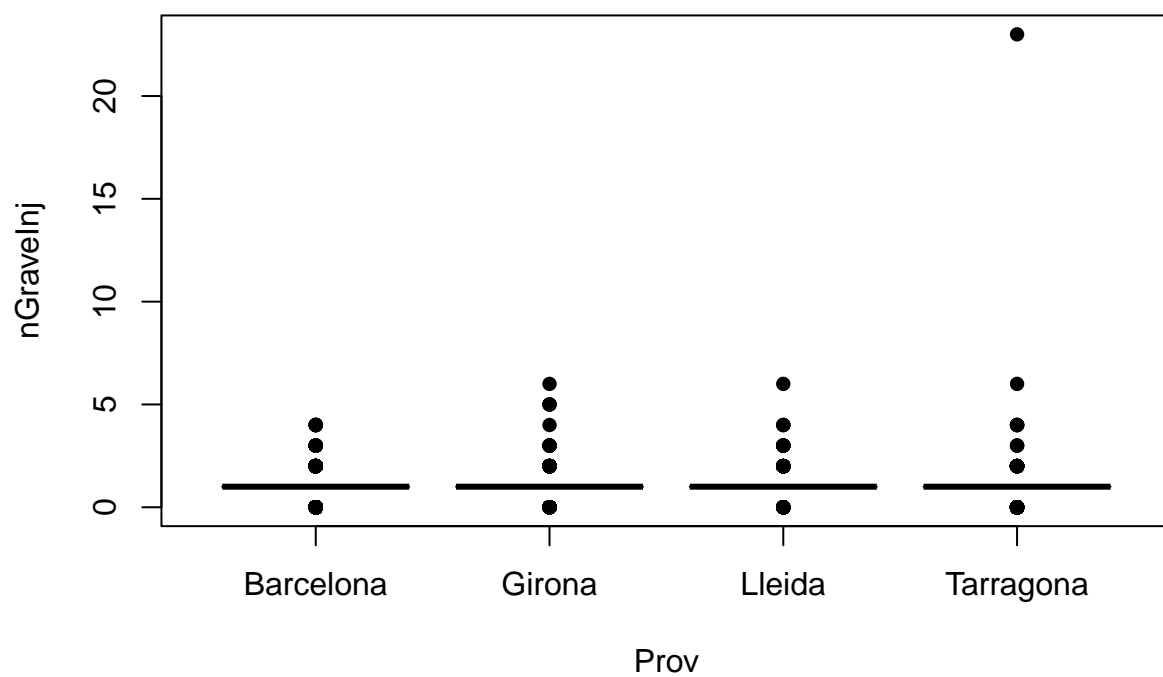
Region vs. nMinorInj



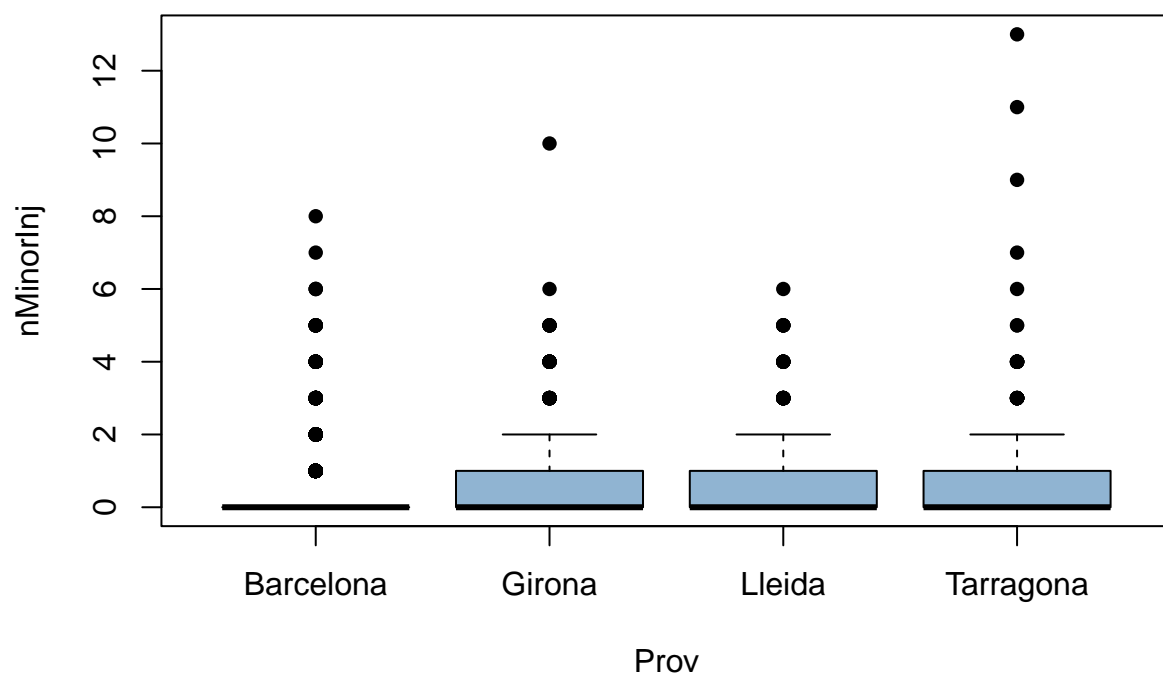
Prov vs. nMortal

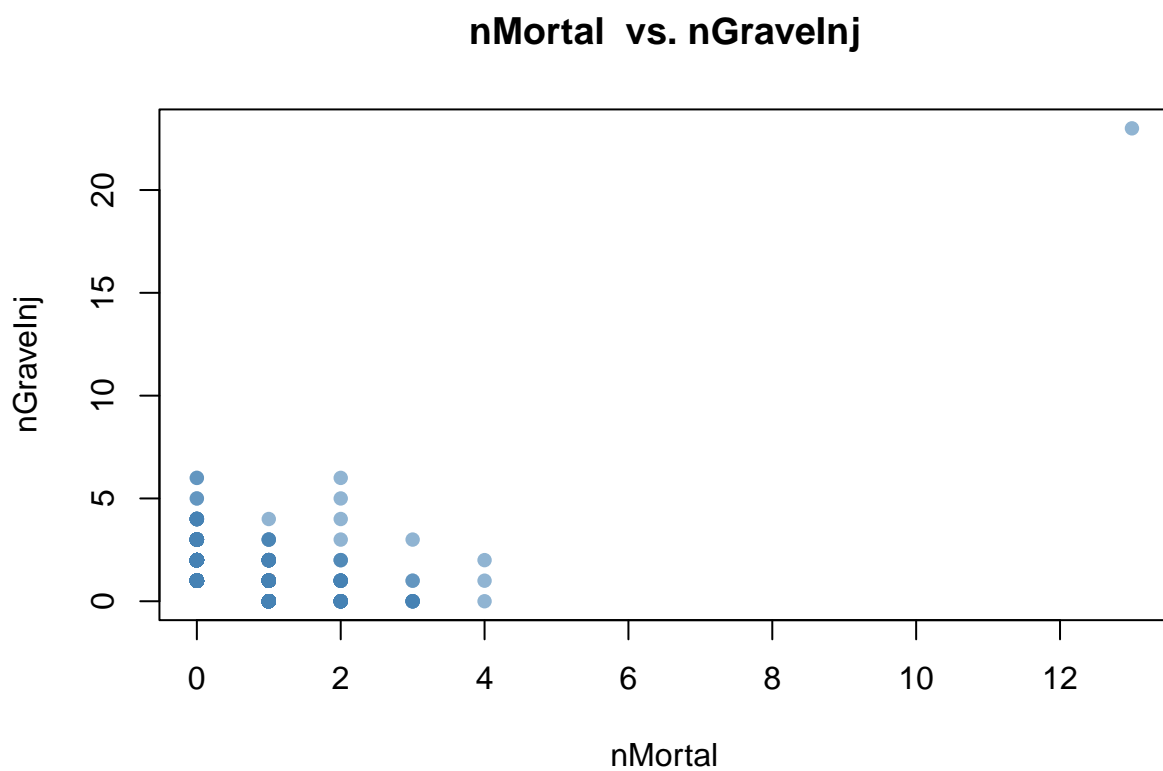


Prov vs. nGravelInj



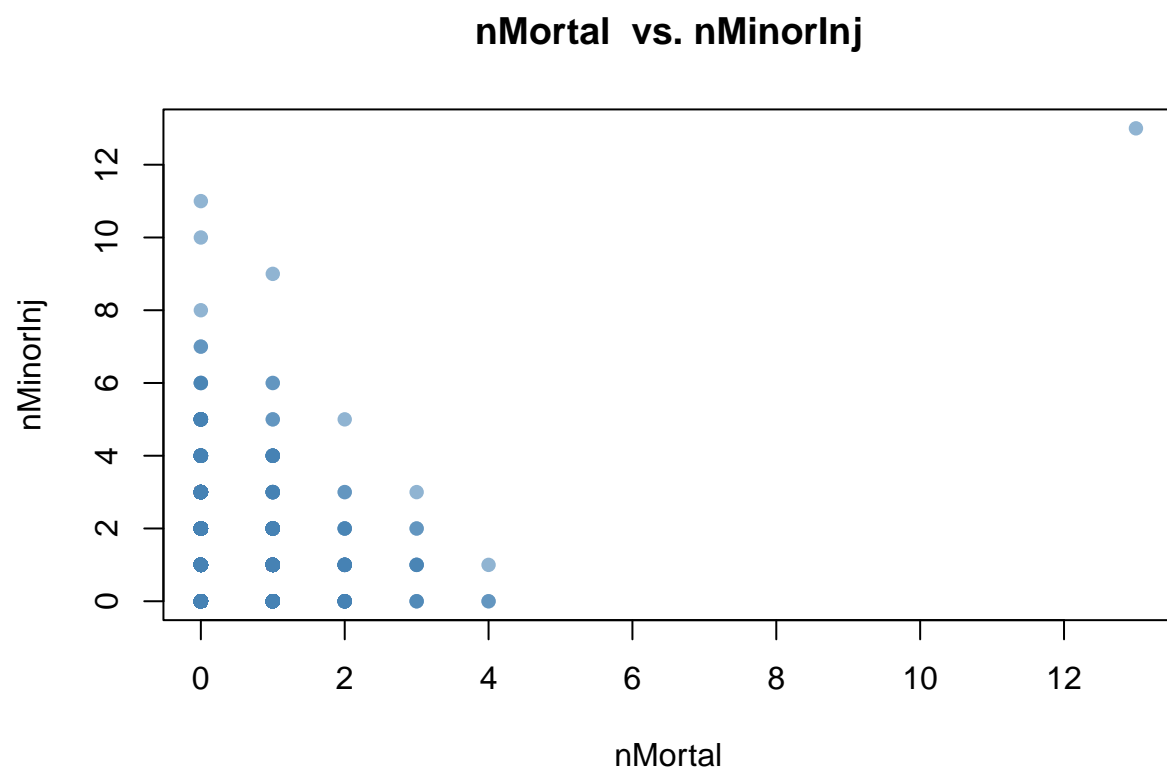
Prov vs. nMinorInj



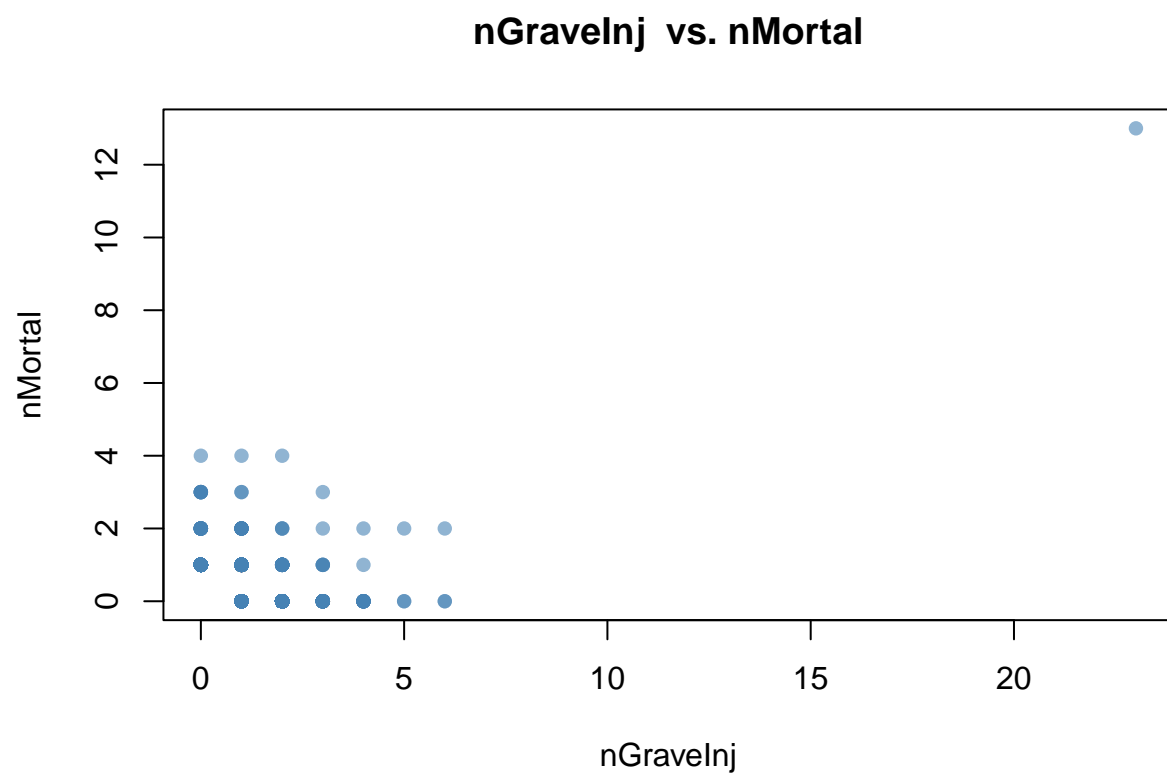


Correlation between nMortal and nGraveInj: -0.133760142352914



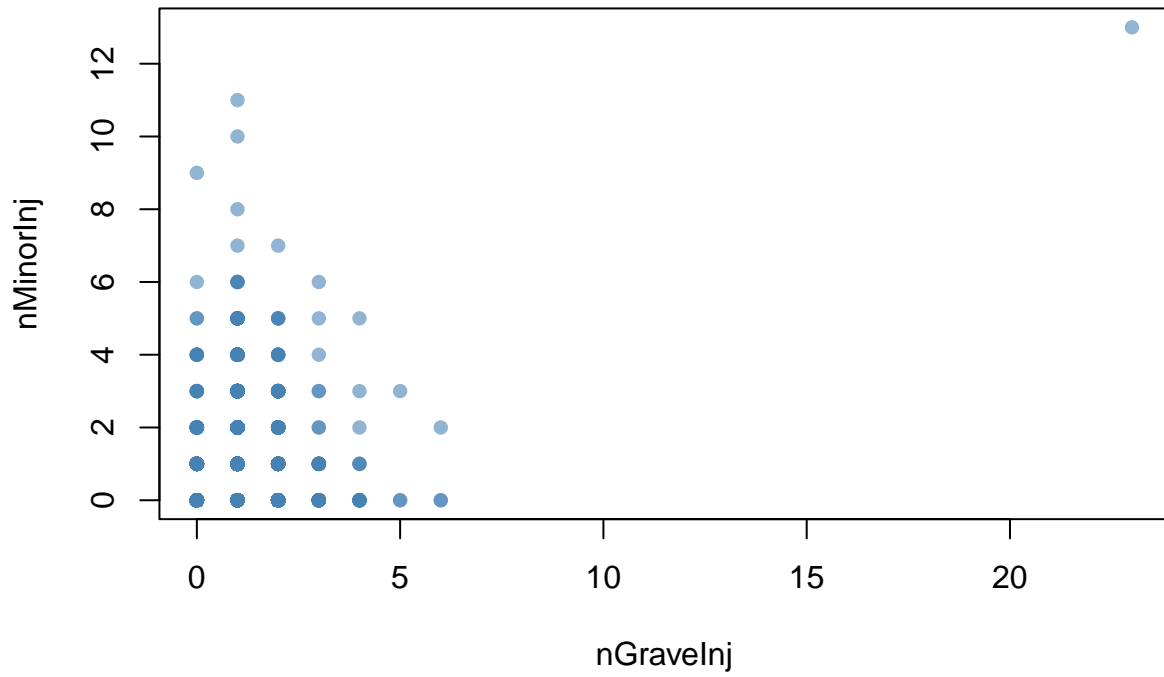


Correlation between nMortal and nMinorInj: 0.142252343552449

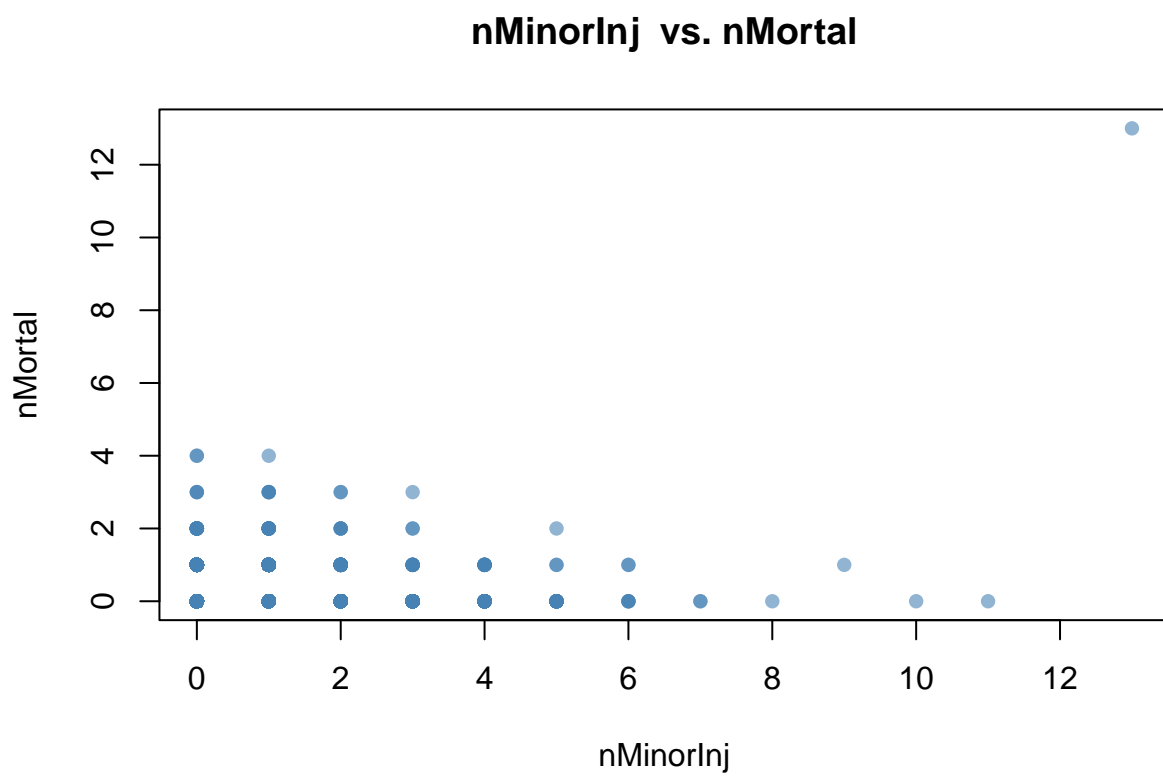


Correlation between nGraveInj and nMortal: -0.133760142352914

**nGravelInj vs. nMinorInj**

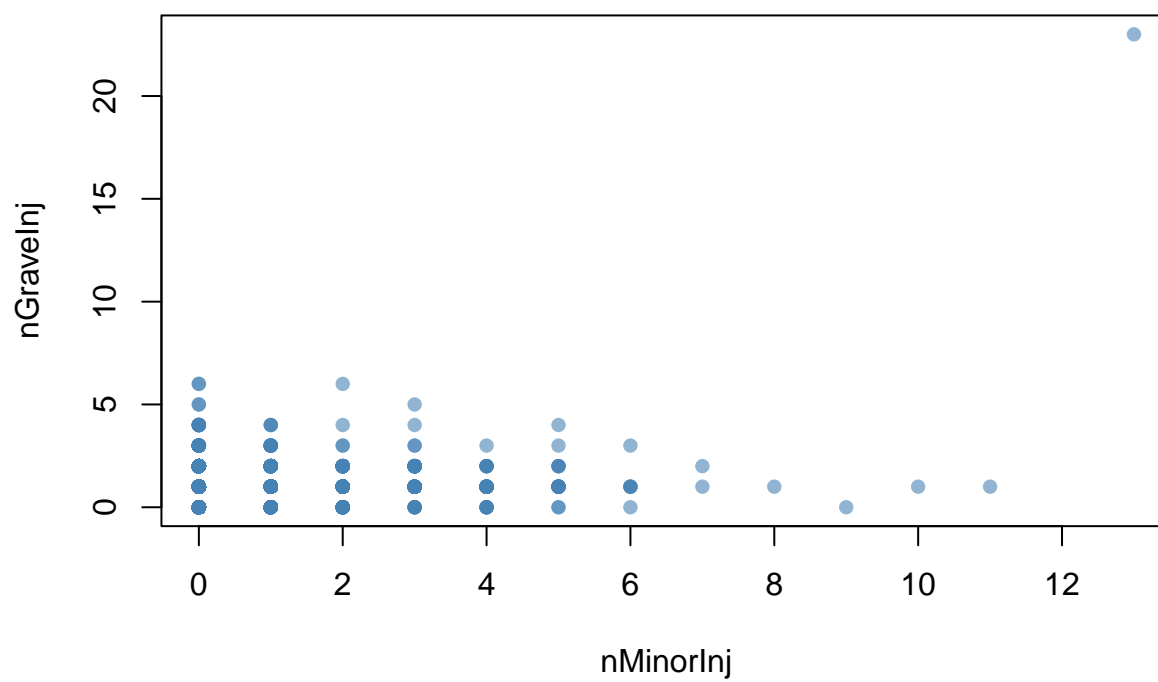


Correlation between nGravelInj and nMinorInj: 0.168531709937411



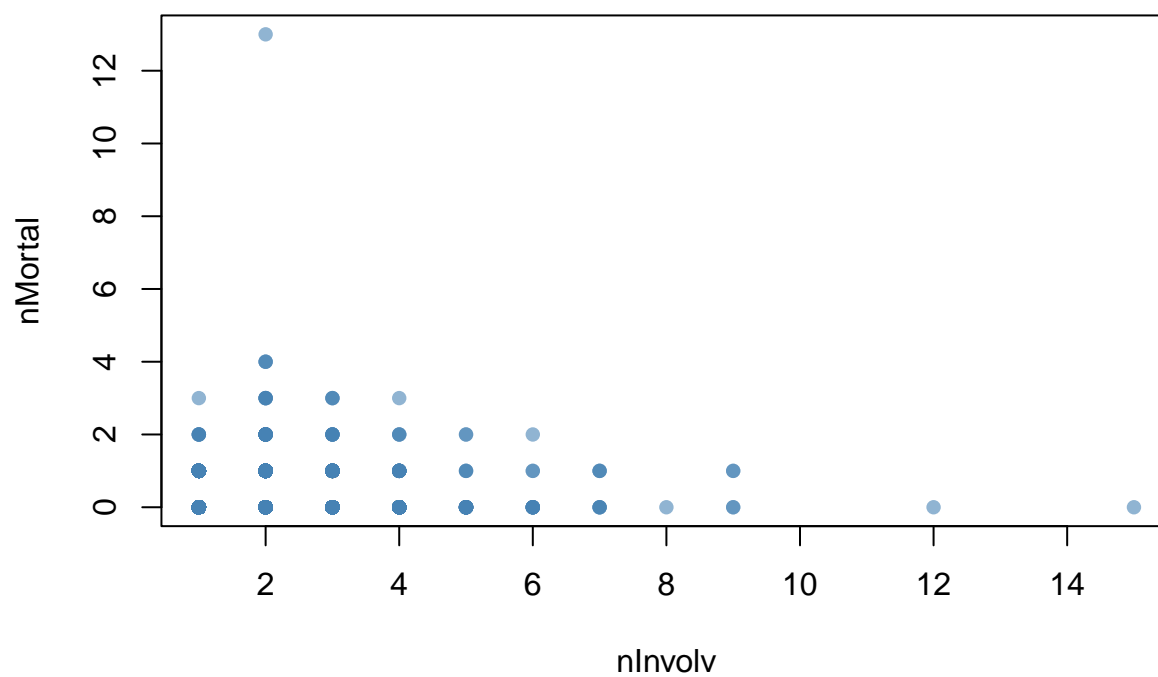
Correlation between nMinorInj and nMortal: 0.142252343552449

**nMinorInj vs. nGravelInj**

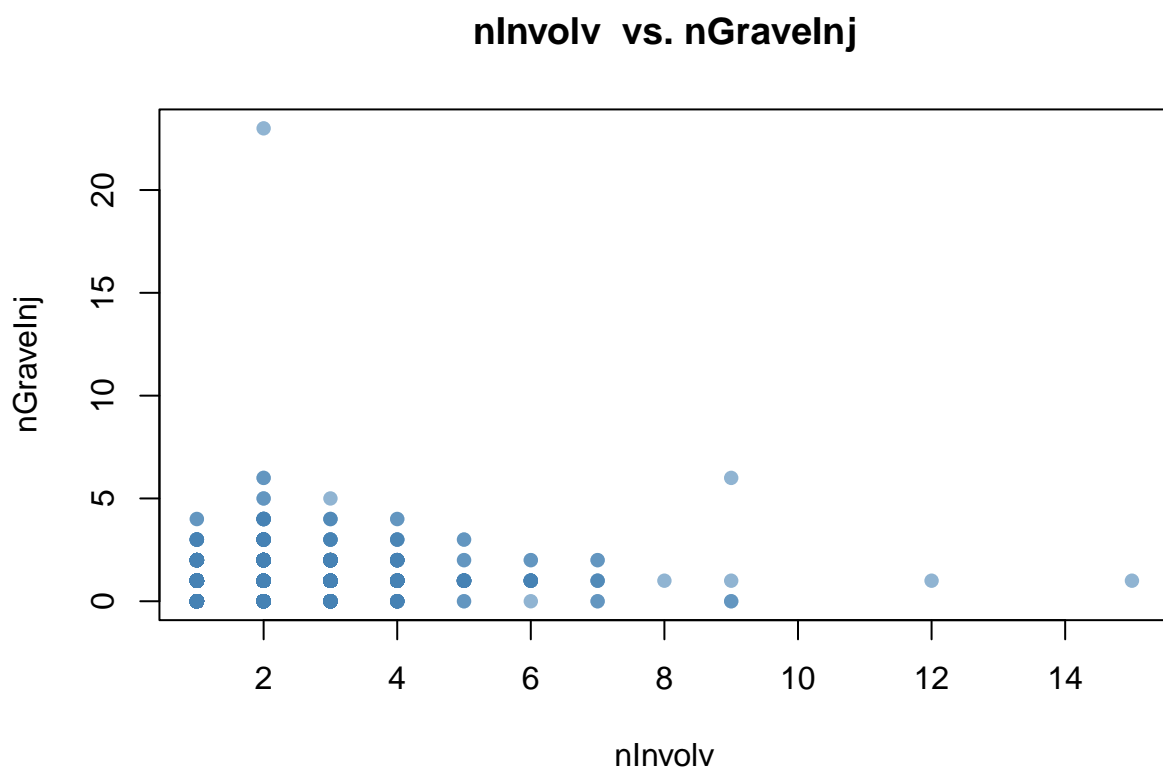


Correlation between nMinorInj and nGravelInj: 0.168531709937411

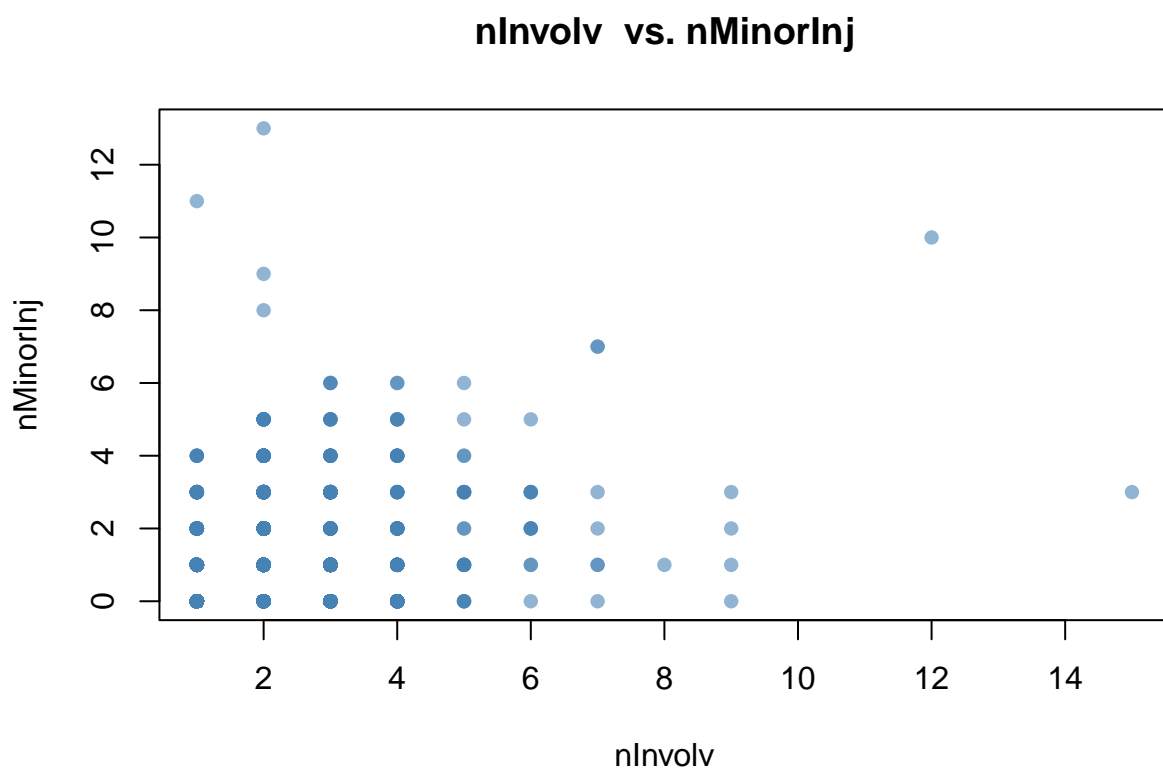
**nInvolv vs. nMortal**



Correlation between nInvolv and nMortal: 0.0558309025288676



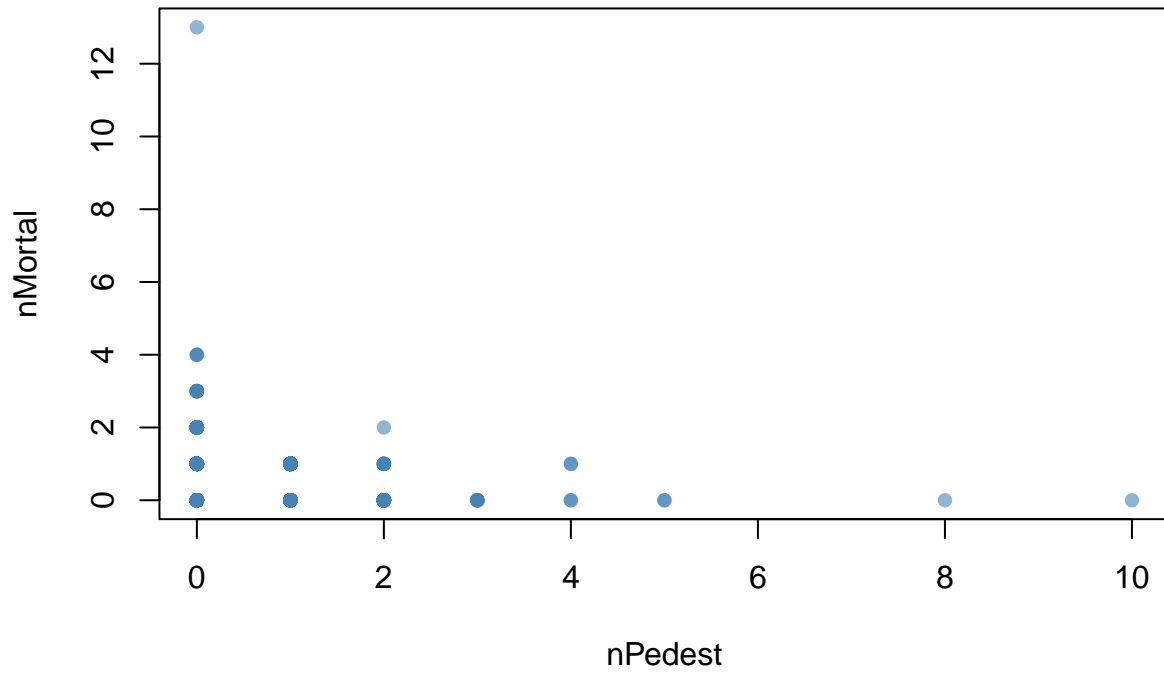
Correlation between nInvolv and nGraveInj: 0.0758675440026851



Correlation between nInvolv and nMinorInj: 0.308329601929549

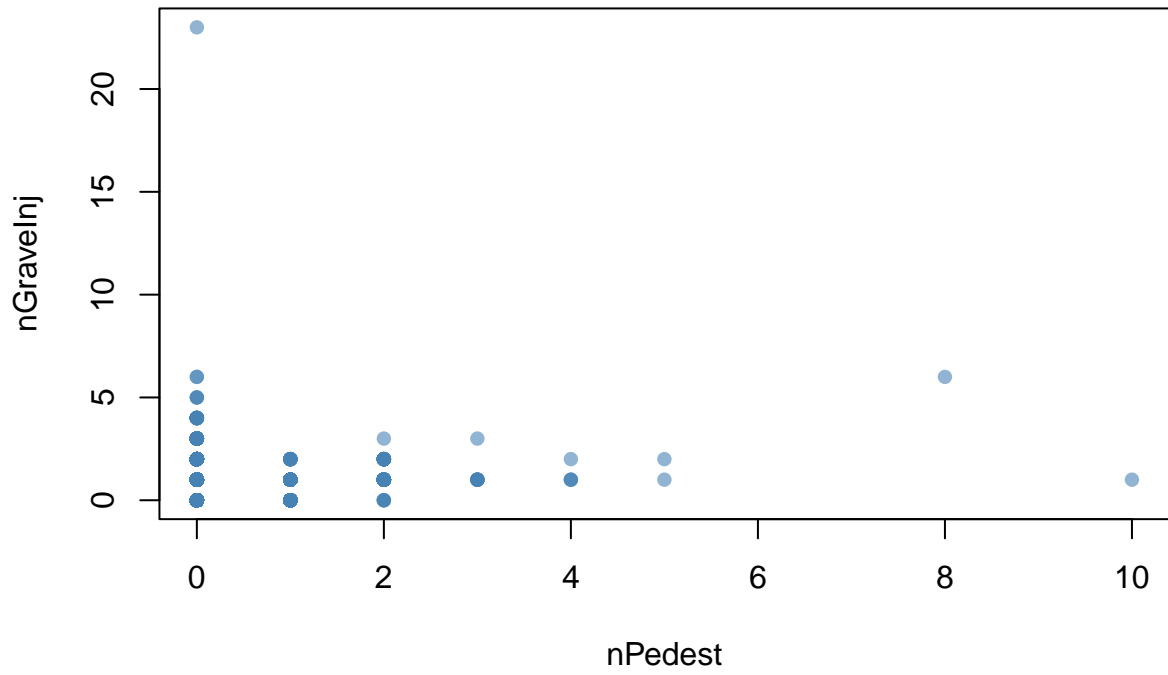


**nPedest vs. nMortal**



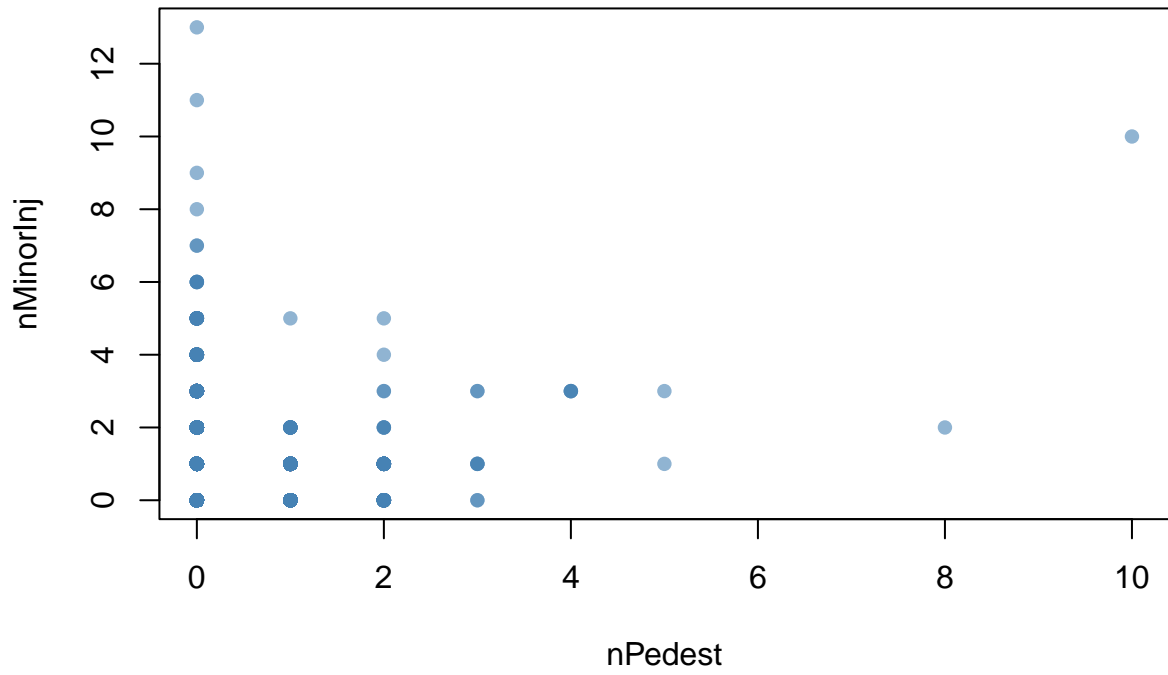
Correlation between nPedest and nMortal: -0.028469479936891

**nPedest vs. nGravelInj**



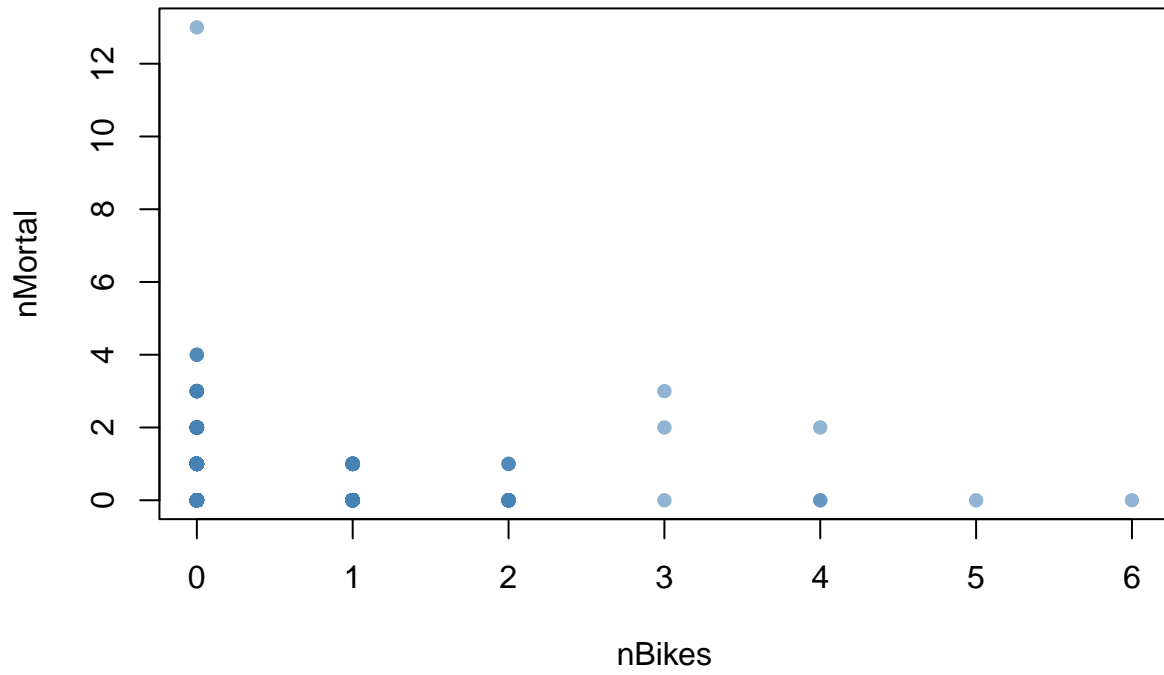
Correlation between nPedest and nGravelInj: -0.00918540410134628

**nPedest vs. nMinorInj**

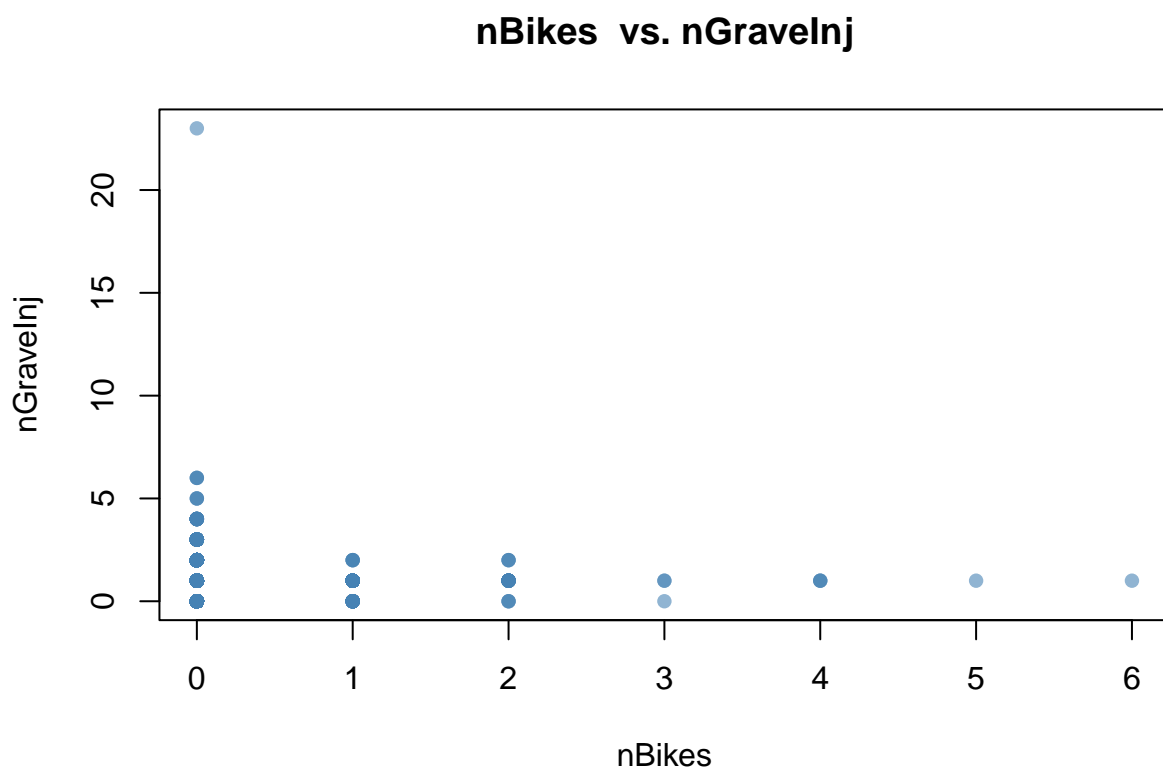


Correlation between nPedest and nMinorInj: -0.00887913409445504

### nBikes vs. nMortal

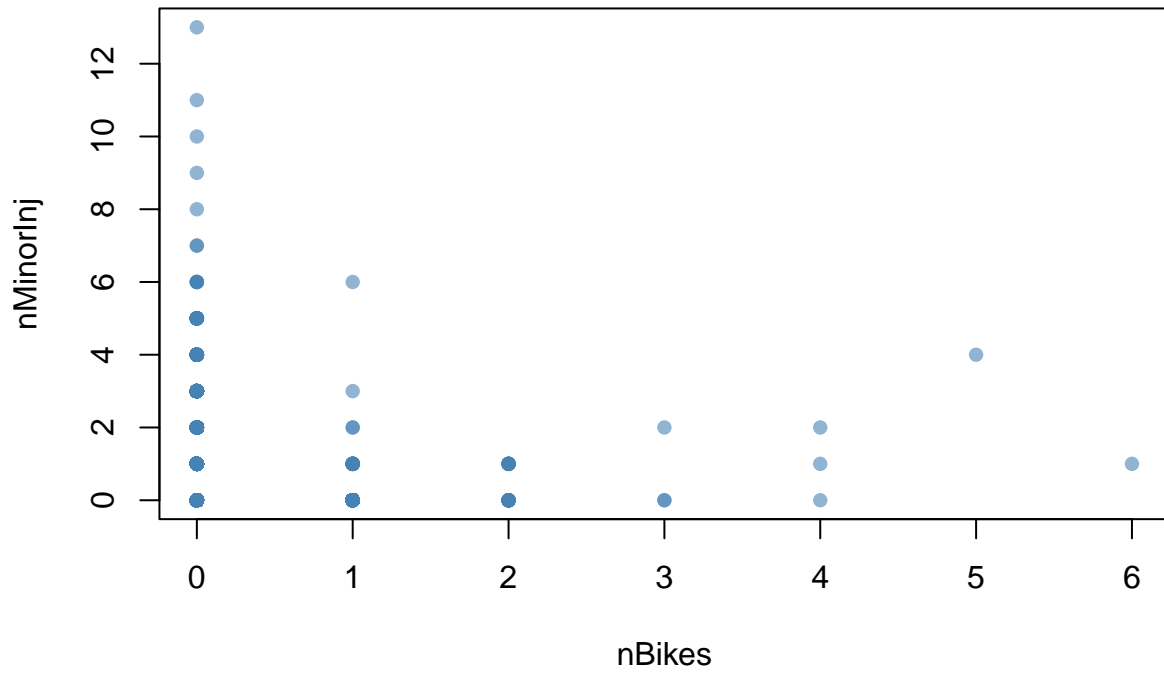


Correlation between nBikes and nMortal: -0.012522000461867



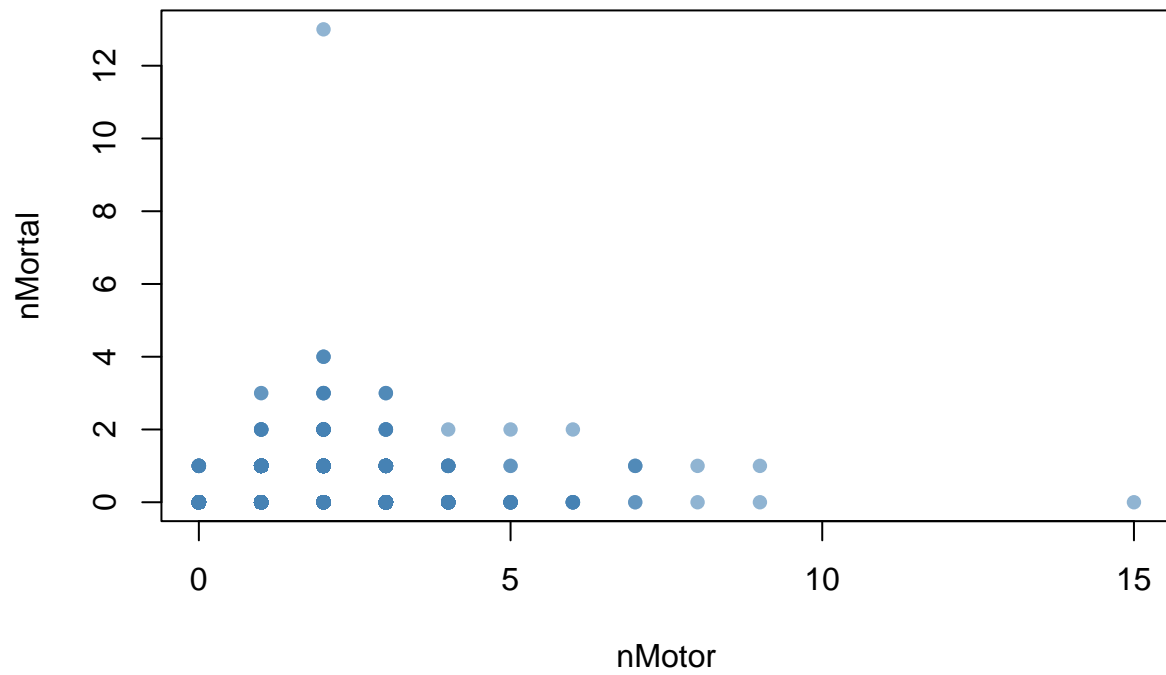
Correlation between nBikes and nGravelInj: -0.0237851313618489

**nBikes vs. nMinorInj**

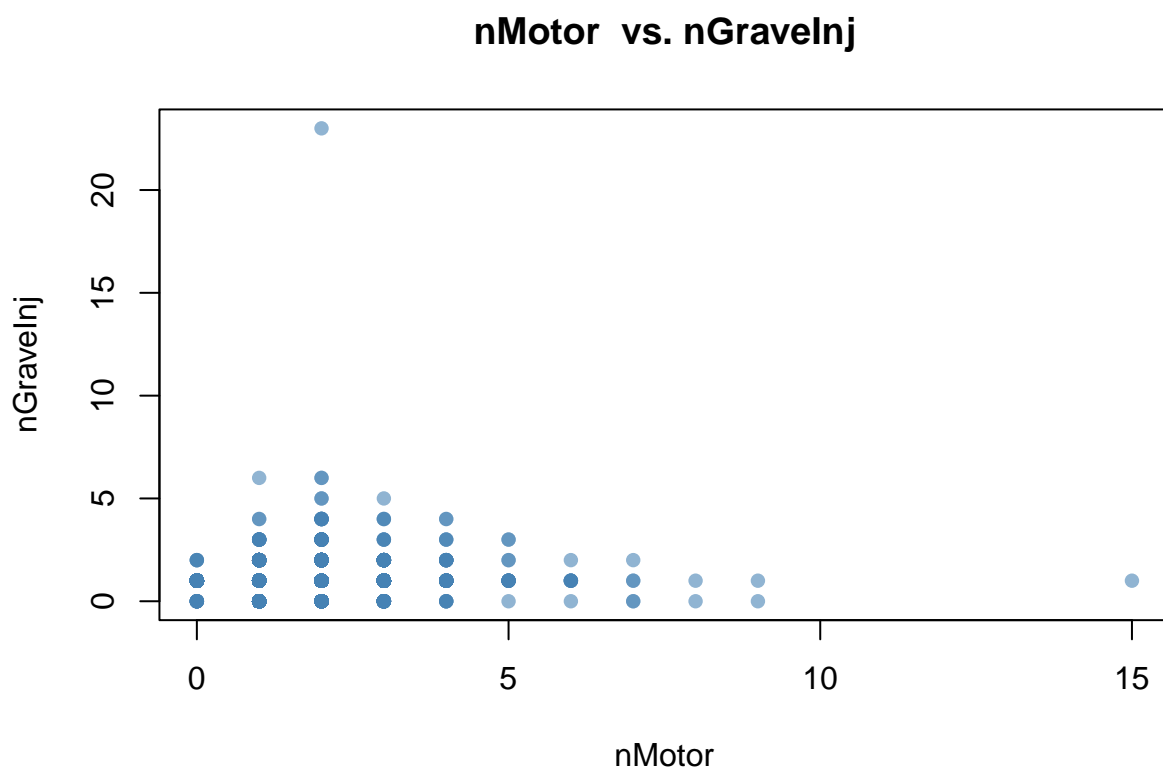


Correlation between nBikes and nMinorInj: -0.0574696527114456

**nMotor vs. nMortal**

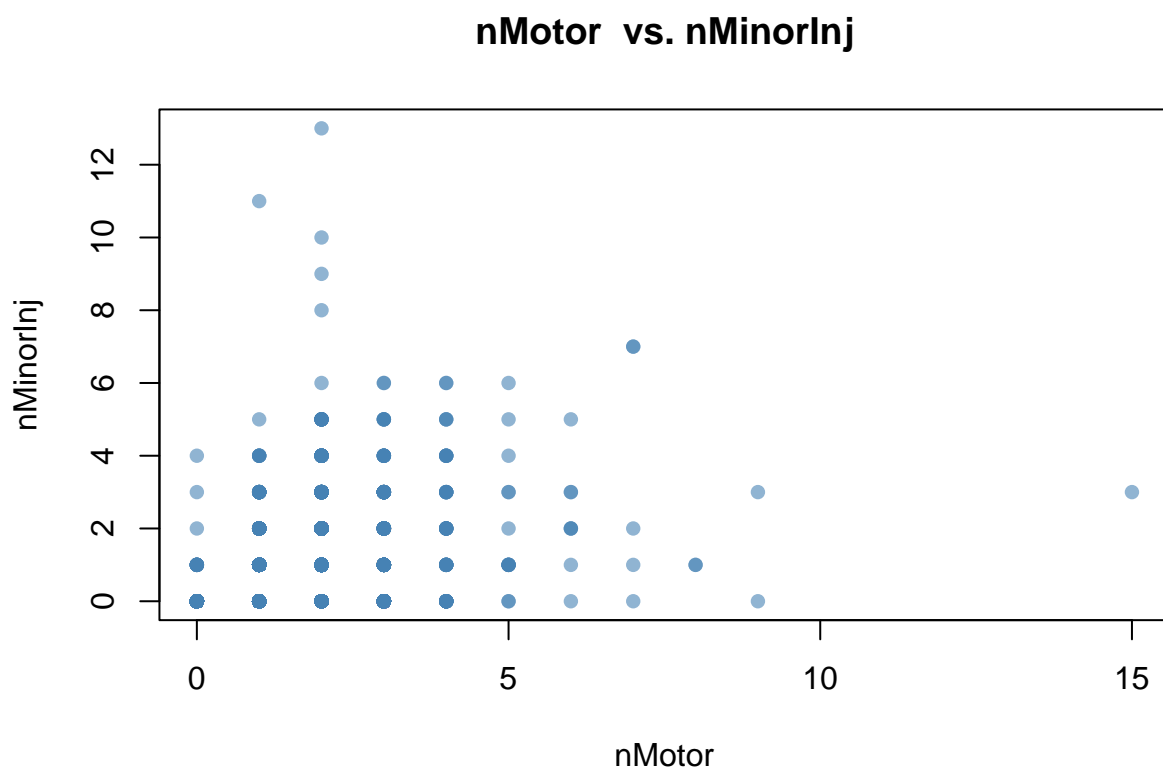


Correlation between nMotor and nMortal: 0.0781798771266676



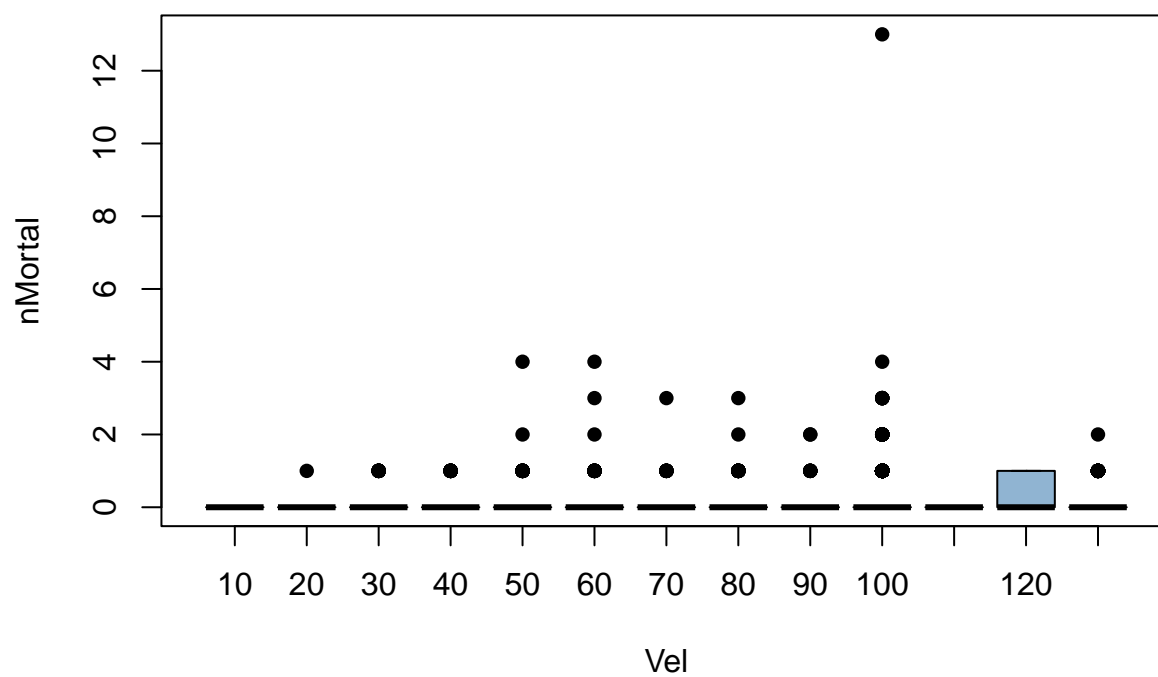
Correlation between nMotor and nGravelInj: 0.0918280610640564



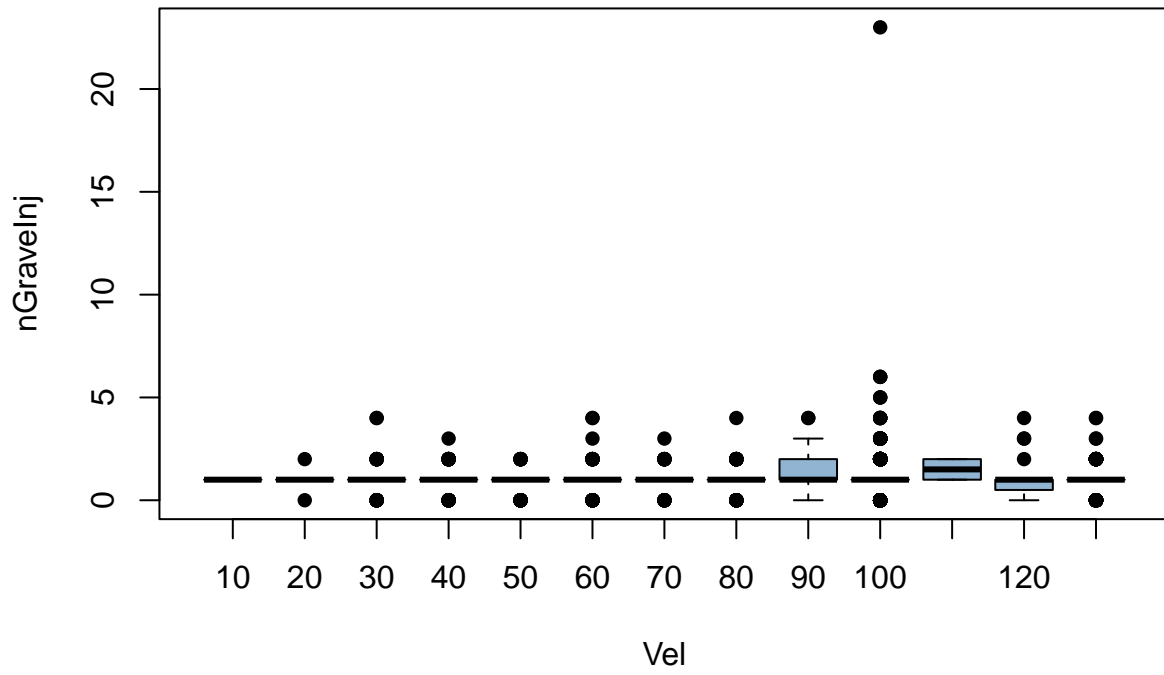


Correlation between nMotor and nMinorInj: 0.325637603518931

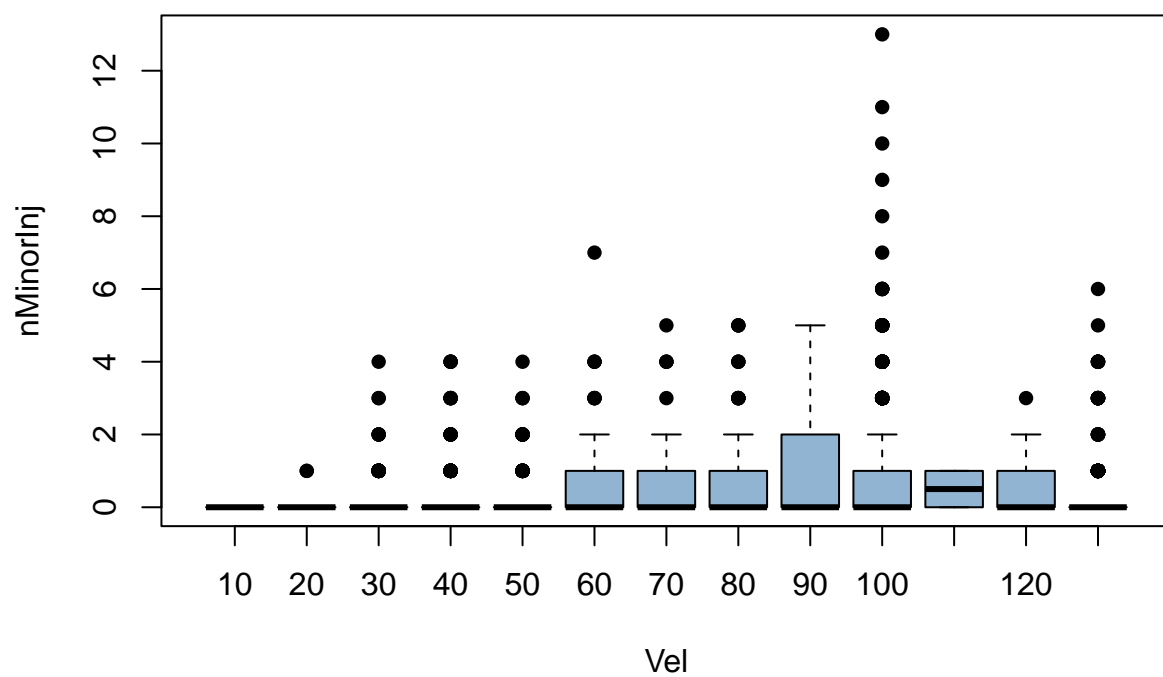
## Vel vs. nMortal



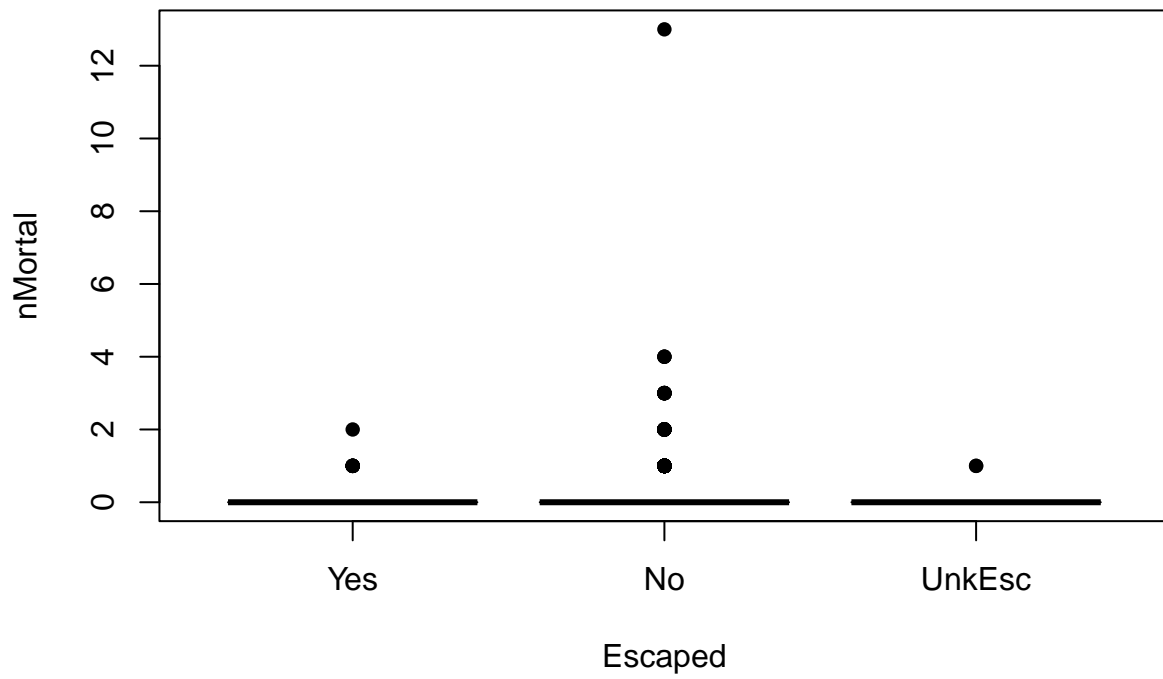
Vel vs. nGravelnj



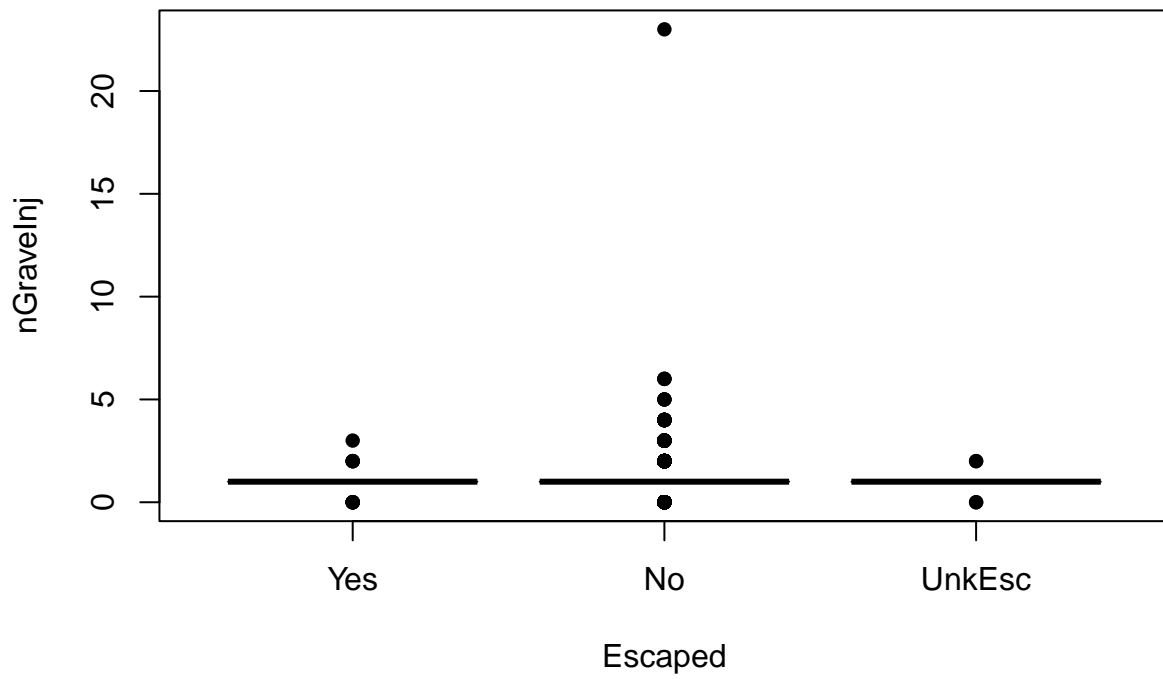
Vel vs. nMinorInj



Escaped vs. nMortal



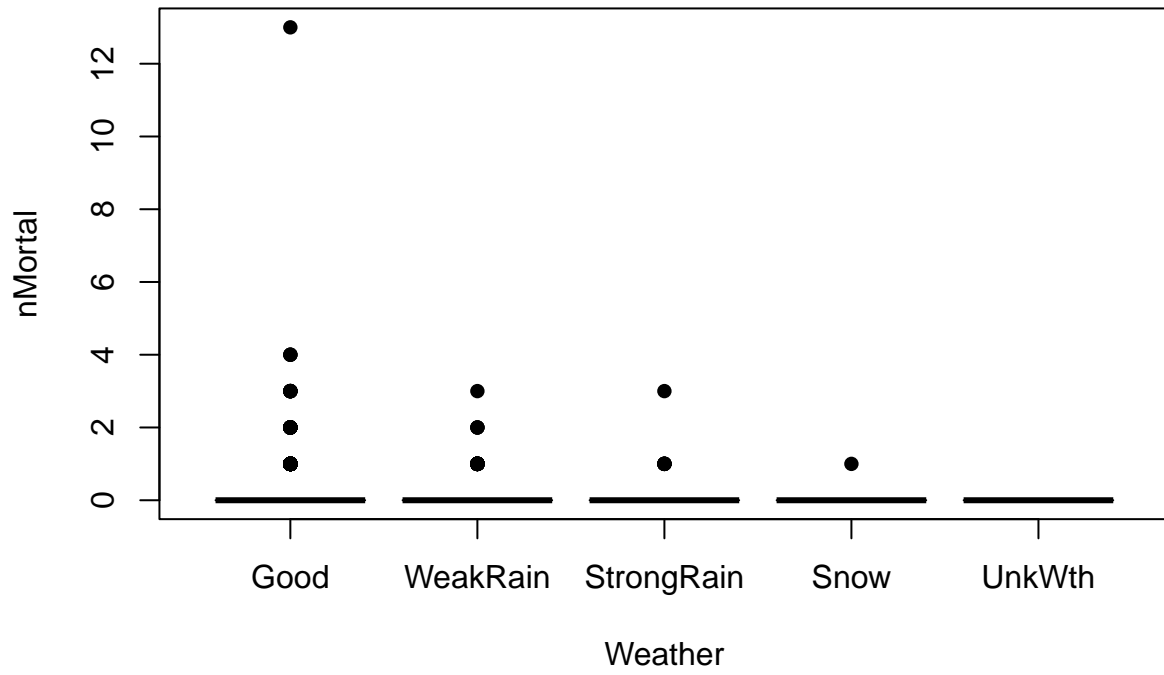
Escaped vs. nGravelInj



Escaped vs. nMinorInj

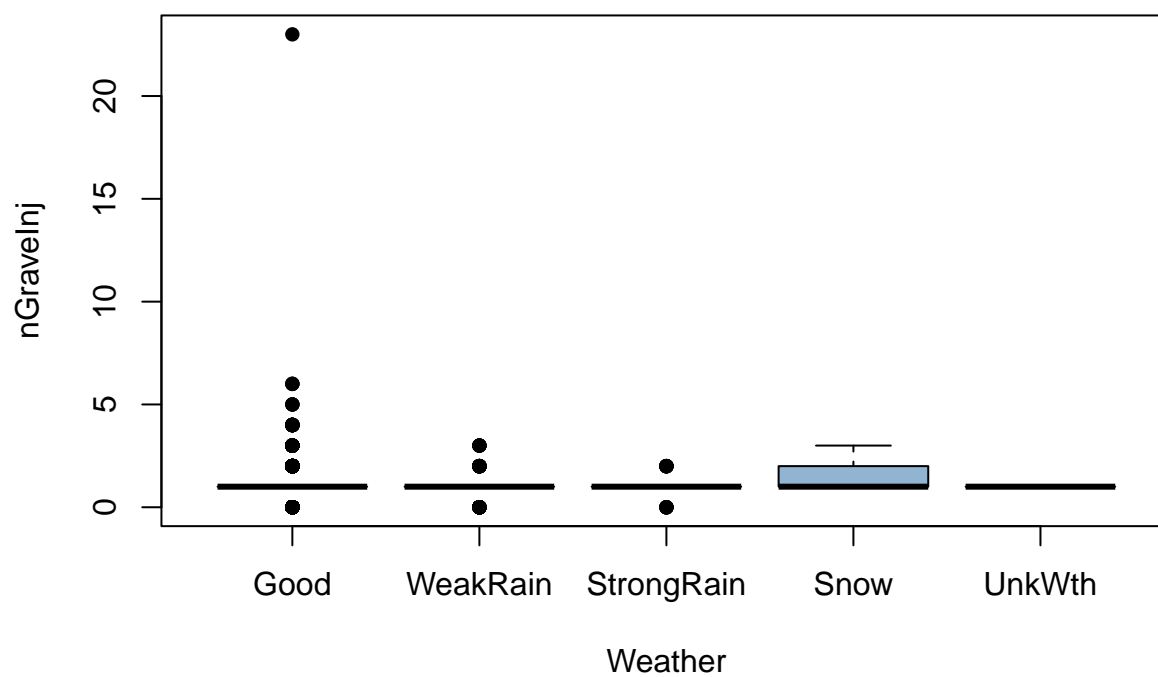


**Weather vs. nMortal**

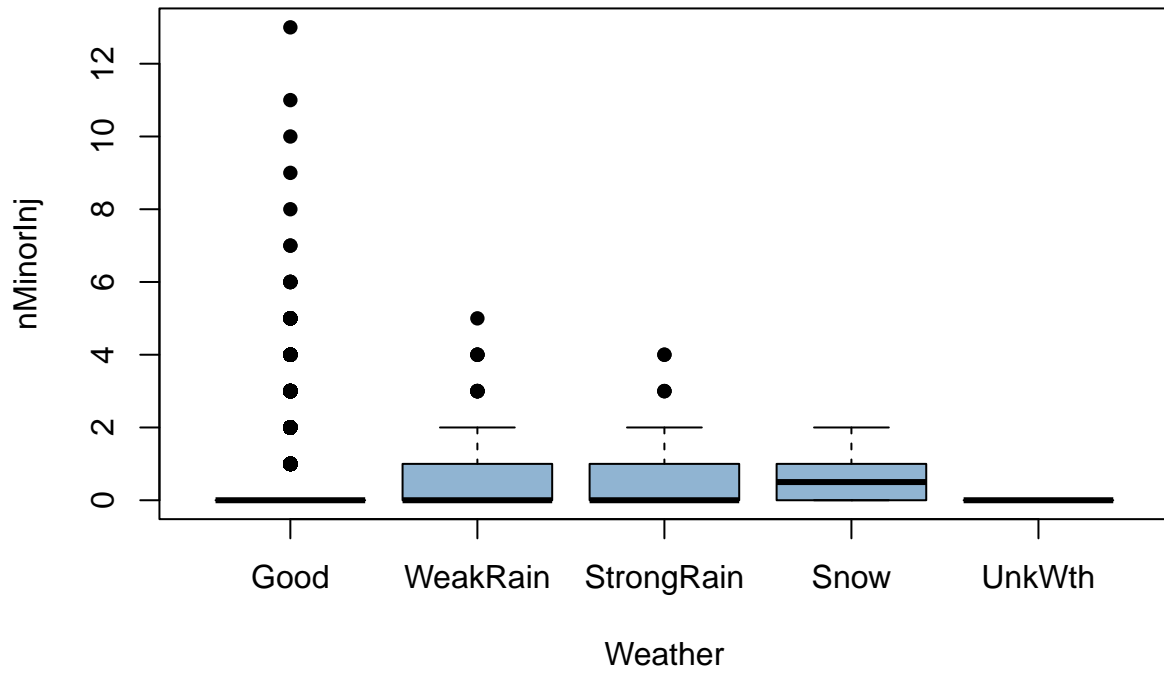




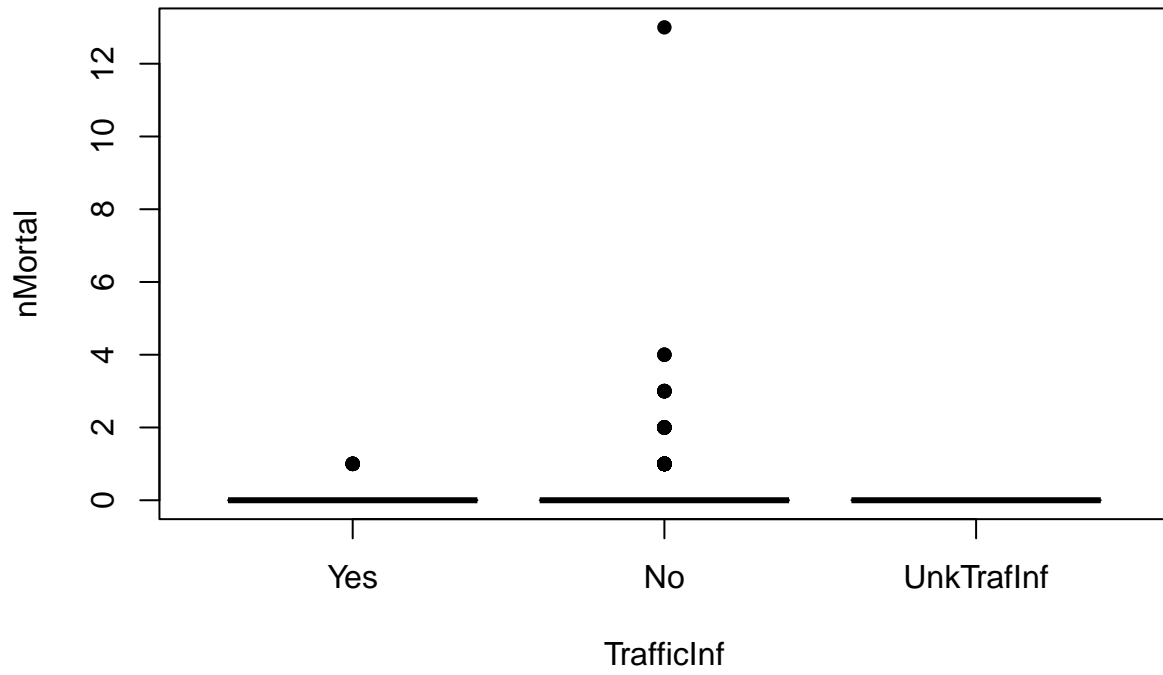
**Weather vs. nGravelInj**



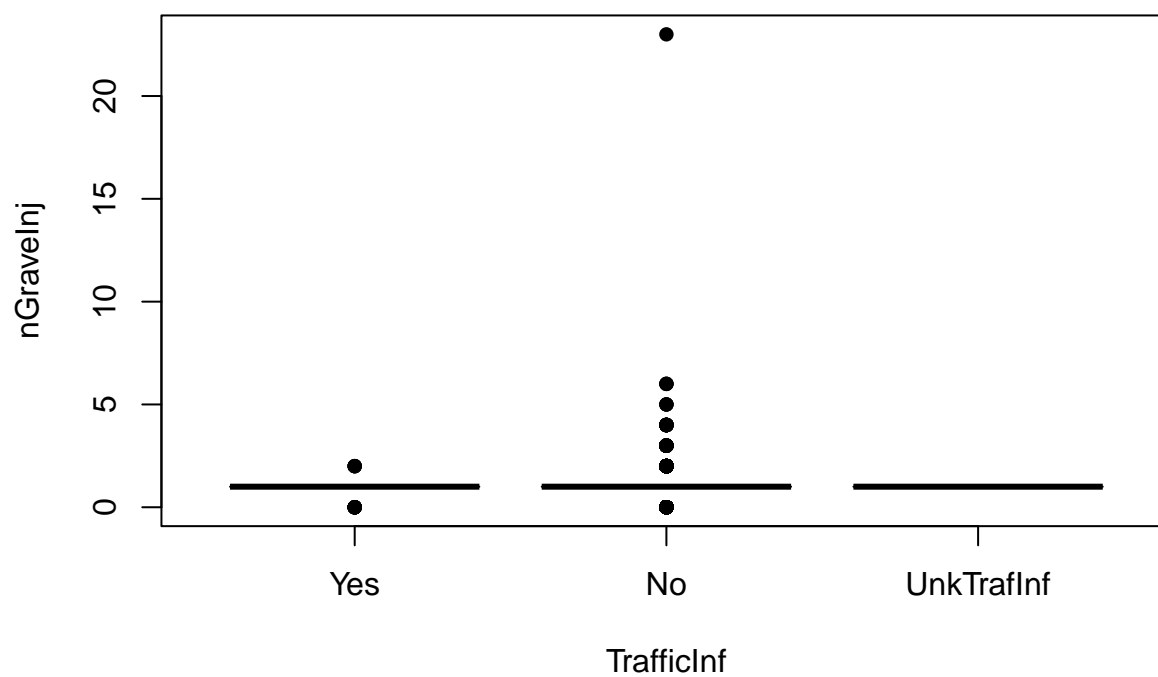
**Weather vs. nMinorInj**



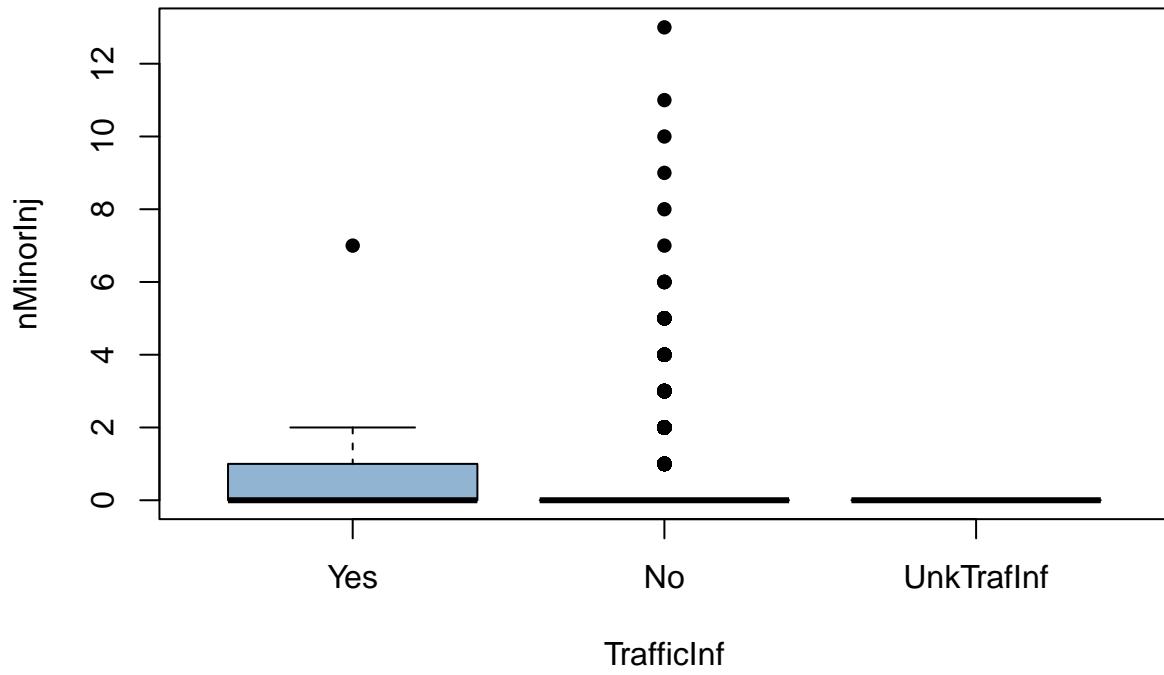
**TrafficInf vs. nMortal**



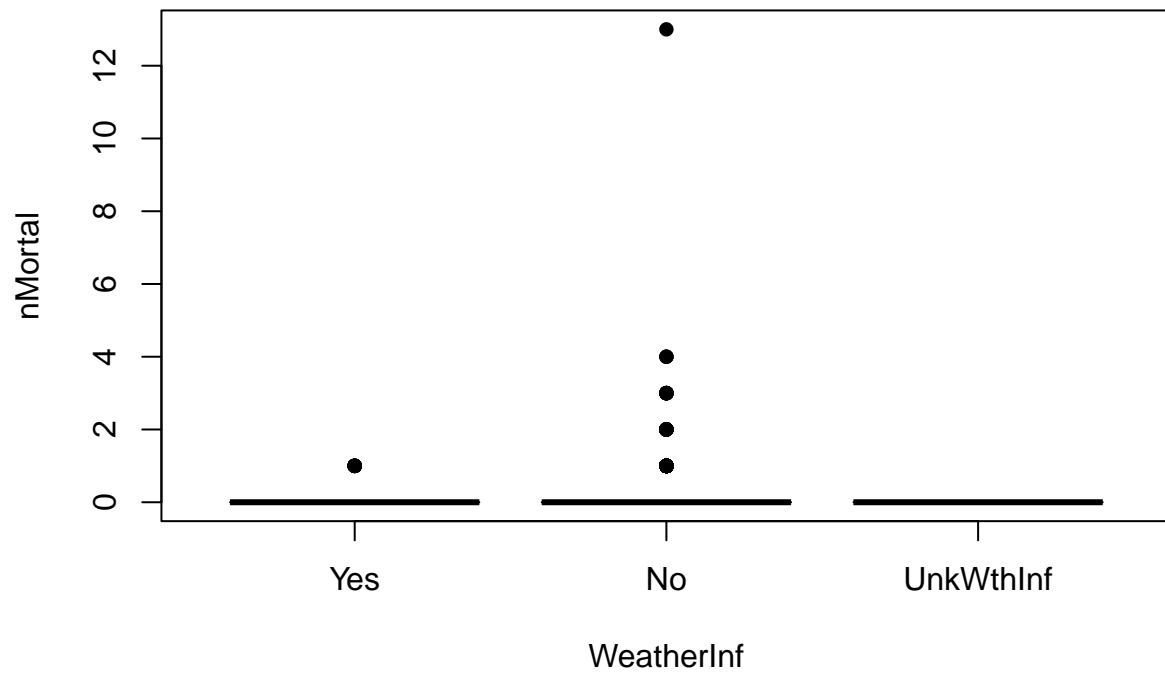
**TrafficInf vs. nGravelInj**



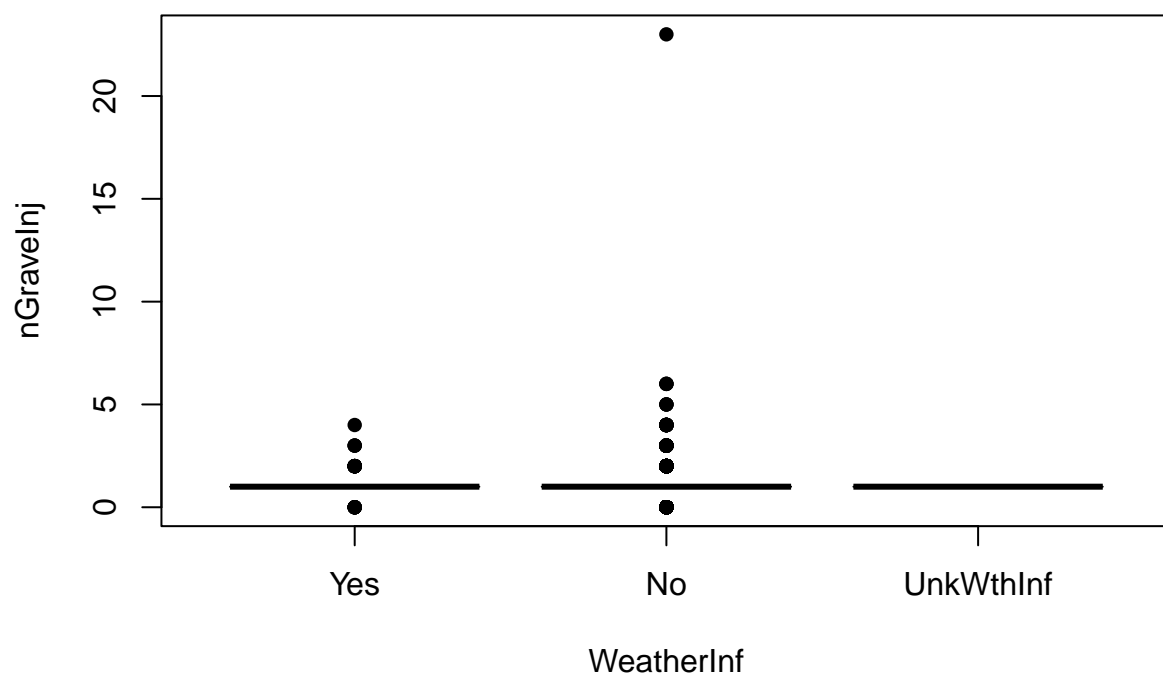
TrafficInf vs. nMinorInj



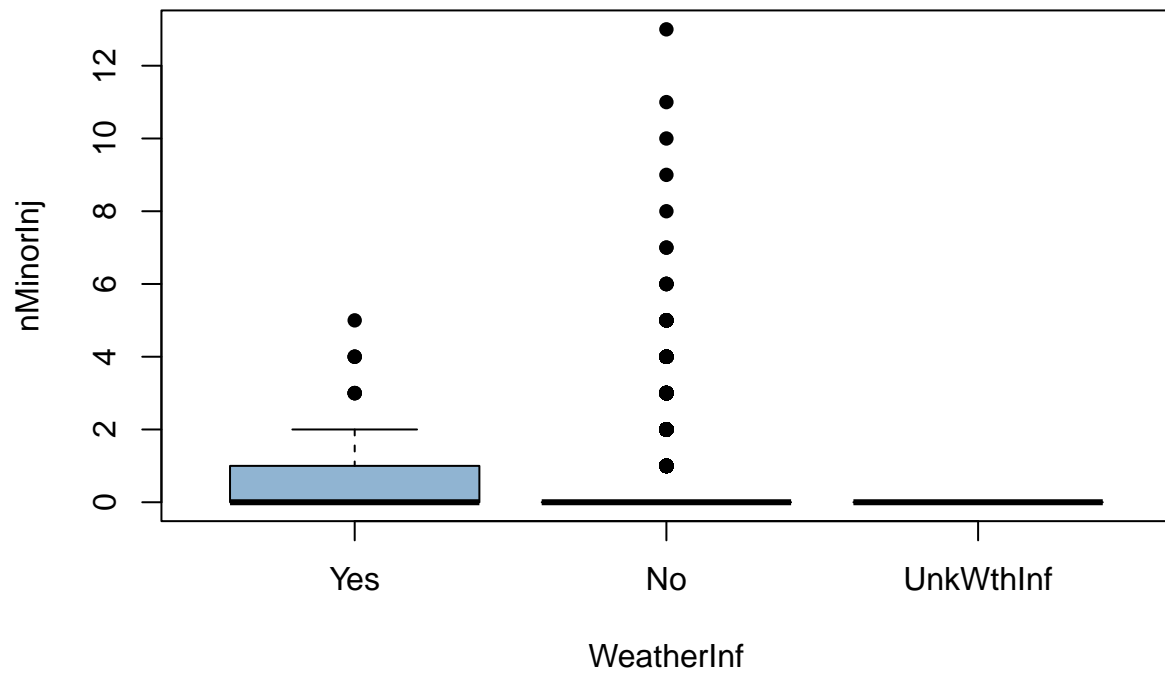
**WeatherInf vs. nMortal**



**WeatherInf vs. nGravelInj**

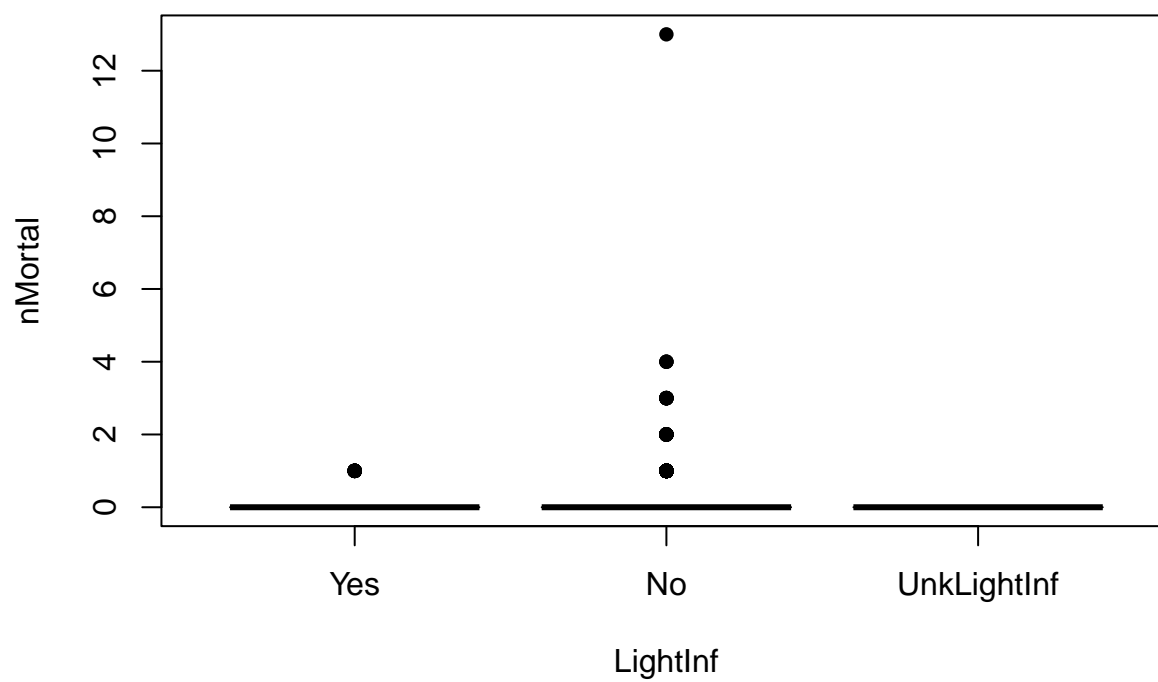


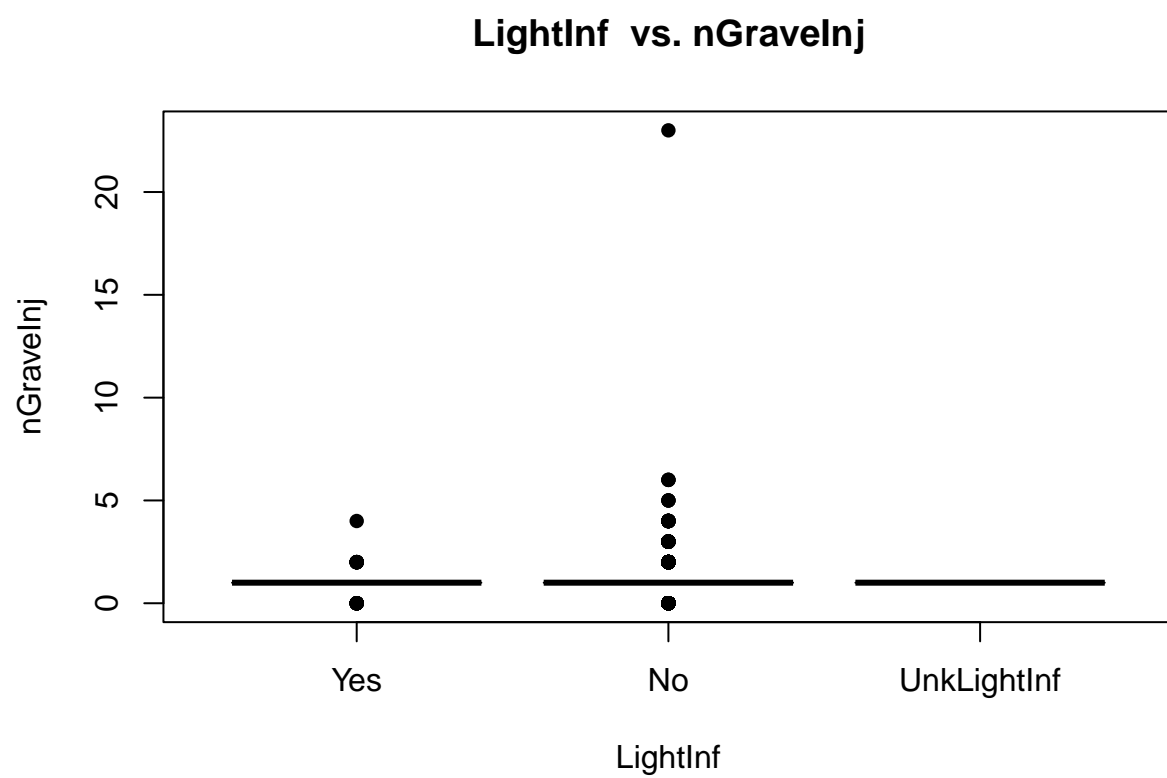
## WeatherInf vs. nMinorInj



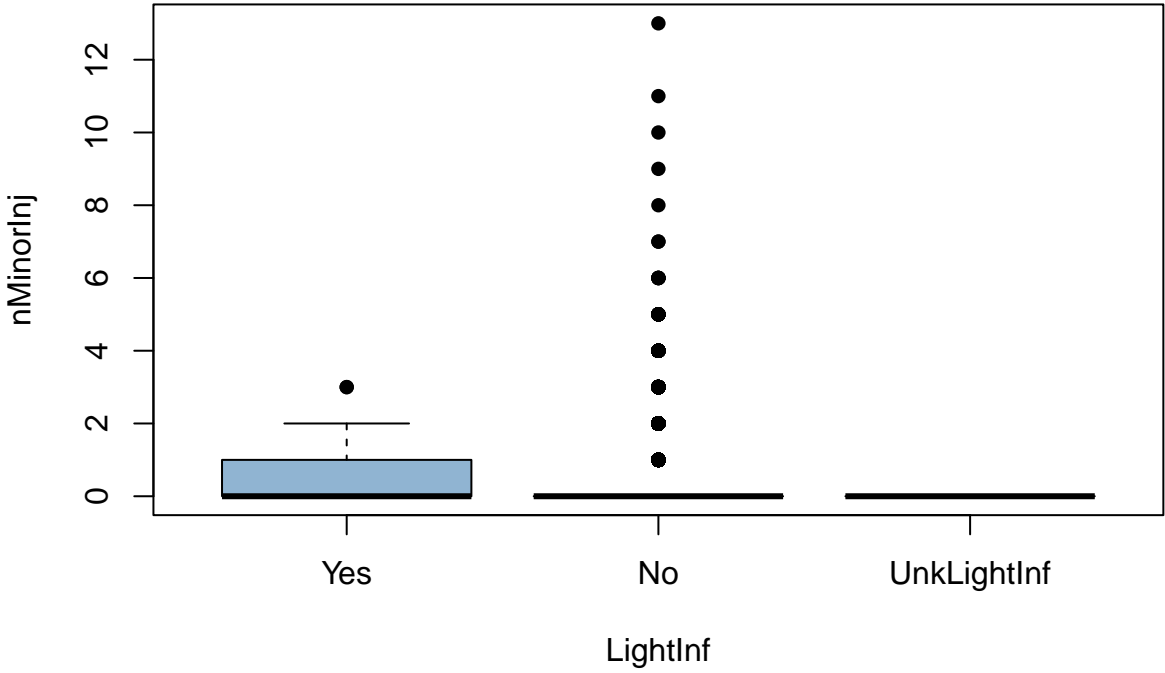


**LightInf vs. nMortal**

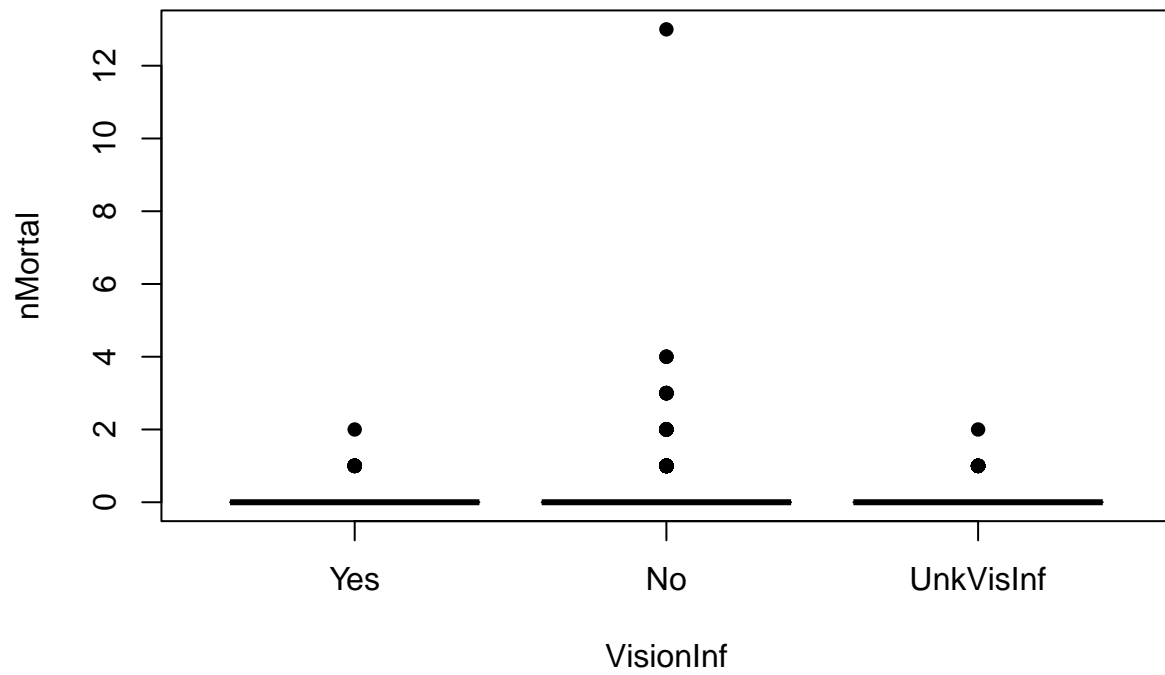




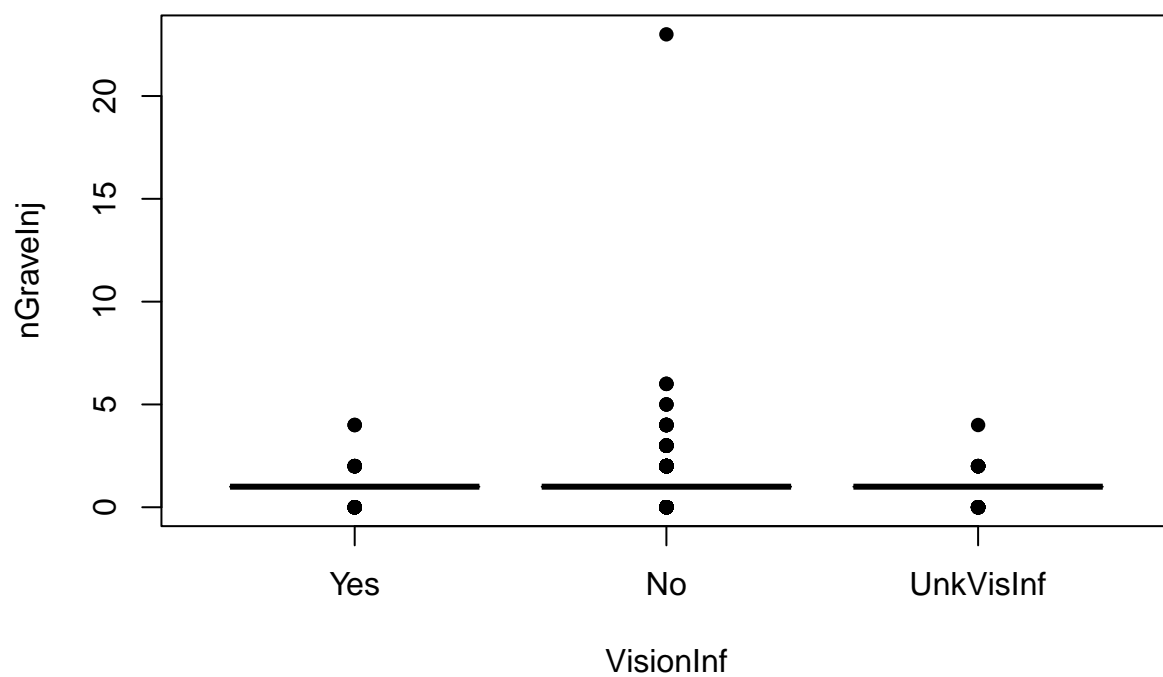
## LightInf vs. nMinorInf



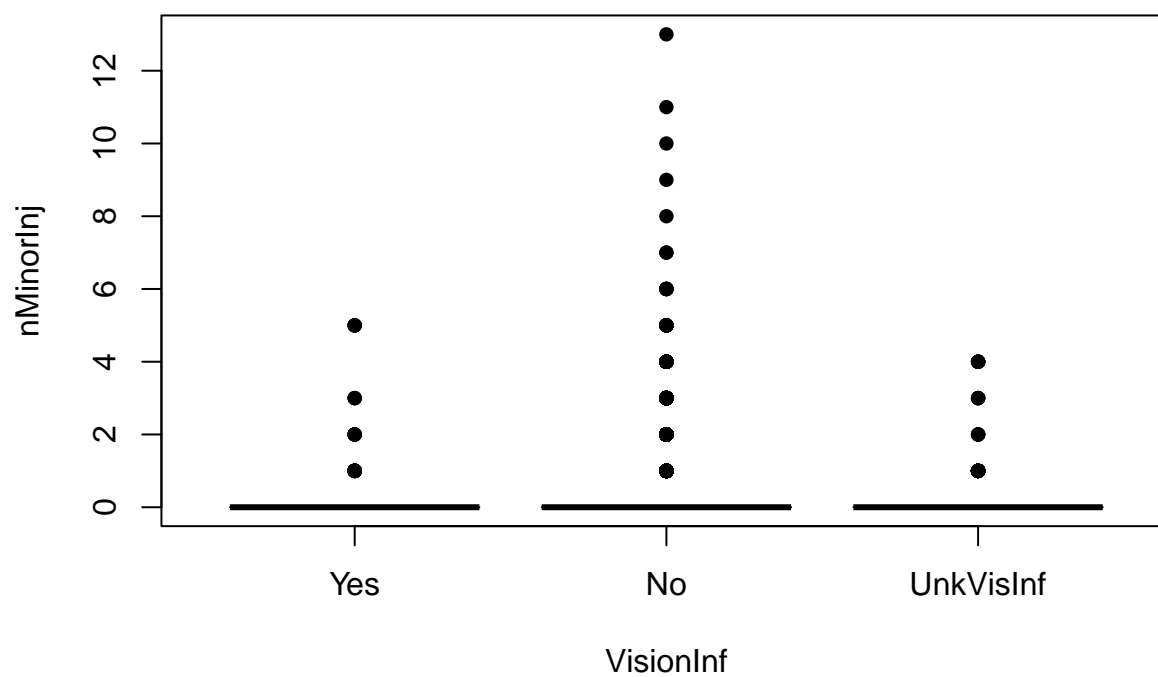
**VisionInf vs. nMortal**



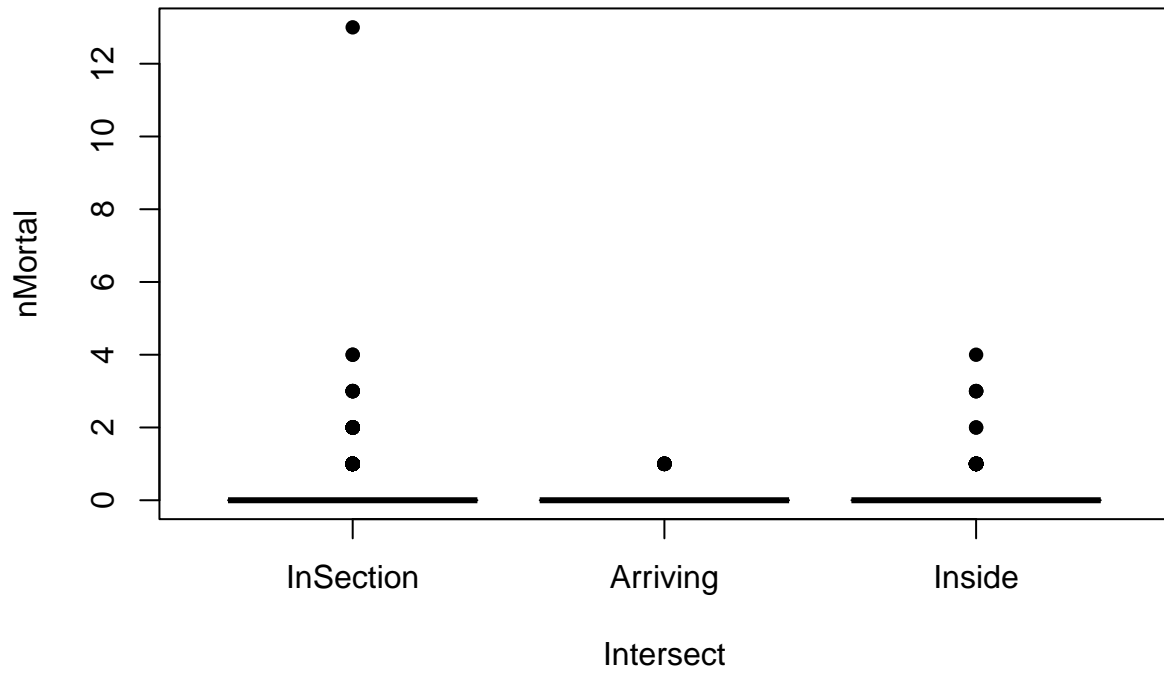
**VisionInf vs. nGravelInj**



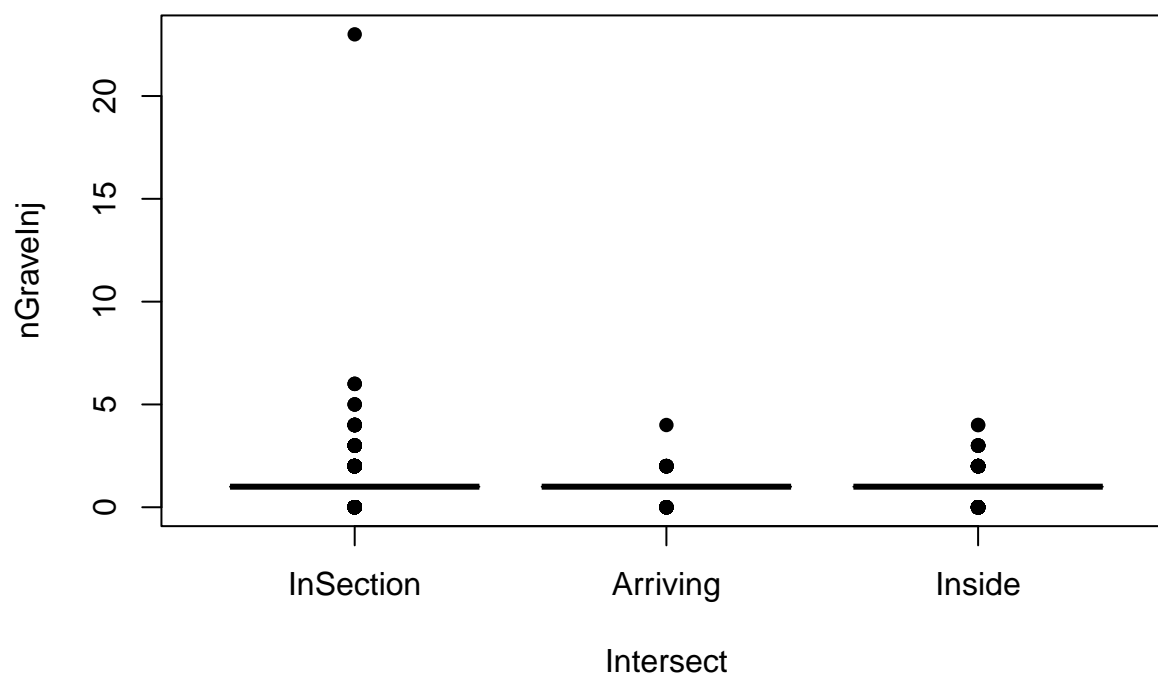
**VisionInf vs. nMinorInj**



**Intersect vs. nMortal**

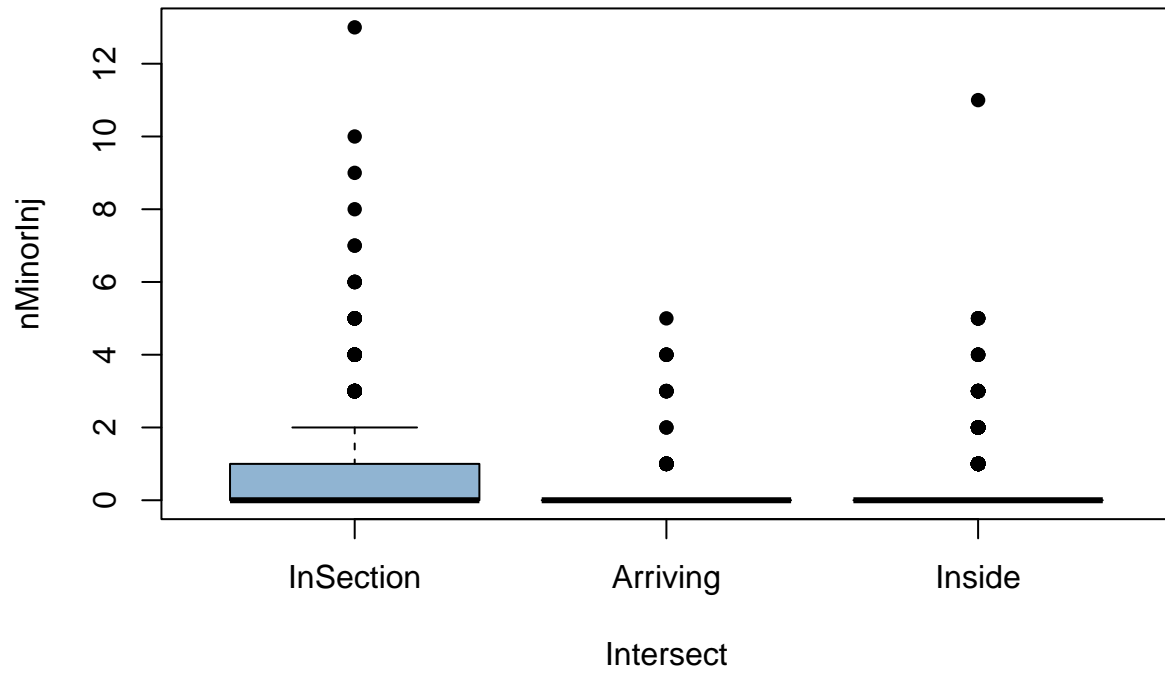


Intersect vs. nGravelnj

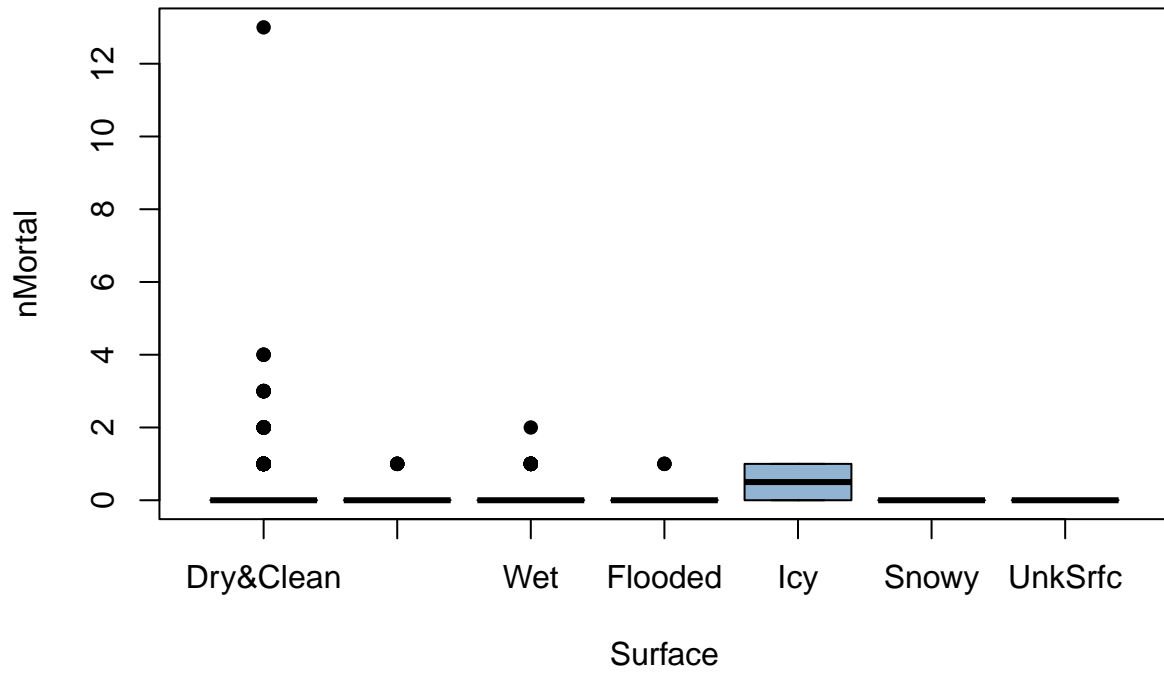




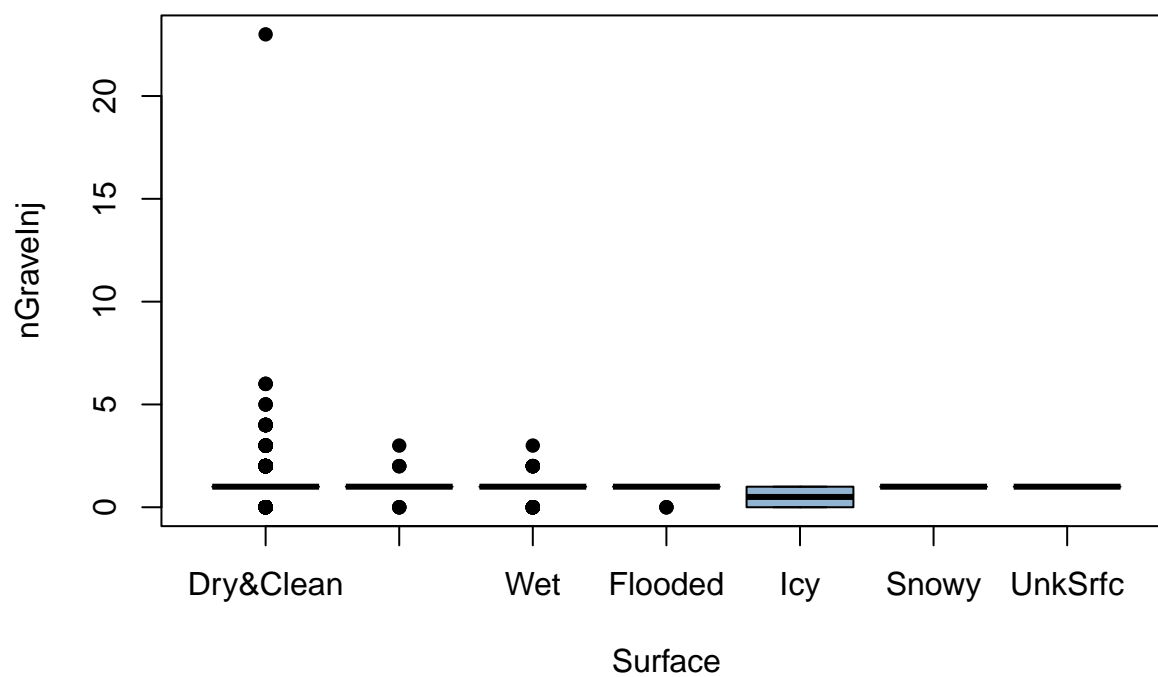
Intersect vs. nMinorInj



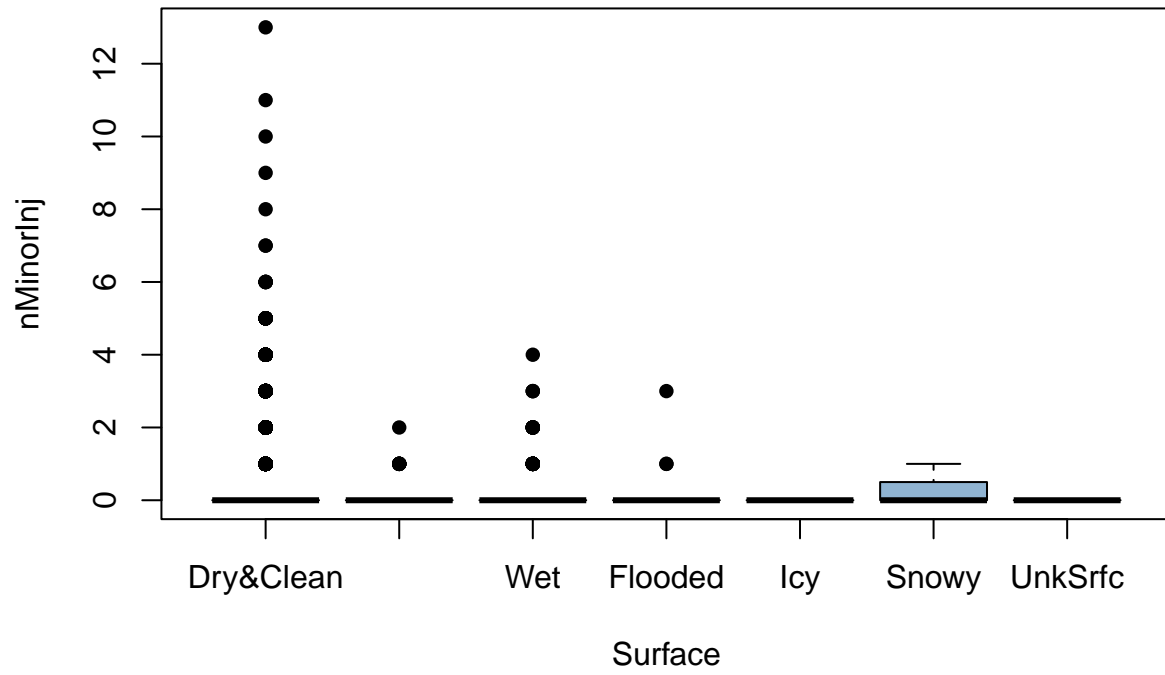
## Surface vs. nMortal

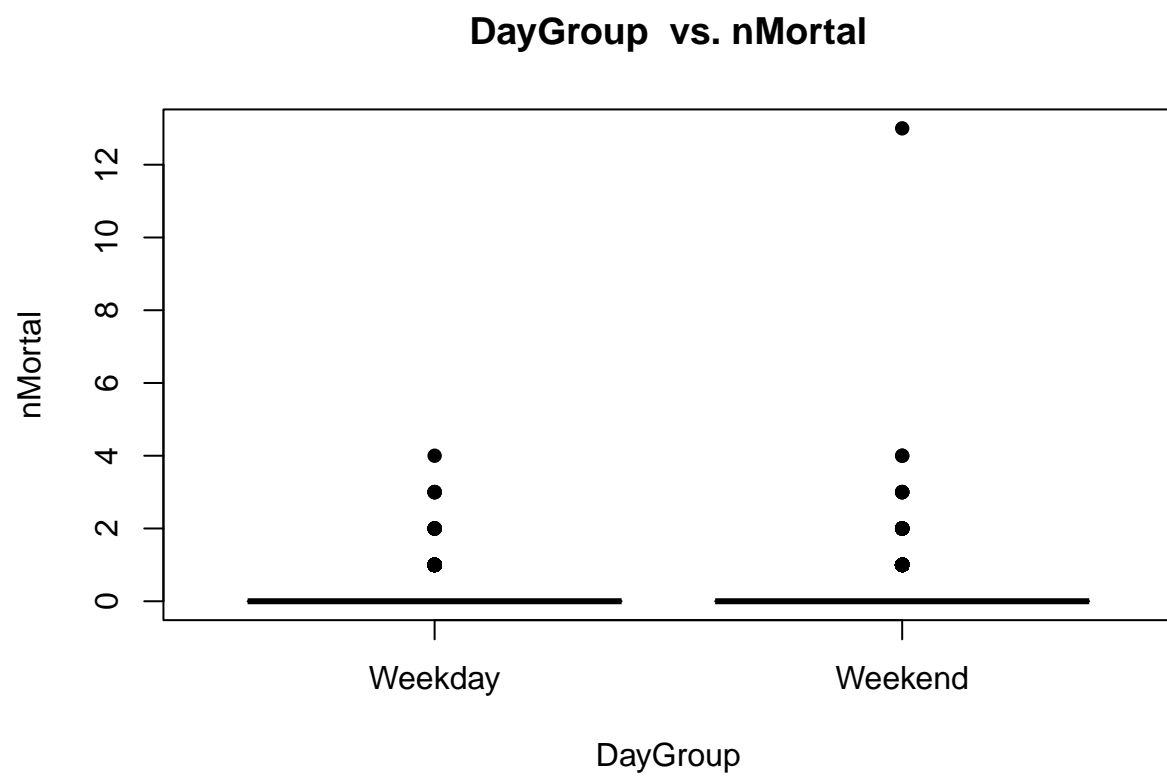


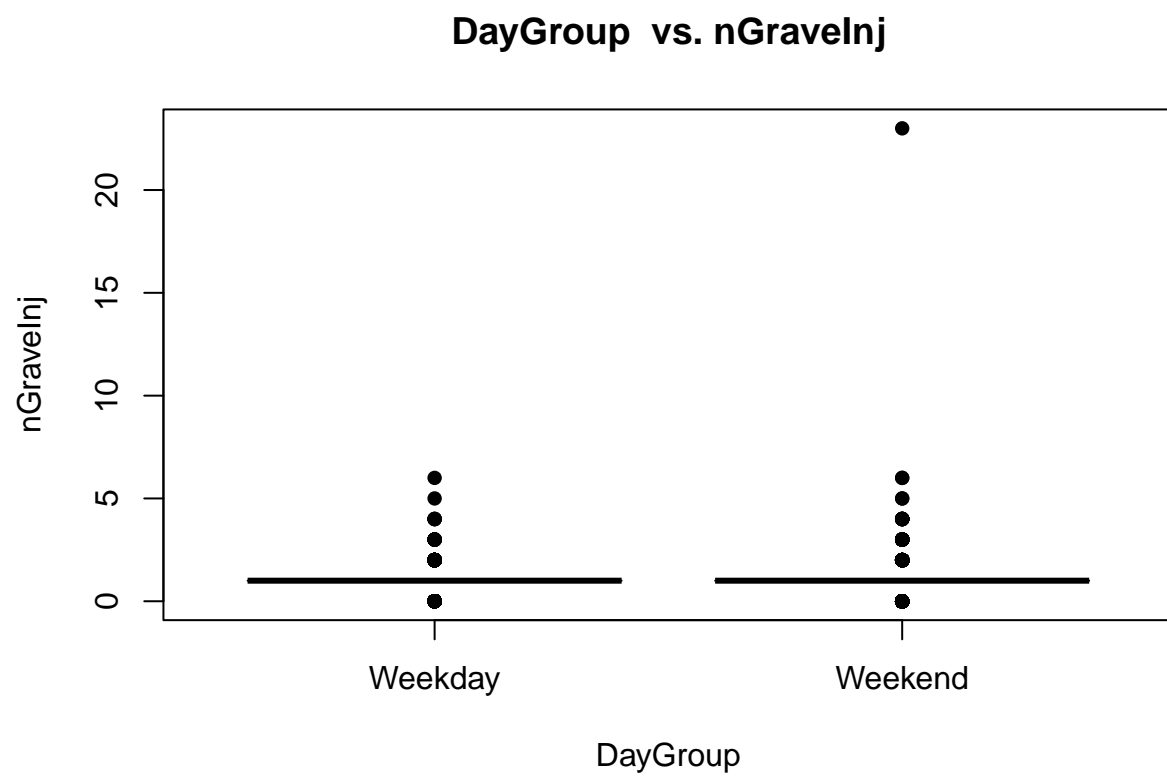
Surface vs. nGravelnj



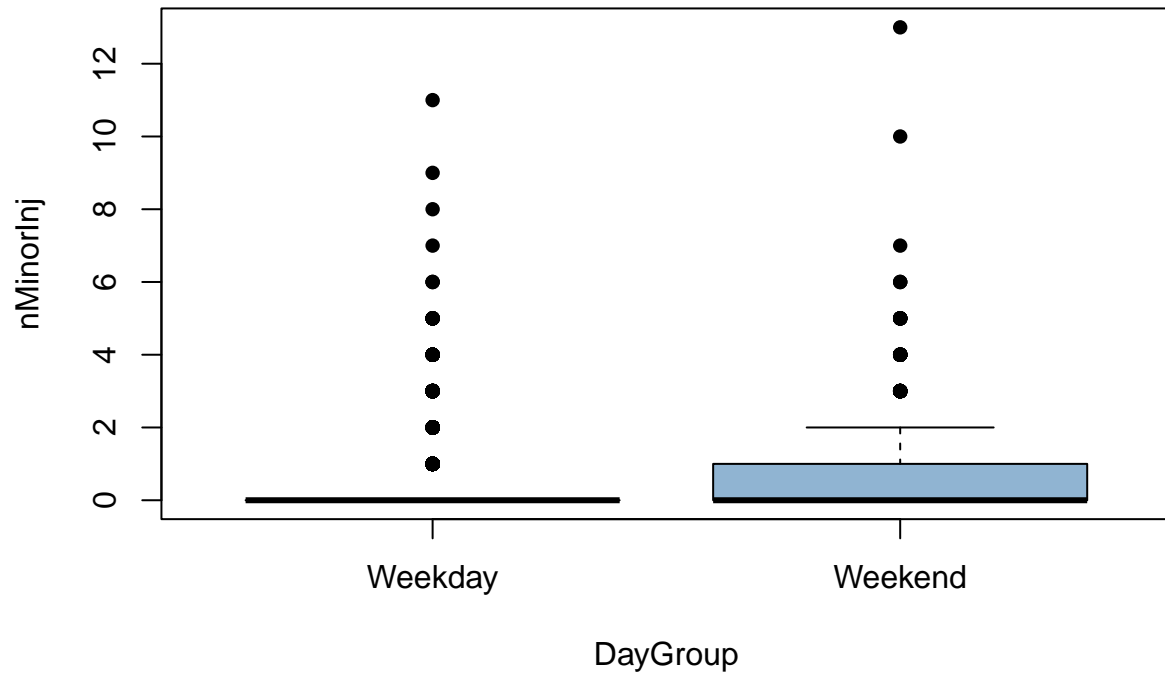
### Surface vs. nMinorInj



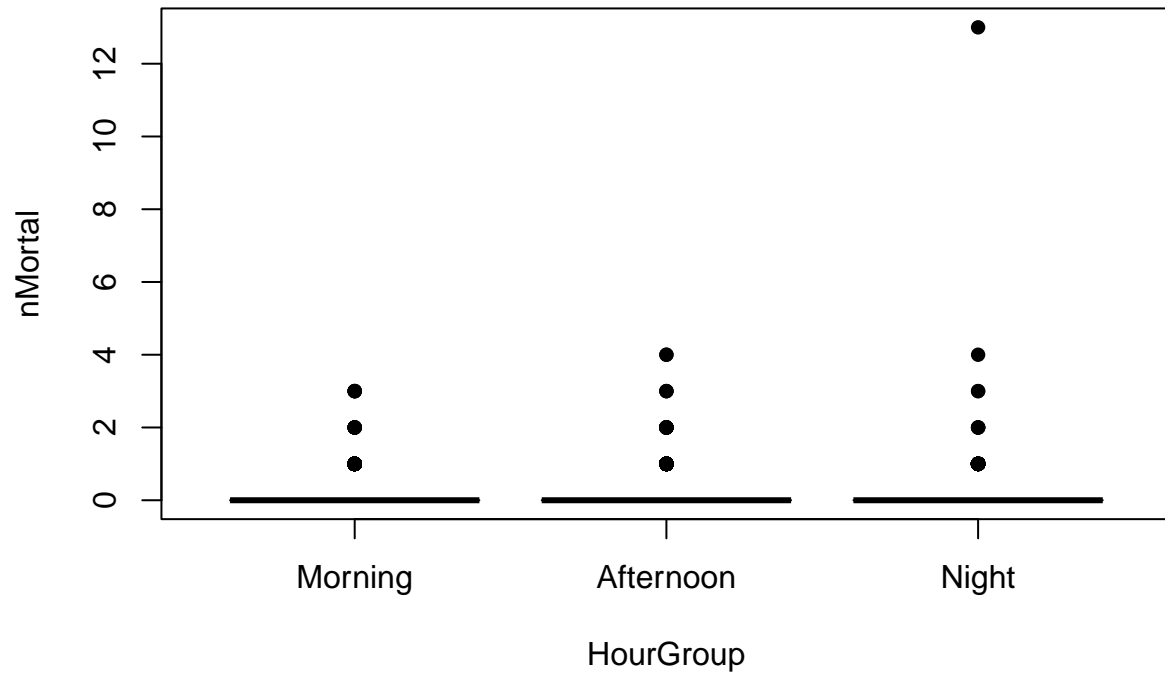




DayGroup vs. nMinorInj

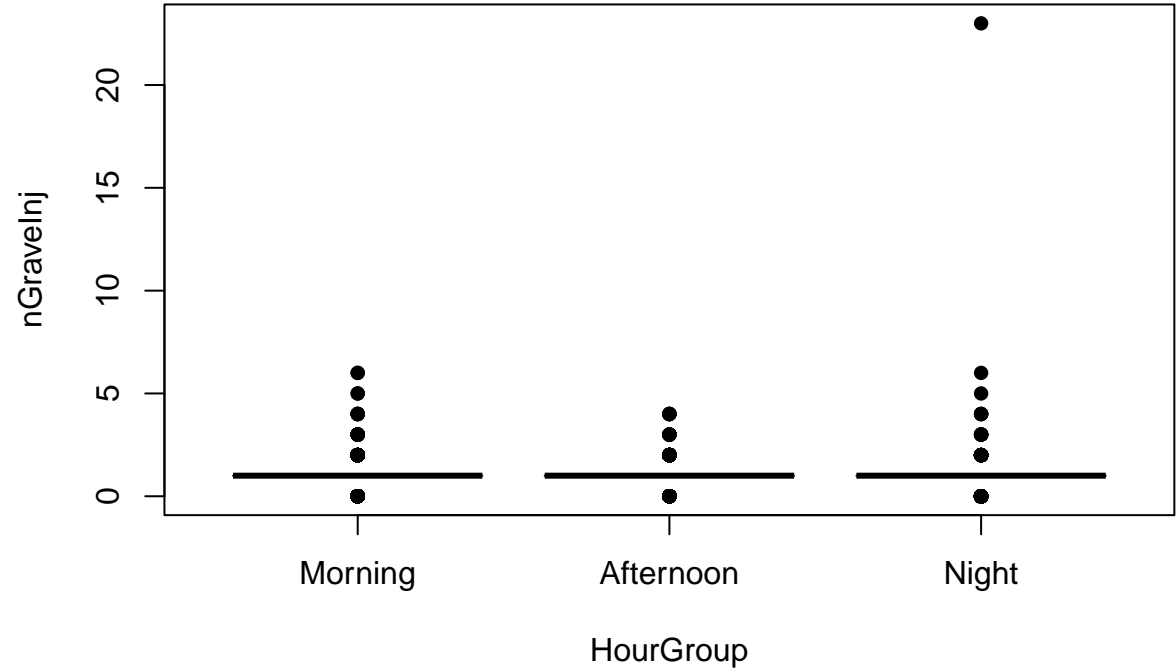


HourGroup vs. nMortal

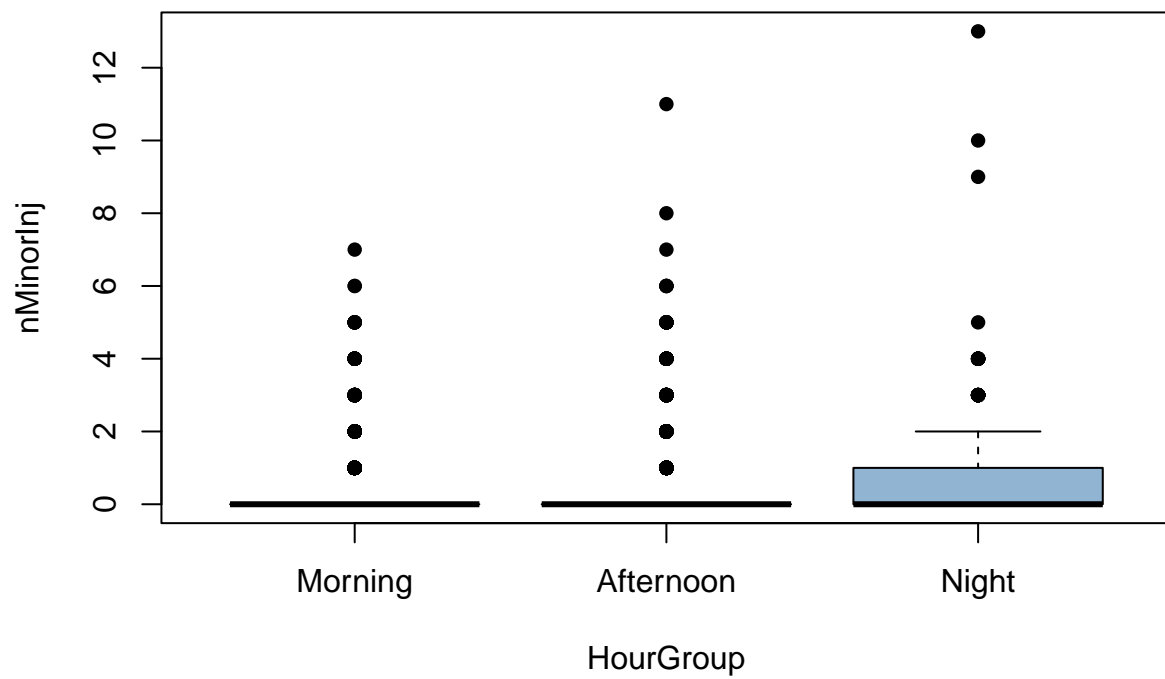




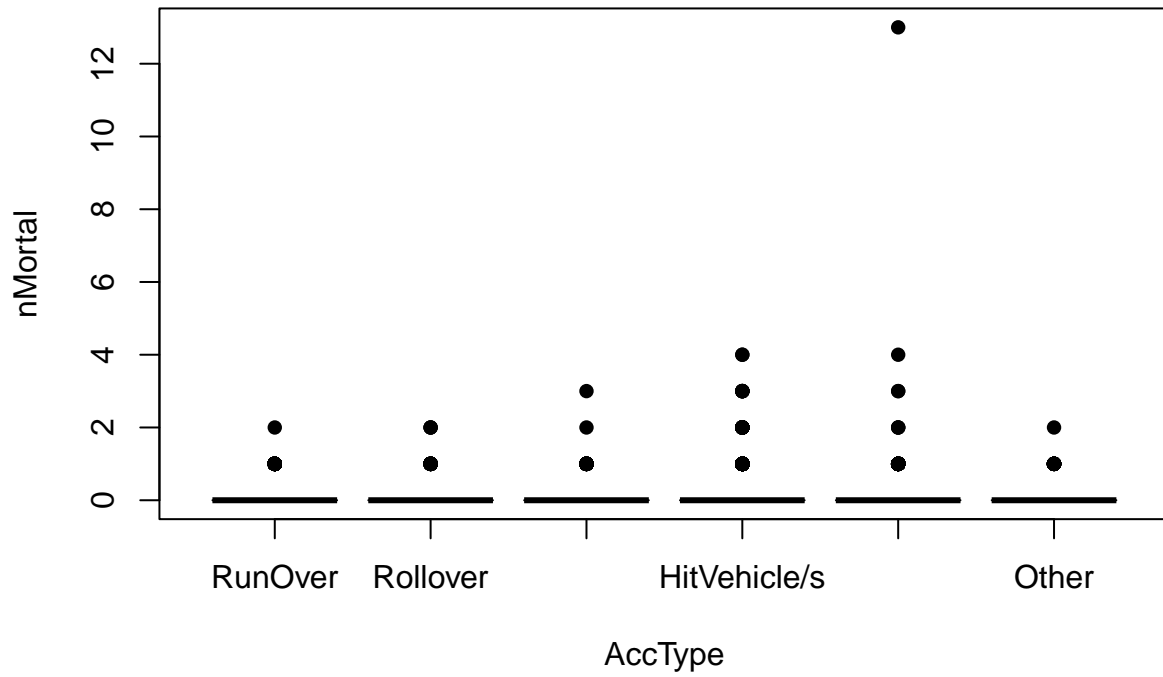
HourGroup vs. nGravelInj



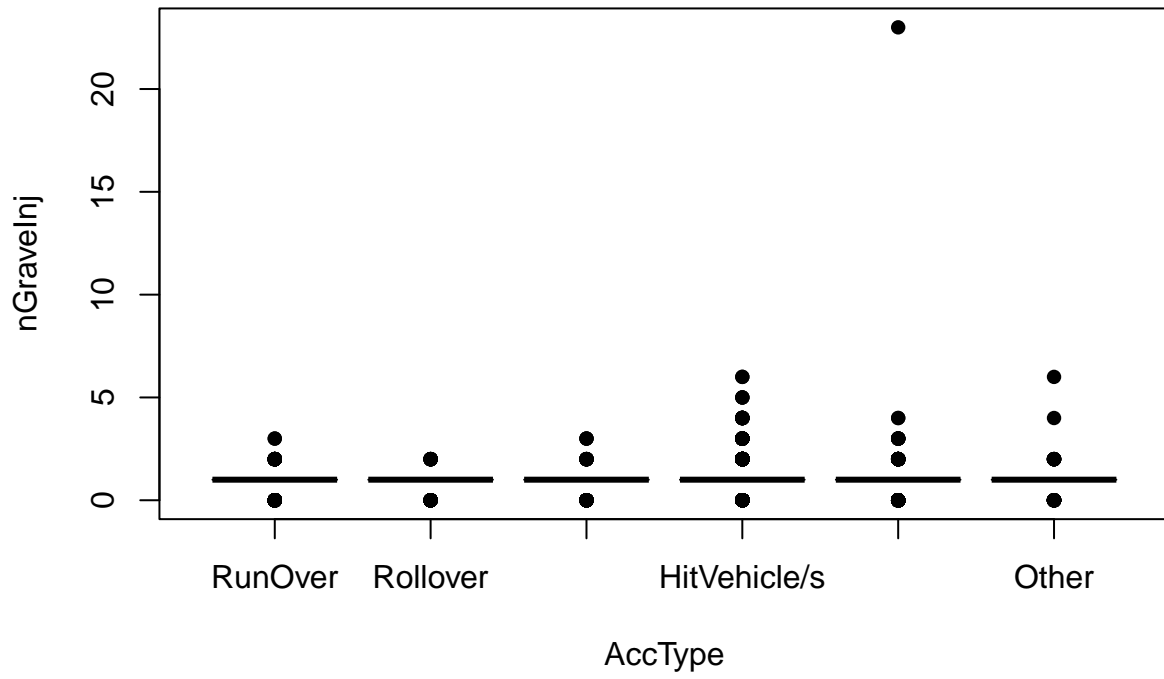
HourGroup vs. nMinorInj



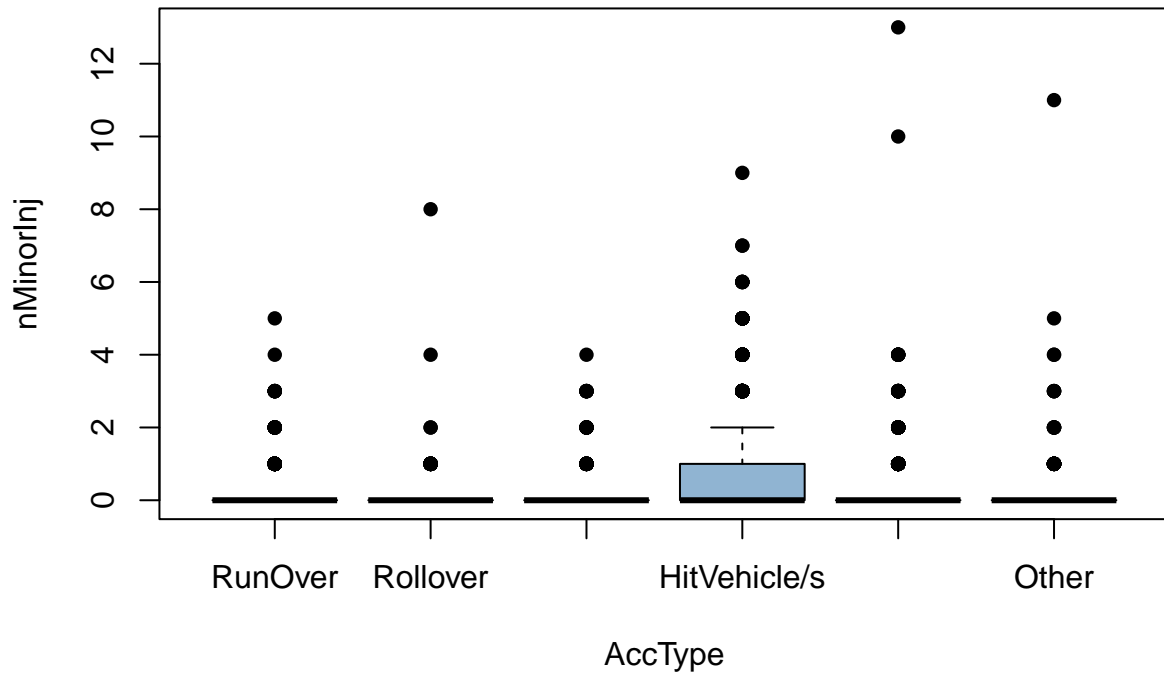
**AccType vs. nMortal**



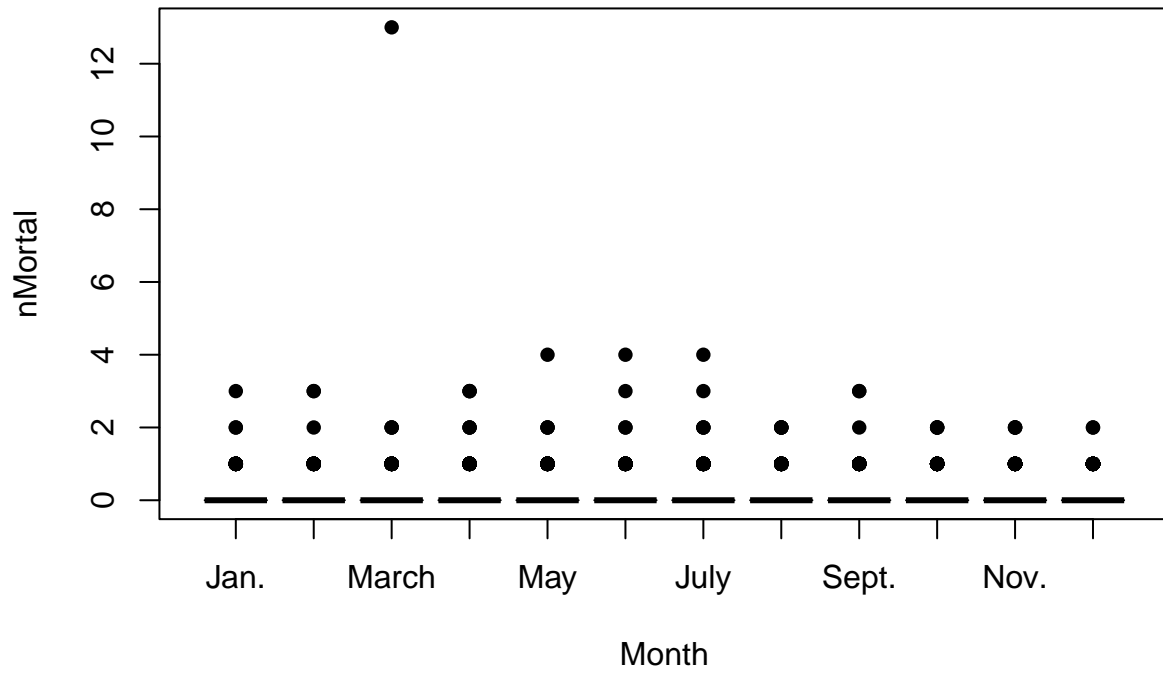
**AccType vs. nGravelnj**



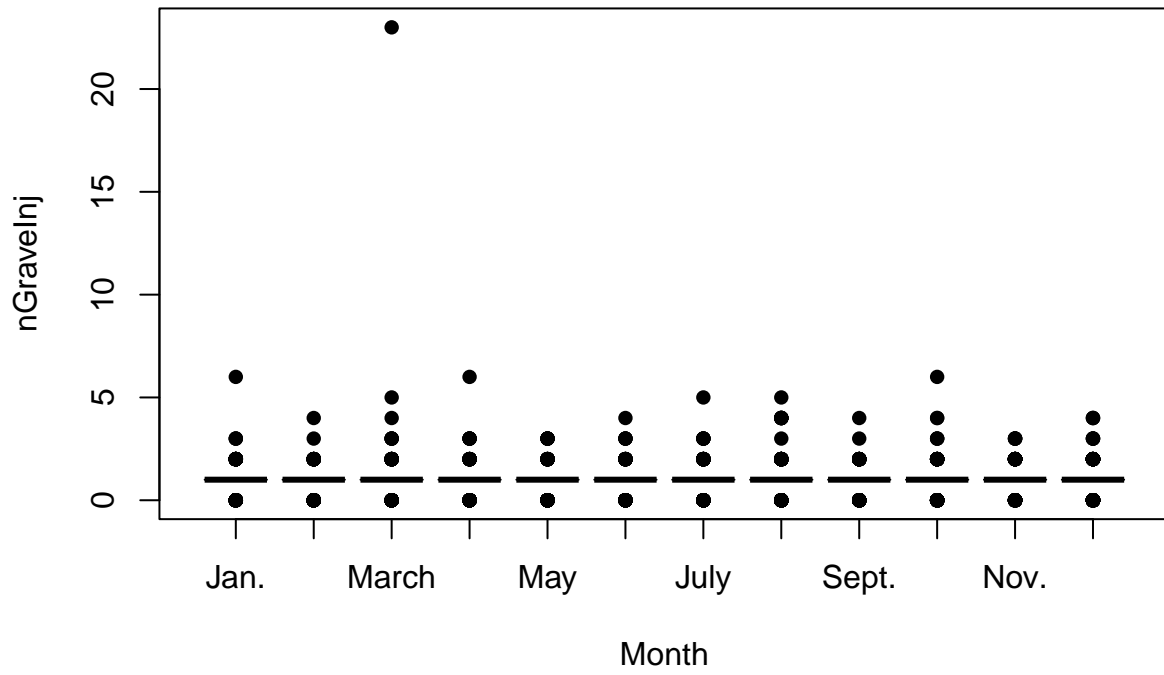
AccType vs. nMinorInj



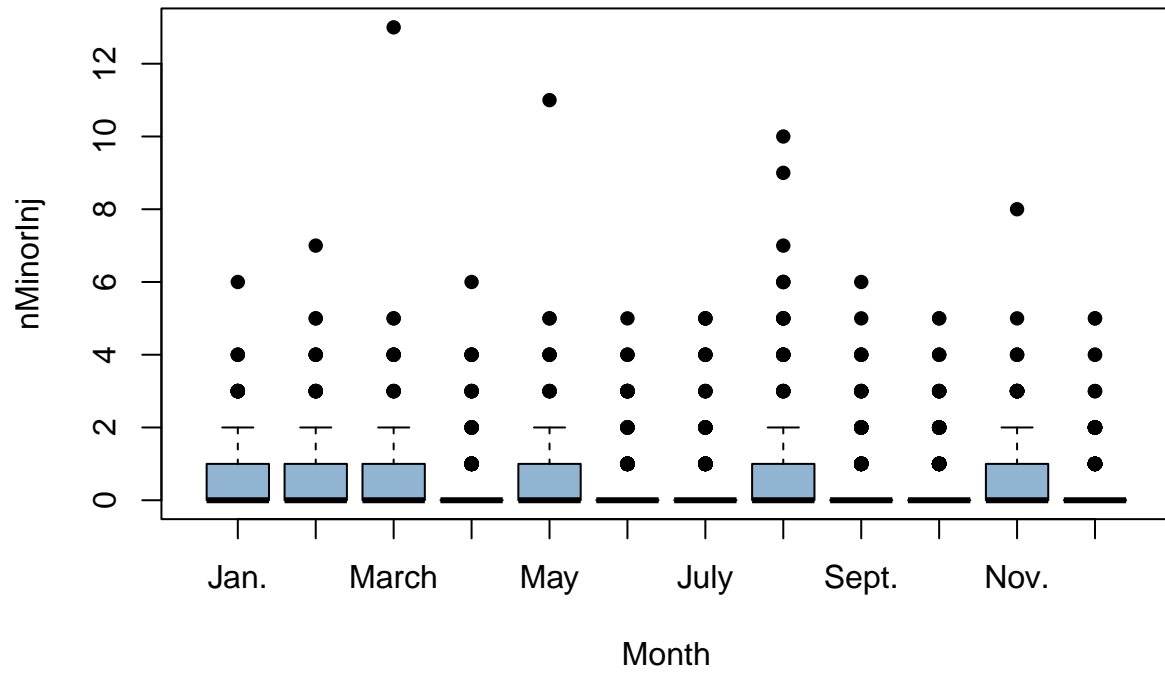
Month vs. nMortal



Month vs. nGravelnj

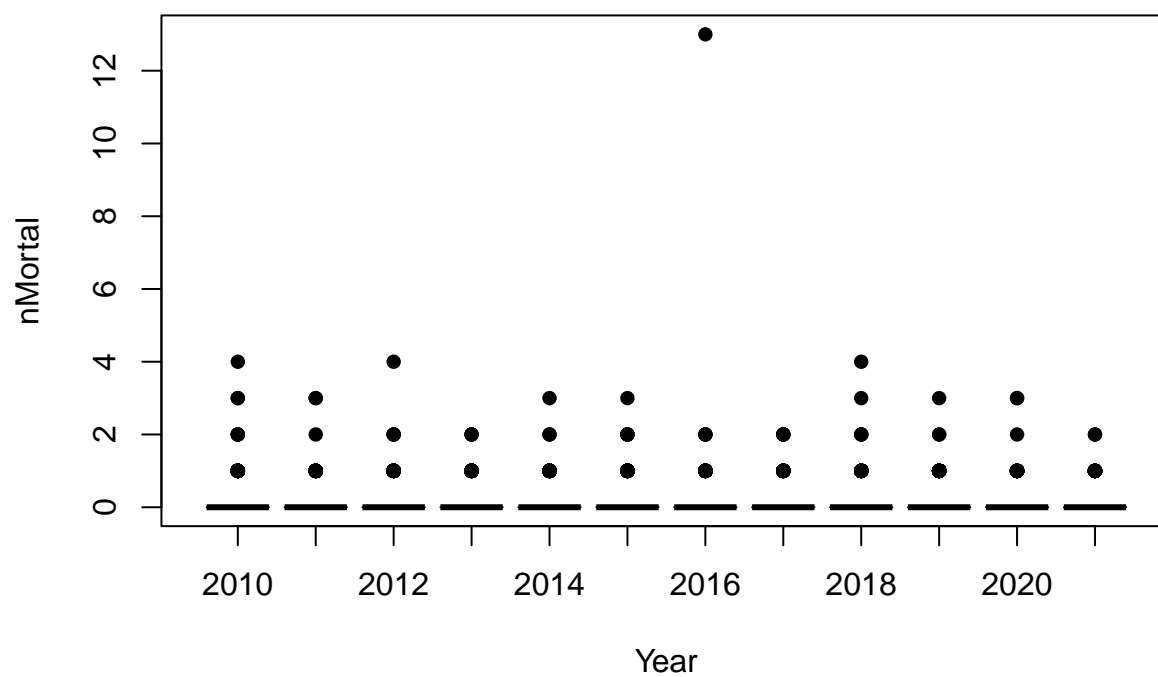


Month vs. nMinorInj

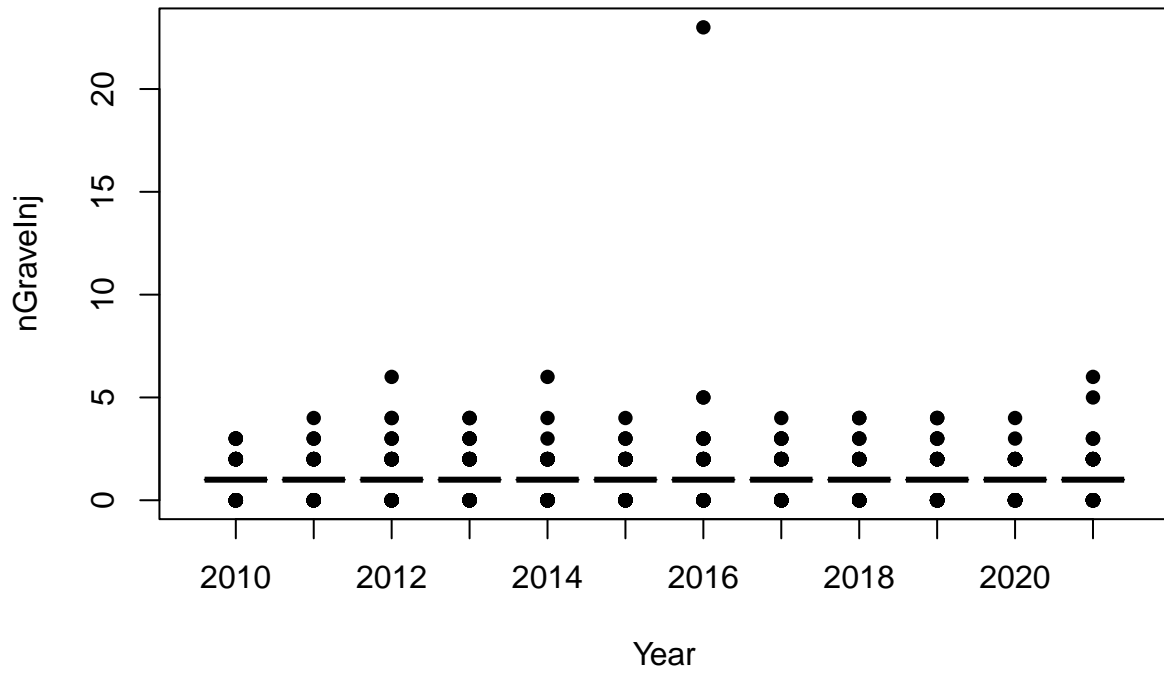




Year vs. nMortal



Year vs. nGravelInj



Year vs. nMinorInj

