

StatCrunch Analyses for Bully Intervention Study

Analysis 1

Frequency table results for Pre Bully:

Pre Bully	Frequency	Relative Frequency
34	2	0.022222223
31	1	0.011111111
27	1	0.011111111
25	2	0.022222223
23	4	0.044444446
22	1	0.011111111
21	3	0.033333335
20	2	0.022222223
19	6	0.06666667
17	1	0.011111111
16	2	0.022222223
13	3	0.033333335
12	5	0.055555556
11	7	0.07777778
10	2	0.022222223
9	2	0.022222223
8	4	0.044444446
7	5	0.055555556
6	6	0.06666667
5	7	0.07777778
4	5	0.055555556
3	8	0.08888889
2	6	0.06666667
1	5	0.055555556

Analysis 2

Variable: Pre Bully

0: 1111122222233333333344444

0: 555555566666677777888899

1: 00111111122222333

1: 667999999

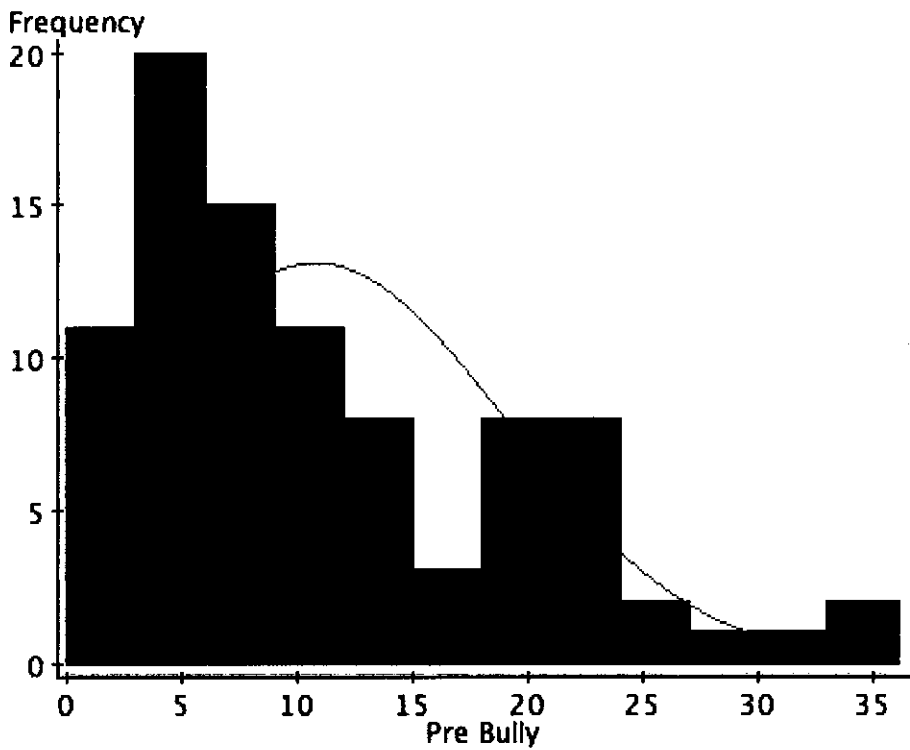
2: 0011123333

2: 557

3: 144

Analysis 3

Normal overlay: mean = 10.76666, std. dev. = 8.2230835



Analysis 4A

Summary statistics for Pre Bully:

Group by: Classification

Classification	n	Mean	Variance	Std. Dev.	Std. Err.	Median	Range	Min	Max	Q1	Q3	40th Per.	70th Per.
Bully	30	3.2666667	3.0988505	1.7603552	0.32139543	3	7	1	8	2	4	3	4
Bully/Victim	30	8.6333333	8.654023	2.941772	0.5370917	8	13	3	16	6	11	7	11
Victim	30	20.4	36.868965	6.071982	1.1085871	20	23	11	34	17	23	19	23

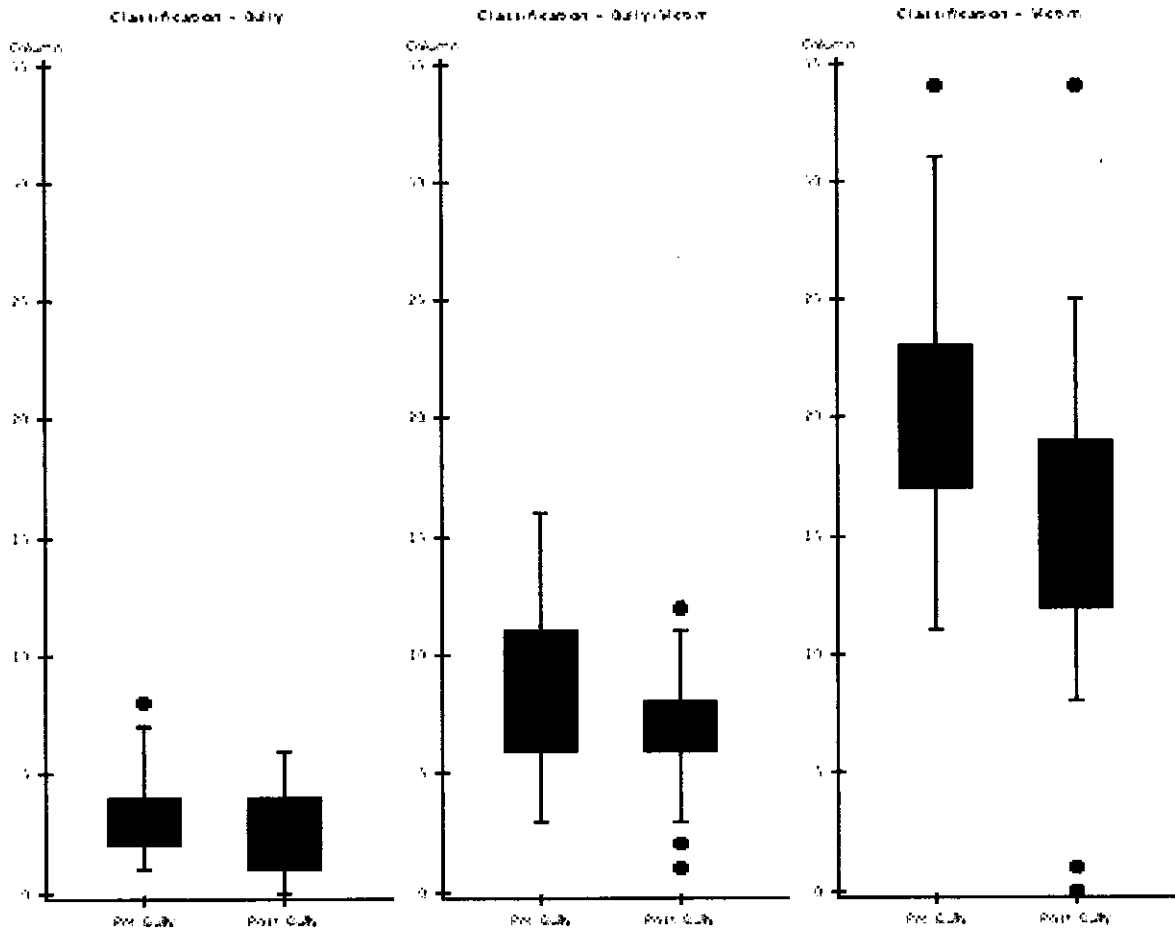
Analysis 4B

Summary statistics for Post Bully:

Group by: Classification

Classification	n	Mean	Variance	Std. Dev.	Std. Err.	Median	Range	Min	Max	Q1	Q3	40th Per.	70th Per.
Bully	30	2.7	3.1827586	1.7840288	0.3257176	3	6	0	6	1	4	2	3.5
Bully/Victim	30	6.8	6.234483	2.4968946	0.4558685	6.5	11	1	12	6	8	6	8
Victim	30	15.533334	46.11954	6.7911367	1.2398863	16	34	0	34	12	19	15	18

Analysis 5



Analysis 6: Pre Bully Z-Scores

Student ID	Z-Scores
1	2.46
2	0.03
3	1.12
4	0.03
5	1.12
6	1.00
7	1.00
8	1.73
9	1.49
10	1.00
11	0.15
12	1.97
13	1.37
14	0.27
15	0.15
16	-0.94
17	-0.82
18	-0.94
19	-1.07
20	-1.07
21	-0.94
22	-1.07
23	-0.82
24	-0.70
25	-1.07
26	-1.07
27	-0.70
28	-1.07
29	-0.94
30	-1.19

Student ID	Z-Scores
31	-0.34
32	0.03
33	-0.58
34	0.64
35	0.15
36	-0.46
37	-0.58
38	0.27
39	-0.34
40	-0.70
41	-0.46
42	0.15
43	-0.58
44	-0.58
45	0.03
46	2.83
47	1.24
48	1.00
49	0.76
50	0.27
51	1.24
52	1.00
53	0.64
54	1.49
55	1.49
56	1.49
57	2.83
58	1.73
59	1.00
60	1.24

Student ID	Z-Scores
61	-0.70
62	-1.19
63	-0.46
64	-0.82
65	-0.94
66	-1.19
67	-0.94
68	-0.82
69	-0.70
70	-1.19
71	-0.94
72	-0.70
73	-1.19
74	-0.34
75	-0.82
76	-0.09
77	-0.09
78	-0.58
79	-0.34
80	0.15
81	-0.58
82	-0.46
83	-0.94
84	0.03
85	-0.46
86	-0.21
87	0.03
88	0.03
89	-0.21
90	-0.70

Analysis 7A

Hypothesis test results:

Group by: Classification

μ : mean of Pre Sch

$H_0 : \mu = 27.65$

$H_A : \mu \neq 27.65$

Classification	Sample Mean	Std. Err.	DF	T-Stat	P-value
Bully	26.433332	1.2107595	29	-1.0048789	0.3233
Bully/Victim	26.133333	0.97406995	29	-1.5570408	0.1303
Victim	26.133333	1.1633615	29	-1.3036934	0.2026

Analysis 7B

Hypothesis test results:

Group by: Classification

μ : mean of Post Sch

$H_0 : \mu = 27.65$

$H_A : \mu \neq 27.65$

Classification	Sample Mean	Std. Err.	DF	T-Stat	P-value
Bully	18.533333	1.0324987	29	-8.829712	<0.0001
Bully/Victim	23.333334	0.9264111	29	-4.6595583	<0.0001
Victim	32.733334	0.8642761	29	5.881608	<0.0001

Analysis 8A

Summary statistics for Pre Bully:

Group by: Family

Family	n	Mean	Variance	Std. Dev.	Std. Err.	Median	Range	Min	Max	Q1	Q3
Negative	40	7.9	47.476925	6.89035	1.08946	6	33	1	34	3	11
Positive	50	13.06	72.95551	8.5414	1.2079363	11.5	33	1	34	6	20

Analysis 8B

Hypothesis test results:

σ_1^2 : variance of Pre Bully where Family=Positive

σ_2^2 : variance of Pre Bully where Family=Negative

σ_1^2/σ_2^2 : variance ratio

$H_0 : \sigma_1^2/\sigma_2^2 = 1$

$H_A : \sigma_1^2/\sigma_2^2 \neq 1$

Ratio	n1	n2	Sample Ratio	F-Stat	P-value
σ_1^2/σ_2^2	50	40	1.5366521	1.5366521	0.1677

Analysis 8C

Hypothesis test results:

μ_1 : mean of Pre Bully where Family=Positive
 μ_2 : mean of Pre Bully where Family=Negative
 $\mu_1 - \mu_2$: mean difference
 $H_0 : \mu_1 - \mu_2 = 0$
 $H_A : \mu_1 - \mu_2 \neq 0$
 (with pooled variances)

Difference	Sample Mean	Std. Err.	DF	T-Stat	P-value
$\mu_1 - \mu_2$	5.16	1.6657952	88	3.0976195	0.0026

Analysis 8D

95% confidence interval results:

μ_1 : mean of Pre Bully where Family=Positive
 μ_2 : mean of Pre Bully where Family=Negative
 $\mu_1 - \mu_2$: mean difference
 (with pooled variances)

Difference	Sample Mean	Std. Err.	DF	L. Limit	U. Limit
$\mu_1 - \mu_2$	5.16	1.6657952	88	1.849582	8.470418

Analysis 9A

Summary statistics for Pre Bully:

Group by: Classification

Classification	n	Mean	Variance	Std. Dev.	Std. Err.	Median	Range	Min	Max	Q1	Q3
Bully	30	3.2666667	3.0988505	1.7603552	0.32139543	3	7	1	8	2	4
Bully/Victim	30	8.633333	8.654023	2.941772	0.5370917	8	13	3	16	6	11
Victim	30	20.4	36.868965	6.071982	1.1085871	20	23	11	34	17	23

Analysis 9B

Summary statistics for Post Bully:

Group by: Classification

Classification	n	Mean	Variance	Std. Dev.	Std. Err.	Median	Range	Min	Max	Q1	Q3
Bully	30	2.7	3.1827586	1.7840288	0.3257176	3	6	0	6	1	4
Bully/Victim	30	6.8	6.234483	2.4968946	0.4558685	6.5	11	1	12	6	8
Victim	30	15.533334	46.11954	6.7911367	1.2398863	16	34	0	34	12	19

Analysis 9C

Hypothesis test results:

$\mu_1 - \mu_2$: mean of the paired difference between Pre Bully and Post Bully

H_0 : $\mu_1 - \mu_2 = 0$

H_A : $\mu_1 - \mu_2 \neq 0$

Group by : Classification

Classification	Sample Diff.	Std. Err.	DF	T-Stat	P-value
Bully	0.56666666	0.45658234	29	1.2411051	0.2245
Bully/Victim	1.8333334	0.6416275	29	2.8573174	0.0078
Victim	4.866667	1.5556595	29	3.1283622	0.004

Analysis 9D

95% confidence interval results:

$\mu_1 - \mu_2$: mean of the paired difference between Pre Bully and Post Bully

Group by : Classification

Classification	Sample Diff.	Std. Err.	DF	L. Limit	U. Limit
Bully	0.56666666	0.45658234	29	-0.36714906	1.5004824
Bully/Victim	1.8333334	0.6416275	29	0.5210578	3.145609
Victim	4.866667	1.5556595	29	1.6849856	8.048347