

Section 2 Demographics

Section 2: Demographics and study population characteristics

- One hundred participants from Australia were included in the study.
- Participants reported a current Patient Oriented Eczema Measure (POEM) score to determine severity of disease. 11 were mild (11.00%), 26 Moderate (26.00%), 41 severe (41.00%) and 22 very severe (22.00%).
- Participants came from NSW (45.00%), Queensland (17.00%), Victoria (13.00%), Western Australia (11.00%), South Australia (5.00%), Australian Capital Territory (4.00%), Tasmania (4.00%) and the Northern Territory (1.00%); from major cities (59.00%) and regional/rural (41.00%).
- Eighty-eight females (88.00%) and 12 males (12.00%) were included in this study.
- Subgroup analysis were included throughout the study. The subgroups were disease severity - mild (11.00%), moderate (26.00%), severe (41.00%) and very severe (22.00%); those with comorbid anxiety and depression (39.00%) and those without (61.00%); by location- Major city (59.00%) or Regional/Remote (41.00%); and by education status - those with a university degree (58.00%) and those with high school or trade (42.00%).
- The baseline health SF36 scores for the entire cohort were very good for physical functioning and role limitations due to physical health; the scores for role limitations due to emotional problems, emotional well-being, social functioning and pain were good; and the scores for energy/fatigue, general health and health change were moderate.
- Participants with very severe disease scored worse than all other groups for the physical functioning, role limitations due to physical health, emotional well-being, social functioning, pain, and general health SF36 scales, and had worse scores than those with moderate or severe disease for energy/fatigue. There were no differences between disease severity groups for role limitations due to emotional problems or for health change scores.
- Participants with comorbid depression and anxiety scored worse on the physical functioning, role limitations due to emotional problems, emotional well-being, social functioning, pain and general health SF36 scales compared to those that did not have comorbid depression and anxiety. There were no differences between these groups for energy/fatigue, role limitations due to physical health, and health change scores.
- Participants that had a university degree had better outcomes compared to those with high school or trade for the social functioning, pain and general health SF36 scales.
- No differences in SF36 subscales were observed for those that lived in major cities compared to those that live in regional/rural areas.

Demographics

One hundred participants from Australia were recruited into the study, including 88 females (88.00%) and 12 males (12.00%). The majority of participants were from NSW (n=45, 45.00%), Queensland (n=17, n=17.00%), and Victoria (n=13, 13.00%), and most live in major cities (n=59, 59.00%). Participants reported a current Patient Oriented Eczema Measure (POEM) score to determine severity of disease. Within this study 11 participants had mild

AD (11.00%), 26 Moderate AD (26.00%), 41 severe AD (41.00%) and 22 very severe AD (22.00%). Subgroup analysis were included throughout the study. The subgroups were by location, major city (59.00%) or regional or remote (41.00%); those with comorbid anxiety and depression (39.00%) and those without (61.00%); those with a university degree (58.00%) and those with high school or trade (42.00%); and by disease severity measured by POEM score. Demographics of participants are available in Table 2.1.

Table 2.1: Demographics

Characteristic	n=	Percentage of Participants
Gender (n=100)		
Female	88	88.00
Male	12	12.00
Type of atopic dermatitis, measured by POEM (n=100)		
Mild	11	11.00
Moderate	26	26.00
Severe	41	41.00
Very severe	22	22.00
Location (n=100)		
Major city	59	59.00
Inner Regional	28	28.00
Outer Regional	10	10.00
Very remote	3	3.00
Index of Relative Socio-economic Advantage and Disadvantage (Decile) * 1= most disadvantaged, 10= most advantaged) (n=100)		
1	7	7.00
2	8	8.00
3	4	4.00
4	11	11.00
5	12	12.00
6	11	11.00
7	10	10.00
8	7	7.00
9	15	15.00
10	15	15.00

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Characteristic	n=	Percentage of Participants
State (n=100)		
NSW	45	45.00
QLD	17	17.00
VIC	13	13.00
WA	11	11.00
SA	5	5.00
ACT	4	4.00
TAS	4	4.00
NT	1	1.00
Associate, Bachelor or Graduate Degree (n=100)		
Yes	58	58.00
No	42	42.00
Comorbid Depression and Anxiety (n=100)		
Yes	39	39.00
No	61	61.00
Age group (n=100)		
18-24	15	15.00
25-34	24	24.00
35-44	31	31.00
45-54	15	15.00
55-64	9	9.00
65-74	6	6.00
Country of birth (n=100)		
Australia	75	75.00
New Zealand	6	6.00
United Kingdom	5	5.00
United States of America	4	4.00
Brazil	2	2.00
South Africa	2	2.00
Chile	1	1.00
Germany	1	1.00
India	1	1.00
Philippines	1	1.00
Singapore	1	1.00
Vietnam	1	1.00

Section 2

Characteristic	n=	Percentage of Participants
What race or ethnicity (n=100)		
Caucasian/White	80	80.00
Asian	9	9.00
Australian	5	5.00
Arab	1	1.00
Caucasian/Asian	1	1.00
European	1	1.00
Hispanic/Latino	1	1.00
Latino/Caucasian	1	1.00
Other	1	1.00
What is the highest level of education completed (n=100)		
Less than high school degree	2	2.00
High school degree or equivalent	19	19.00
Some college but no degree	15	15.00
Trade	6	6.00
Associate degree	3	3.00
Bachelor degree	34	34.00
Graduate degree	21	21.00
Accessed "My Health Record" (n=100)		
Yes	16	16.00
No	45	45.00
Not sure	8	8.00
I don't know what "My Health Record" is	31	31.00
Usefulness of "My Health Record" in managing condition (n=16)		
Good	1	6.25
Acceptable	4	25.00
Poor	5	31.25
Very poor	6	37.50

Section 2

Characteristic	n=	Percentage of Participants
Employment status (Can choose more than one option) (n=100)		
Employed, working part time	36	36.00
Employed, working full time	34	34.00
Full/part time study	10	10.00
Not employed, looking for work	10	10.00
Currently receiving Centrelink support	9	9.00
Retired	8	8.00
Full/part time carer	7	7.00
Disabled, not able to work	3	3.00
Current relationship status (n=100)		
Married	51	51.00
Single, never married	17	17.00
Not married, but co-habiting with a significant other	12	12.00
Not married, but in a relationship with a significant other	7	7.00
Divorced	6	6.00
In a domestic partnership or civil union	4	4.00
Separated	3	3.00
Full time or part time carer status (n=100)		
Children	35	35.00
Parents	1	1.00
Siblings	1	1.00
Spouse/partner	1	1.00
Not a carer	62	62.00
Number of dependent children under 18 (n=100)		
0	62	62.00
1	9	9.00
2	16	16.00
3	9	9.00
4 or more	4	4.00

Section 2

Characteristic	n=	Percentage of Participants
Religion (Can choose more than one option) (n=66)		
No Religion	36	54.55
Catholicism	13	19.70
Christianity	11	16.67
Judaism	4	6.06
Buddhism	3	4.55
Anglican	1	1.52
Presbyterian	1	1.52
Protestantism	1	1.52
Interested in national politics (n=66)		
Extremely interested	3	4.55
Very interested	10	15.15
Moderately interested	25	37.88
Slightly interested	15	22.73
Not at all	13	19.70
Political leanings (n=65)		
Extremely left	3	4.62
Moderately left	13	20.00
Slightly left	9	13.85
Neither/neutral	30	46.15
Slightly right	5	7.69
Moderately right	4	6.15
Extremely right	1	1.54

Baseline health

The Short Form Health Survey 36 (SF36) measures baseline health, or the general health of an individual. The SF36 comprises nine sub scales: physical functioning, role limitations due to physical health, role limitations due to emotional problems, energy and fatigue, emotional well-being, social function, pain, general health, and health change from one year ago. A higher score denotes a better health/function.

Summary statistics for the entire cohort are displayed alongside the possible range of each scale in Table 2.2, where the scale has a normal distribution mean and sd are used as a central measure, otherwise the median and IQR are used. The overall scores for the cohort were in the highest quintile for physical functioning (Median=95.00, IQR=20.00), and role limitations due to physical functioning (Median = 100, IQR = 75.00) indicating very good scores for the

cohort. The scores for role limitations due to emotional problems (Median=66.67, IQR=100.00), emotional well-being (Median=68.00, IQR=28.00), social functioning (Median=62.50, SD = 37.50) and pain (Median=67.50, IQR = 45.00) were in the second highest quintile indicating good scores. The energy/fatigue (Mean=42.00, SD=19.17), general health (Median= 60.00, IQR=40.00) and health change (Median=50.00, IQR=50.00) scales had scores in the middle quintile indicating moderate scores.

Comparisons of SF36 have been made based on disease severity (Figures 2.1 to 2.9, Tables 2.3 to 2.7), comorbid depression/anxiety status (Figures 2.10 to 2.18, Tables 2.8 to 2.9), location (Figures 2.19 to 2.27, Tables 2.10 to 2.11), and education level (Figures 2.28 to 2.36, Tables 2.12 to 2.13).

Table 2.2: SF36 scores for entire cohort

Scale	Median	IQR	Possible range
Physical functioning	95.00	20.00	0-100
Role limitations due to physical health	100.00	75.00	0-100
Role limitations due to emotional problems	66.67	100.00	0-100
Energy/fatigue*	42.00	19.17	0-100
Emotional well-being	68.00	28.00	0-100
Social functioning	62.50	37.50	0-100
Pain	67.50	45.00	0-100
General health	60.00	40.00	0-100
Health change	50.00	50.00	0-100

*Mean and SD used, Energy/Fatigue had a normal distribution

Comparisons of SF36 sub scales by disease severity

Comparisons of SF36 sub scales were made between participants by disease severity; mild, moderate, severe and very severe. Boxplots of each SF36 scale by disease severity are displayed in Figures 2.1-2.9, and summary statistics are listed in Tables 2.3. A one-way ANOVA test was used with the assumptions for response variable residuals were normally distributed and variances of populations were equal. When the ANOVA test indicated a significant result, post hoc comparisons were made using the Tukey HSD test (Tables 2.4 – 2.5). When the assumptions for a one-way ANOVA were not met, a Kruskal-Wallis test was used, and when a significant result was indicated, it

was followed by post hoc Wilcoxon rank sum tests between groups (Tables 2.6 – 2.7).

A one way ANOVA test indicated a significant difference in the SF36 energy/fatigue scale between groups [$F(3,96) = 4.54$, $p = 0.0051$] (Table 2.4). Post hoc comparisons using the Tukey HSD test indicated that the mean score for those with very severe disease was significantly lower than those with moderate or severe disease (Table 2.5). A one way ANOVA test indicated a significant differences between groups for the social functioning [$F(3,96) = 10.56$, $p < 0.0001$], pain and [$F(3,96) = 18.60$, $p < 0.0001$] and general health [$F(3,96) = 11.20$, $p < 0.0001$] scales (Table 2.4). Post hoc comparisons using the Tukey HSD test indicated that the mean

score for those with very severe disease was significantly lower than any other group for the social functioning, pain and general health scales (Table 2.5).

A Kruskal-Wallis test indicated a significant difference between severity for the physical function [$X^2(3) = 10.84$, $p=0.0126$], role limitations due to physical health [$X^2(3) = 10.06$, $p=0.0181$] and emotional well-being scales [$X^2(3) = 11.06$, $p=0.0114$] (Table 2.8).

Post hoc pairwise comparisons using Wilcoxon rank sum test indicated that the median scores were significantly lower for the very severe group compared to all other groups for the physical function, role limitations due to physical health and emotional well-being scales (Table 2.9). There were no significant differences between the groups for role limitations due to emotional problems or for health change (Table 2.8).

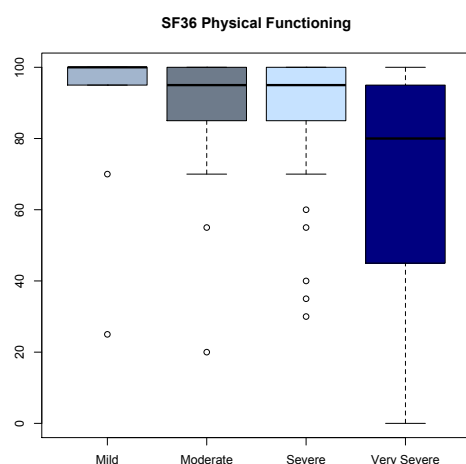


Figure 2.1: Boxplot of SF36 physical functioning by disease severity

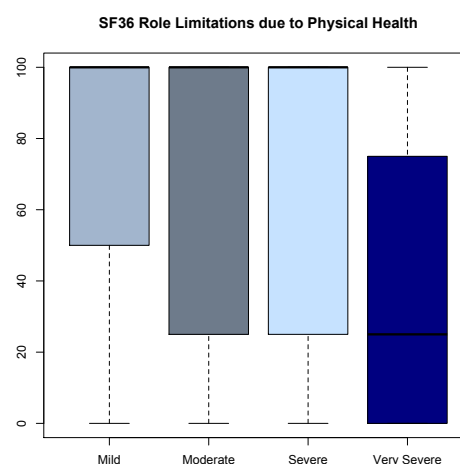


Figure 2.2: Boxplot of SF36 role limitations due to physical health by disease severity

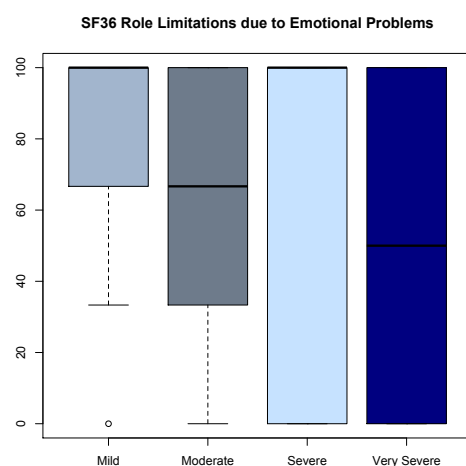


Figure 2.3: Boxplot of SF36 role limitations due to emotional problems by disease severity

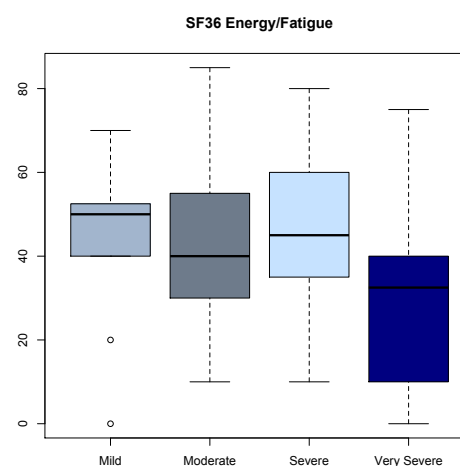


Figure 2.4: Boxplot of SF36 energy/fatigue by disease severity

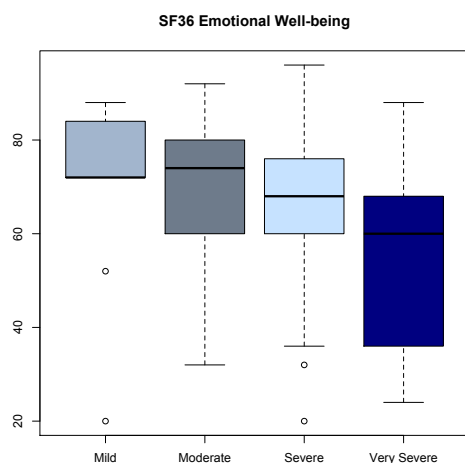


Figure 2.5: Boxplot of SF36 emotional well-being by disease severity

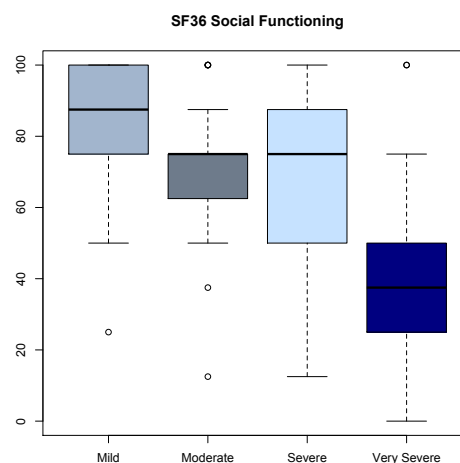


Figure2.6: Boxplot of SF36 social functioning by disease severity

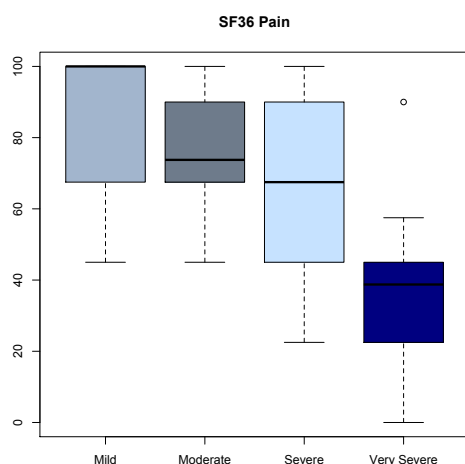


Figure 2.7: Boxplot of SF36 pain by disease severity

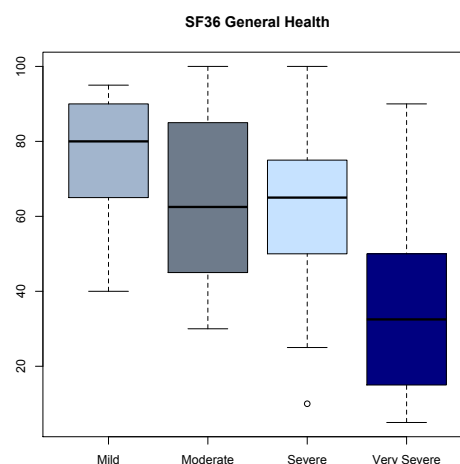


Figure2.8: Boxplot of SF36 general health by disease severity

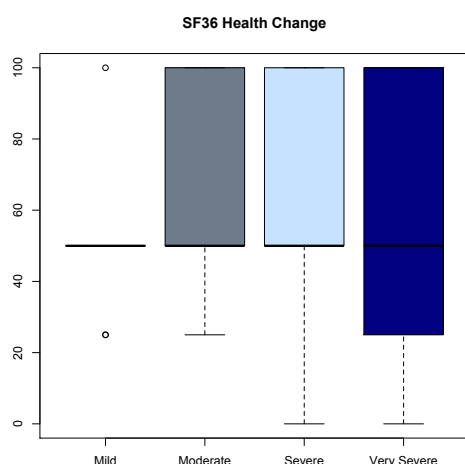


Figure 2.9: Boxplot of SF36 health change by disease severity

Table 2.3: Summary statistics by disease severity

SF36 subscale	Group	Count	Mean	Sd	Median	IQR
Physical function	Mild	11	89.10	23.00	100.00	5.00
	Moderate	26	89.00	18.00	95.00	12.80
	Severe	41	86.80	18.40	95.00	15.00
	Very severe	22	68.90	30.50	80.00	47.50
Role limitations due to physical health	Mild	11	75.00	38.70	100.00	50.00
	Moderate	26	68.30	41.00	100.00	68.00
	Severe	41	71.30	40.90	100.00	75.00
	Very severe	22	39.80	40.60	25.00	75.00
Role limitations due to emotional problems	Mild	11	78.8	37.30	100.00	33.30
	Moderate	26	60.30	40.00	66.70	66.70
	Severe	41	65.90	43.10	100.00	100.00
	Very severe	22	48.50	43.30	50.00	100.00
Energy/Fatigue	Mild	11	44.10	19.30	50.00	12.50
	Moderate	26	44.00	18.80	40.00	22.50
	Severe	41	46.80	15.40	45.00	25.00
	Very severe	22	29.50	21.60	32.50	30.00
Emotional well-being	Mild	11	71.30	19.90	72.00	12.00
	Moderate	26	69.40	15.90	74.00	18.00
	Severe	41	67.20	17.70	68.00	16.00
	Very severe	22	54.20	19.90	60.00	31.00
Social Functioning	Mild	11	81.80	24.60	87.50	25.00
	Moderate	26	70.20	19.70	75.00	12.50
	Severe	41	71.00	23.10	75.00	37.50
	Very severe	22	40.90	28.90	37.50	25.00
Pain	Mild	11	84.30	20.80	100.00	32.50
	Moderate	26	75.00	16.60	73.80	20.00
	Severe	41	67.00	23.30	67.50	45.00
	Very severe	22	36.10	22.20	38.80	22.50
General health	Mild	11	75.00	17.50	80.00	25.00
	Moderate	26	63.70	22.10	62.50	37.50
	Severe	41	62.80	21.00	65.00	25.00
	Very severe	22	35.70	24.50	32.50	33.80
Health change	Mild	11	50.00	19.4	50.00	0.00
	Moderate	26	64.40	27.5	50.00	50.00
	Severe	41	61.00	30.6	50.00	50.00
	Very severe	22	53.4	33.0	50.00	62.50

Table 2.4: One-way ANOVA table for SF36 scales by disease severity

SF36 subscale		Sum of squares	Df	Mean square	F	P
Energy/Fatigue	Between Groups	4525	3	1508	4.54	0.0051*
	Within Groups	31875	96	332		
	Total	36400	99			
Social Functioning	Between Groups	18060	3	6020	10.56	P <0.0001*
	Within Groups	54707	96	570		
	Total	72767	99			
Pain	Between Groups	25122	3	8374	18.60	P <0.0001*
	Within Groups	43217	96	450		
	Total	68339	99			
General health	Between Groups	15899	3	5300	11.20	P <0.0001*
	Within Groups	45445	96	473		
	Total	61344	99			

Table 2.5: Post hoc Tuckey HSD test for SF36 scales by disease severity

SF36 subscale	Comparison	Mean difference	Lower	Upper	P adjusted
Energy/Fatigue	Moderate -Mild	-0.05	-17.19	17.08	1.0000
	Severe-Mild	2.74	-13.44	18.92	0.9709
	Very severe – Mild	-14.55	-32.14	3.05	0.1415
	Severe-Moderate	2.79	-9.15	14.73	0.9284
	Very Severe-Moderate	-14.49	-28.29	-0.69	0.0357*
	Very Severe-Severe	-17.28	-29.87	-4.69	0.0029*
Social Functioning	Moderate -Mild	-11.63	-34.08	10.82	0.5312
	Severe-Mild	-10.78	-31.98	10.41	0.5462
	Very severe – Mild	-40.91	-63.96	-17.86	<0.0001*
	Severe-Moderate	0.84	-14.80	16.49	0.9990
	Very Severe-Moderate	-29.28	-47.36	-11.20	0.0003*
	Very Severe-Severe	-30.13	-46.62	-13.63	<0.0001*
Pain	Moderate -Mild	-9.32	-29.27	10.635	0.6151
	Severe-Mild	-17.37	-36.20	1.47	0.0819
	Very severe – Mild	-48.18	-68.67	-27.70	<0.0001*
	Severe-Moderate	-8.05	-21.96	5.86	0.4337
	Very Severe-Moderate	-38.86	-54.93	-22.79	<0.0001*
	Very Severe-Severe	-30.81	-45.48	-16.15	<0.0001*
General health	Moderate -Mild	-11.35	-31.81	9.12	0.4718
	Severe-Mild	-12.20	-31.51	7.12	0.3555
	Very severe – Mild	-39.32	-60.33	-18.31	<0.0001*
	Severe-Moderate	-0.85	-15.11	13.41	0.9986
	Very Severe-Moderate	-27.97	-44.45	-11.49	0.0001*
	Very Severe-Severe	-27.12	-42.16	-12.09	<0.0001*

* Statistically significant at p<0.05

Table 2.6: Summary statistics and Kruskal-Wallis rank sum test for SF36 scales by disease severity

SF36 subscale	χ^2	Df	P
Physical functioning	10.84	3	0.0126*
Role limitations due to physical health	10.06	3	0.0181*
Role limitations due to emotional problems	5.20	3	0.1573
Emotional well-being	11.06	3	0.0114*
Health change	2.76	3	0.4294

* Statistically significant at $p < 0.05$

Table 2.7: Post hoc pairwise comparisons using Wilcoxon rank sum test, p-values

SF36 subscale	Group	Mild	Moderate	Severe
Physical functioning	Moderate	0.535		
	Severe	0.297	0.535	
	Very severe	0.036*	0.036*	0.036*
Role limitations due to physical health	Moderate	0.714		
	Severe	0.876	0.714	
	Very severe	0.052*	0.052*	0.027*
Emotional well-being	Moderate	0.505		
	Severe	0.420	0.522	
	Very severe	0.030*	0.025*	0.025*

* Statistically significant at $p < 0.05$

Comparisons of SF36 sub scales by comorbid depression and anxiety status

Comparisons of SF36 subscales were made between those that have comorbid depression and anxiety and those that do not. Boxplots of each SF36 scale by comorbid depression and anxiety status are displayed in Figures 2.10-2.18, and summary statistics are listed in Tables 2.8 and 2.9.

A two-sample t-test was used when assumptions for normality and variance were met (Table 2.8), or when assumptions for normality and variance were not met, a Wilcoxon rank sum test with continuity correction was used (Table 2.9).

A two sample t-test indicated no significant differences between the two groups for the SF36 energy/fatigue scale (Table 2.8). Wilcoxon rank sum tests with continuity corrections revealed a significant difference between those that have both depression and anxiety and those that do not for the SF36 Physical functioning [$W=1465.00$, $P=0.0460$], role limitations due to emotional problems [$W=1679.50$, $p=0.0002$], emotional well-being [$W=1808.00$, $p<0.0001$], social functioning [$W=1750.00$, $p<0.0001$], pain [$W=1530.00$, $p=0.0155$], and general health [$W=1470.00$, $p<0.0473$] (Table 2.9). In each of these scales, those with both depression and anxiety scored worse than those that did not have both depression and anxiety (Table 2.9).

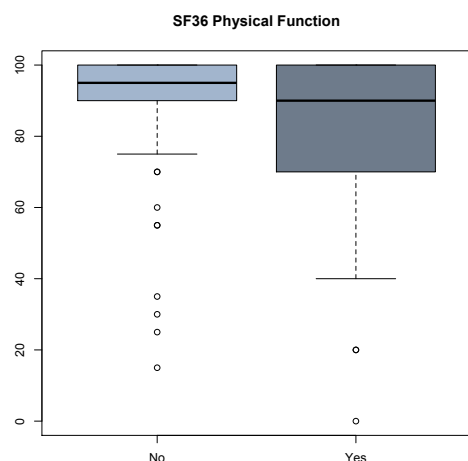


Figure 2.10: Boxplot of SF36 physical functioning by depression and anxiety status

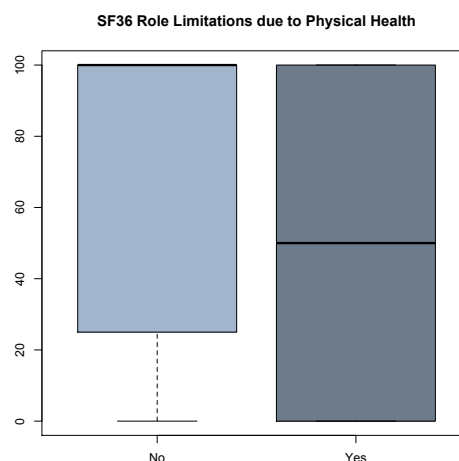


Figure 2.11: Boxplot of SF36 role limitations due to physical health by depression and anxiety status

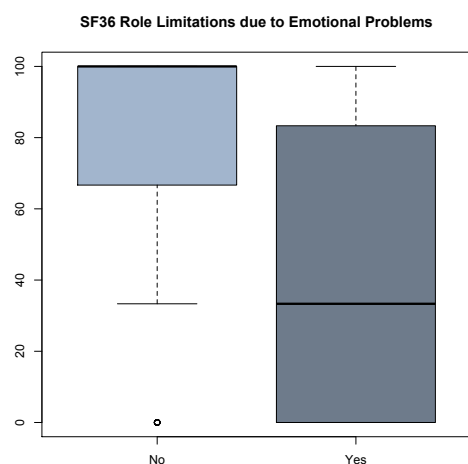


Figure 2.12: Boxplot of SF36 role limitations due to emotional problems by depression and anxiety status

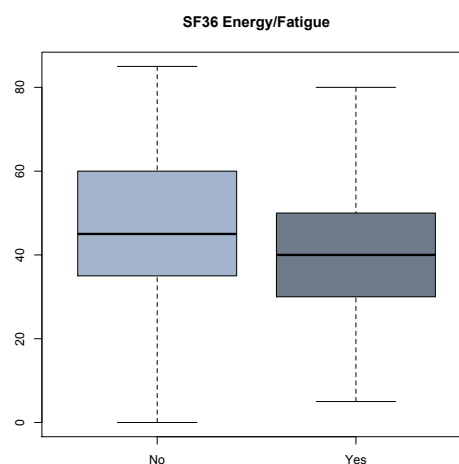


Figure 2.13: Boxplot of SF36 energy/fatigue by depression and anxiety status

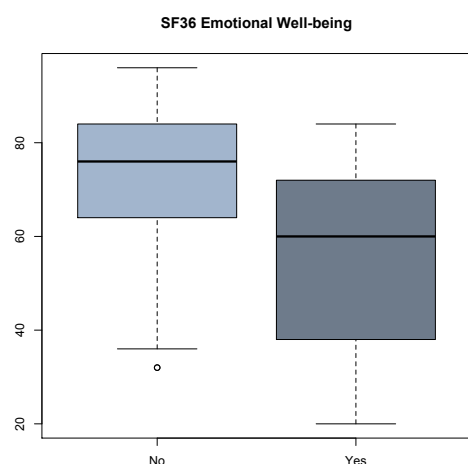


Figure 2.14: Boxplot of SF36 emotional well-being by depression and anxiety status

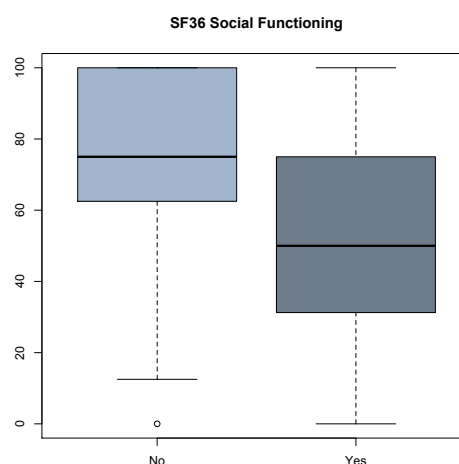


Figure 2.15: Boxplot of SF36 social functioning by depression and anxiety status

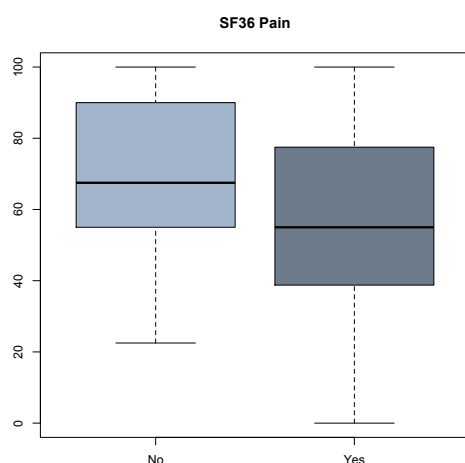


Figure 2.16: Boxplot of SF36 pain by depression and anxiety status

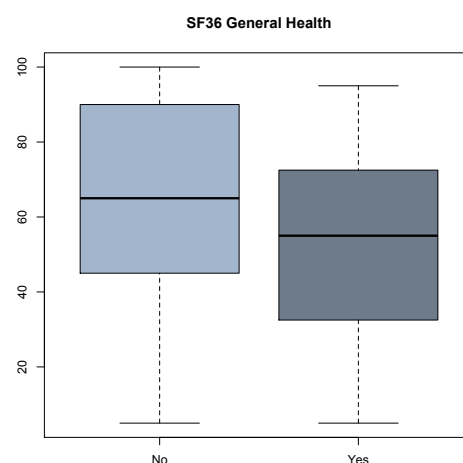


Figure 2.17: Boxplot of SF36 general health by depression and anxiety status

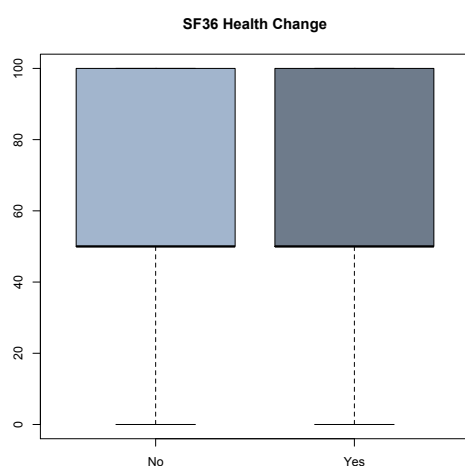


Figure 2.18: Boxplot of SF36 health change by depression and anxiety status

Table 2.8 Summary statistics and two sample t-test SF36 subscales by depression and anxiety status

SF36 subscale	Depression and Anxiety	Count	Mean	SD	t	df	P
Energy/Fatigue	No	61	43.70	18.80	1.10	60	0.2729
	Yes	39	39.40	19.60			

Table 2.9: Summary statistics Wilcoxon rank sum test with continuity correction SF36 subscales by depression and anxiety status

SF36 subscale	Depression and Anxiety	Count	Median	IQR	W	P
Physical functioning	No	61	95.00	10.00	1465.00	0.0460*
	Yes	39	90.00	30.00		
Role limitations due to physical health	No	61	100.00	75.00	1414.00	0.0855
	Yes	39	50.00	100.00		
Role limitations due to emotional problems	No	61	100.00	33.30	1679.5	0.0002*
	Yes	39	33.30	83.30		
Emotional well-being	No	61	76.00	20.00	1808.00	<0.0001*
	Yes	39	60.00	34.00		
Social functioning	No	61	75.00	37.50	1750.00	<0.0001*
	Yes	39	50.00	43.80		
Pain	No	61	67.50	35.00	1530.00	0.0155*
	Yes	39	55.00	38.80		
General Health	No	61	65.00	45.00	1470.00	0.0473*
	Yes	39	55.00	40.00		
Health change	No	61	50.00	50.00	1180.00	0.9450
	Yes	39	50.00	50.00		

* Statistically significant at $p < 0.05$

Comparisons of SF36 sub scales by location

Comparisons of SF36 sub scales were made between participants that live in major cities compared to those that live in regional or rural areas. Boxplots of each SF36 scale by location are displayed in Figures 2.19-2.27, and summary statistics are listed in Tables 2.10 and 2.11. A two-sample t-test was used when assumptions for normality and variance were met

(Table 2.10), or when assumptions for normality and variance were not met, a Wilcoxon rank sum test with continuity correction was used (Table 2.11). No statistically significant differences were observed between these two groups for any SF36 sub scale (Tables 2.10 and 2.11).

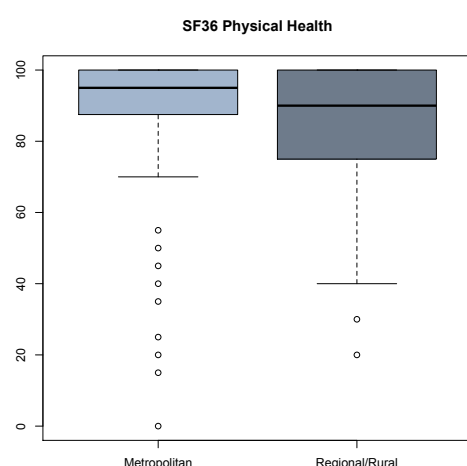


Figure 2.19: Boxplot of SF36 physical functioning by location



Figure 2.20: Boxplot of SF36 role limitations due to physical health by location

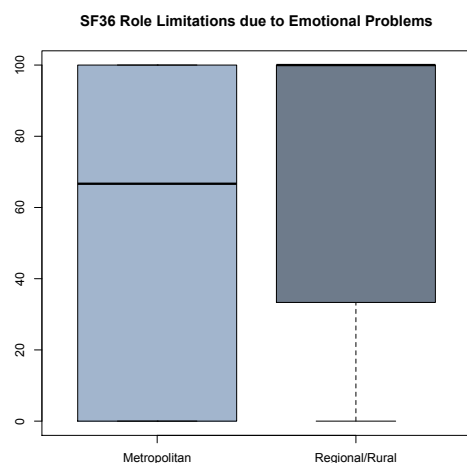


Figure 2.21: Boxplot of SF36 role limitations due to emotional problems by location

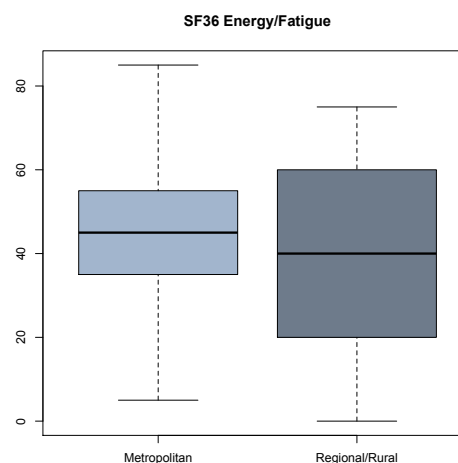


Figure 2.22: Boxplot of SF36 energy/fatigue by location

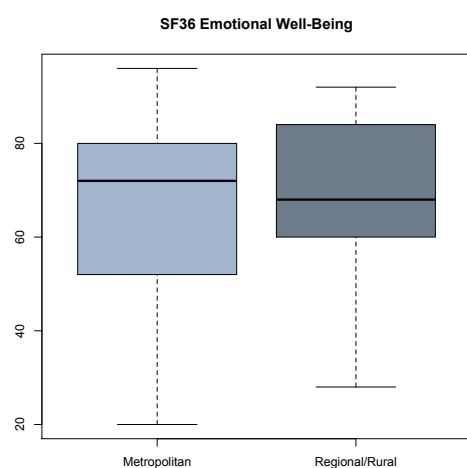
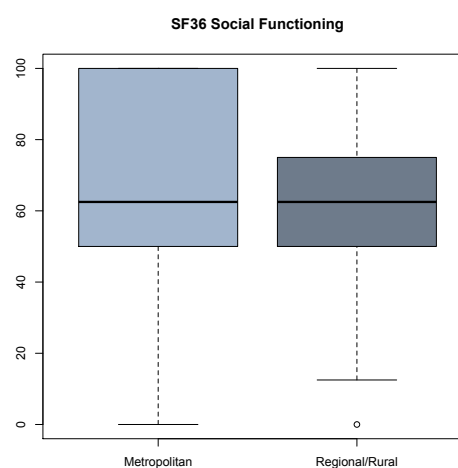


Figure 2.23: Boxplot of SF36 emotional well-being by location



2.24: Boxplot of SF36 social functioning by location

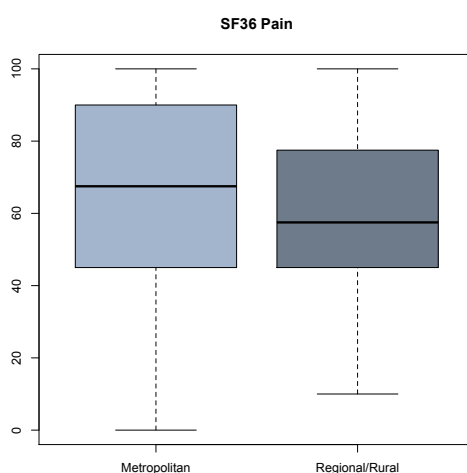
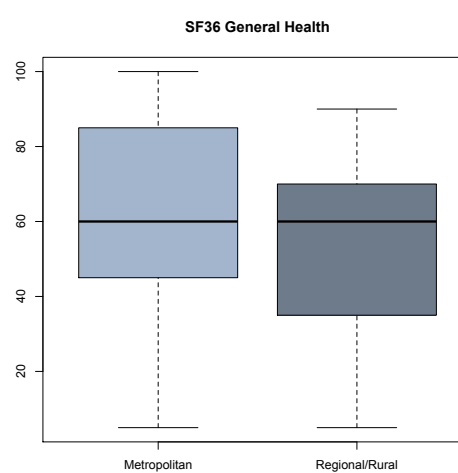


Figure 2.25: Boxplot of SF36 pain by location



2.26: Boxplot of SF36 general health by location

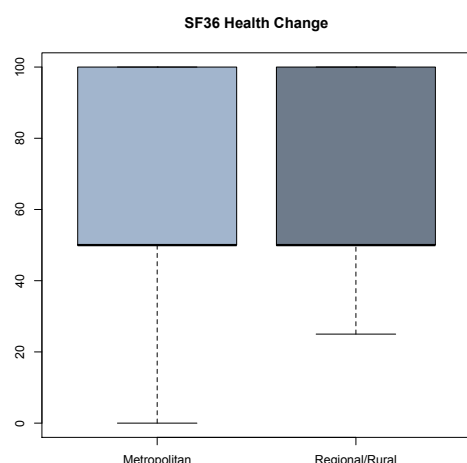


Figure 2.27: Boxplot of SF36 health change by location

Table 2.10: Summary statistics and two sample t-test SF36 subscales by location

SF36 subscale	Location	Count	Mean	SD	T	df	p
Energy/Fatigue	Major City	59	45.10	17.20	1.96	98	0.0532
	Regional/Remote	41	37.60	21.20			

Table 2.11: Summary statistics Wilcoxon rank sum test with continuity correction SF36 subscales by location

SF36 subscale	Depression and Anxiety	Count	Median	IQR	W	P
Physical functioning	Major City	59	95.00	12.50	1422.00	0.1271
	Regional/Remote	41	90.00	25.00		
Role limitations due to physical health	Major City	59	100.00	75.00	227.50	0.8940
	Regional/Remote	41	100.00	75.00		
Role limitations due to emotional problems	Major City	59	66.70	100.00	1102.00	0.4220
	Regional/Remote	41	100.00	66.70		
Emotional well-being	Major City	59	72.00	28.00	1228.00	0.8993
	Regional/Remote	41	68.00	24.00		
Social functioning	Major City	59	62.50	50.00	1357.50	0.2949
	Regional/Remote	41	62.50	25.00		
Pain	Major City	59	67.50	45.00	1414.00	0.1498
	Regional/Remote	41	57.50	32.50		
General Health	Major City	59	60.00	40.00	1432.00	0.1188
	Regional/Remote	41	60.00	35.00		
Health change	Major City	59	50.00	50.00	1221.50	0.9303
	Regional/Remote	41	50.00	50.00		

* Statistically significant at $p < 0.05$

Comparisons of SF36 sub scales by education

Comparisons of SF36 subscales were made by education status, comparing the highest level of education obtained, either university or high school/trade. Boxplots of each SF36 scale by education status are displayed in Figures 2.28-2.36, and summary statistics are listed in Tables 2.12 and 2.13. A two-sample t-test was used when

assumptions for normality and variance were met (Table 2.12), or when assumptions for normality and variance were not met, a Wilcoxon rank sum test with continuity correction was used (Table 2.13).

Wilcoxon rank sum tests with continuity corrections revealed a significant difference between those with a university degree compared to those with high school or trade for the SF36 social functioning [$W=917.50$,

$p=0.0338$]; pain [$W=852.00$, $p=0.0101$]; and the general health score [$W=918.00$, $p=0.0360$] (Table 2.13).

In each of these scales, those with a university degree scored better than those with high school or trade

(Table 2.13). No other significant differences were observed (Tables 2.12 and 2.13).

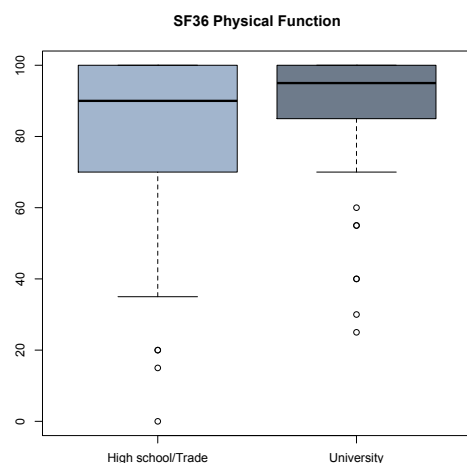


Figure 2.28: Boxplot of SF36 physical functioning by education

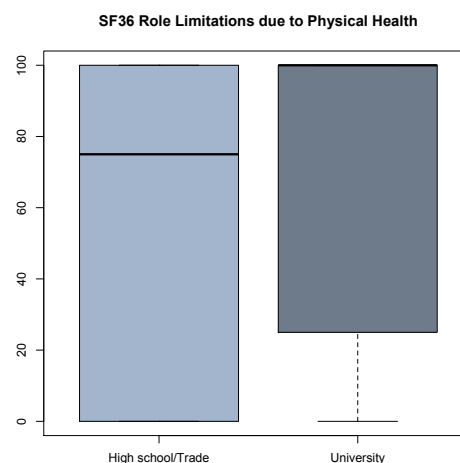


Figure 2.29: Boxplot of SF36 role limitations due to physical health by education

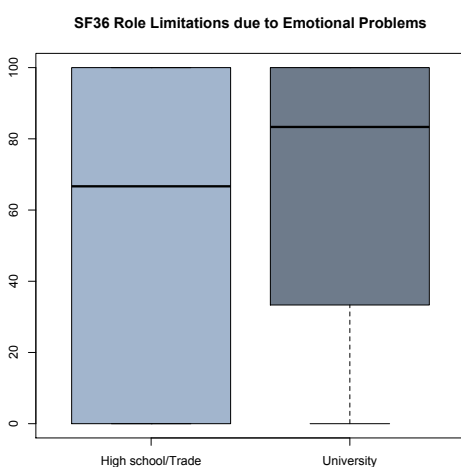


Figure 2.30: Boxplot of SF36 role limitations due to emotional problems by education

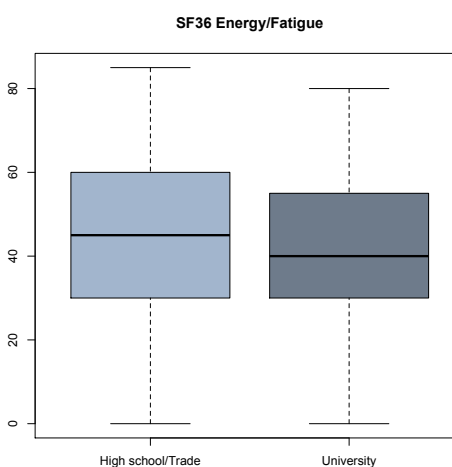


Figure 2.31: Boxplot of SF36 energy/fatigue by education

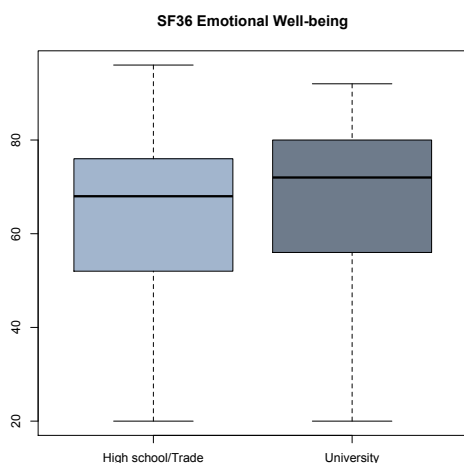
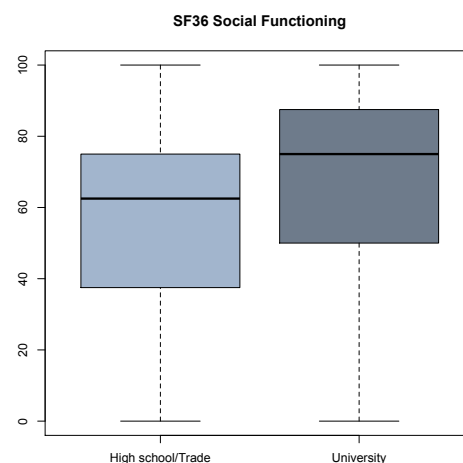


Figure 2.32: Boxplot of SF36 emotional well-being by education



2.33: Boxplot of SF36 social functioning by education

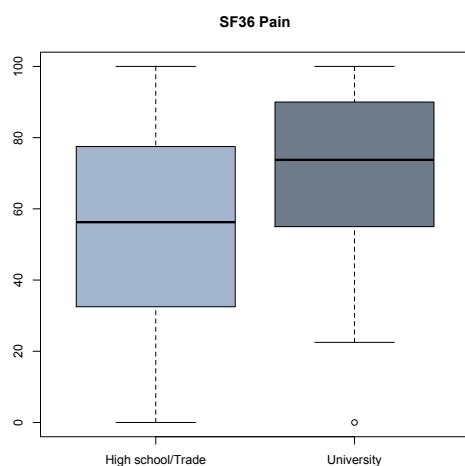
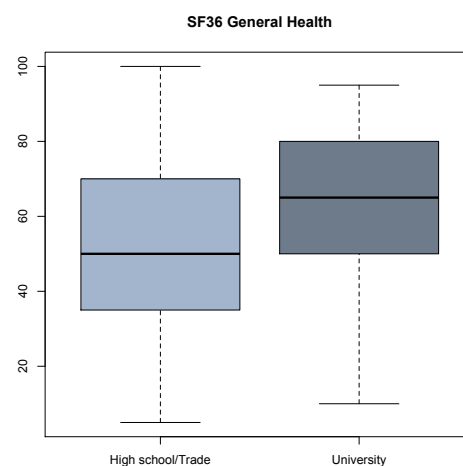


Figure 2.34: Boxplot of SF36 pain by education



2.35: Boxplot of SF36 general health by education

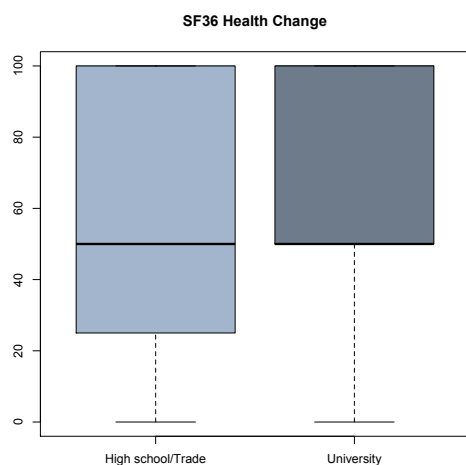


Figure 2.36: Boxplot of SF36 health change by education

Table 2.12: Summary statistics and two sample t-test SF36 subscales by education

SF36 subscale	Location	Count	Mean	SD	t	df	p
Energy/Fatigue	High school/Trade	42	42.00	20.70	0.01	98	0.9916
	University degree	58	42.00	18.20			

Table 2.13: Summary statistics Wilcoxon rank sum test with continuity correction SF36 subscales by location

SF36 subscale	Depression and Anxiety	Count	Median	IQR	W	P
Physical functioning	High school/Trade	42	90.00	28.80	958.00	0.0628
	University degree	58	95.00	13.80		
Role limitations due to physical health	High school/Trade	42	75.00	93.80	1060.50	0.2336
	University degree	58	100.00	75.00		
Role limitations due to emotional problems	High school/Trade	42	66.70	100.00	1125.00	0.4891
	University degree	58	83.30	66.70		
Emotional well-being	High school/Trade	42	68.00	24.00	1056.50	0.2593
	University degree	58	72.00	23.00		
Social functioning	High school/Trade	42	62.50	37.50	917.50	0.0338*
	University degree	58	75.00	34.40		
Pain	High school/Trade	42	56.20	42.50	852.00	0.0101*
	University degree	58	73.80	34.40		
General Health	High school/Trade	42	50.00	35.00	918.00	0.0360*
	University degree	58	65.00	30.00		
Health change	High school/Trade	42	50.00	62.50	1040.50	0.1799
	University degree	58	50.00	50.00		

* Statistically significant at $p < 0.05$