

Section 2

Demographics

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Participants

There were 29 people with lung cancer and 3 family members or carers who took part in this study. There were 4 participants (12.90%) with Stage 1, 3 participants (9.68%) with Stage 2, 4 participants (58.06%) with Stage 3, and 18 participants (58.06%) with Stage 4.

Demographics

Participants were aged from 35 to over 75 years of age, most were aged between 55 to 74 years (n=21, 65.63%). Participants were most commonly from Queensland (n=10, 31.25%), Victoria (n=10, 31.25%), and Western Australia (n=7, 21.88%). Most participants were from major cities (n=29, 90.63%), and they lived in all levels of advantage, defined by Socio-economic Indexes for Areas (SEIFA) (www.abs.gov.au) with 20 participants (62.50%) from an area with a high SEIFA score of 7 to 10 (more advantage), and 12 participants (37.50%) from an area of mid to low SEIFA scores of 1 to 6 (less advantaged).

There were 15 participants (46.88%) that had completed university to at least an associate degree. There were 10 participants (34.48%) who were in paid employment. Less than half of the participants were carers to family members or spouses (n=13, 40.63%), most commonly carers to Children (n=9, 28.13%).

Other health conditions

Almost all of the participants had at least one other condition that they had to manage (n=30, 96.77%), the maximum number reported was 7 other conditions, with a median of 2.00 other conditions (IQR = 2.00) (Table 2.3, Figure 2.2). The most commonly reported health condition was sleep problems (n=11, 35.48%), followed by depression (n=9, 29.03%), anxiety (n=9, 29.03%), and arthritis (n=9, 29.03%).

Baseline health

The Short Form Health Survey 36 (SF36) measures baseline health, or the general health of an individual. The SF36 comprises nine scales: physical functioning, role functioning/physical, role functioning/emotional, energy and fatigue, emotional well-being, social function, pain, general health, and health change from one year ago. The scale ranges from 0 to 100, a higher score denotes better health or function.

SF36 Physical functioning scale measures health limitations in physical activities such as walking, bending, climbing stairs, exercise, and housework. On average, physical activities were slightly limited for participants in this study.

SF36 Role functioning/physical scale measures how physical health interferes with work or other activities. On average, physical health almost always interfered with work or other activities for participants in this study.

SF36 Role functioning/emotional scale measures how emotional problems interfere with work or other activities. On average, emotional problems often interfered with work or other activities for participants in this study.

SF36 Energy/fatigue scale measures the proportion of energy or fatigue experienced. On average, participants were sometimes fatigued.

The **SF36 Emotional well-being scale** measures how a person feels, for example happy, calm, depressed or anxious. On average, participants had good emotional well-being.

The **SF36 Social functioning scale** measures limitations on social activities due to physical or emotional problems. On average, social activities were slightly limited for participants in this study.

The **SF36 Pain scale** measures how much pain, and how pain interferes with work and other activities. On average, participants had mild pain.

The **SF36 General health scale** measures perception of health. On average, participants reported average health.

The **SF36 Health change scale** measures health compared to a year ago. On average, participants reported that their health is about the same as a year ago.

Demographics

There were 29 people with lung cancer and 3 family members or carers who took part in this study, 23 were females (71.88%). Participants were aged from 35 to over 75 years of age, most were aged between 55 to 74 years (n=21, 65.63%).

Participants were most commonly from Queensland (n=10, 31.25%), Victoria (n=10, 31.25%), and Western Australia (n=7, 21.88%). Most participants were from major cities (n=29, 90.63%), and they lived in all levels of advantage, defined by Socio-economic Indexes for Areas (SEIFA) (www.abs.gov.au) with 20 participants (62.50%) from an area with a high SEIFA score of 7 to 10 (more advantage), and 12 participants (37.50%)

from an area of mid to low SEIFA scores of 1 to 6 (less advantaged).

There were 15 participants (46.88%) that had completed university to at least an associate degree. There were 10 participants (34.48%) who were in paid employment.

Less than half of the participants were carers to family members or spouses (n=13, 40.63%), most commonly carers to Children (n=9, 28.13%). The demographics of participants are listed in Table 2.1.

Table 2.1: Demographics

Demographic	Definition	Number (n=32)	Percent
Gender	Female	23	71.88
	Male	9	28.13
Age	35-44	1	3.13
	45-54	8	25.00
	55-64	9	28.13
	65-74	12	37.50
	75+	2	6.25
	Location	Major Cities of Australia	29
	Inner Regional Australia	3	9.38
	Outer Regional or remote Australia	0	0.00
	Remote Australia	0	0.00
State	Queensland	10	31.25
	Victoria	10	31.25
	Western Australia	7	21.88
	South Australia	3	9.38
	New South Wales	2	6.25
	Australian Capital Territory	0	0.00
	Northern Territory	0	0.00
	Tasmania	0	0.00
Socio-Economic Indexes for Areas (SEIFA)	1	1	3.13
	2	5	15.63
	3	1	3.13
	4	1	3.13
	5	2	6.25
	6	2	6.25
	7	4	12.50
	8	5	15.63
	9	6	18.75
	10	5	15.63
Race/ethnicity	Caucasian/White	28	87.50
	Other	4	12.50
Education	Less than high school degree	2	6.25
	High school degree or equivalent	5	15.63
	Some college but no degree	2	6.25
	Trade	2	6.25
	Associate degree	3	9.38
	Bachelor degree	11	34.38
Employment	Graduate degree	7	21.88
	Currently receiving Centrelink support	2	6.25
	Disabled not able to work	8	25.00
	Employed working full time	3	9.38
	Employed working part time	8	25.00
	Full/part time carer	2	6.25
	Full/part time study	0	0.00
	Not Employed looking for work	0	0.00
	Retired	12	37.50
	Carer status	I am not a carer	19
Children		9	28.13
Grandchildren		3	9.38
Parents		1	3.13

Participants

There were 29 people with lung cancer and 3 family members or carers who took part in this study. There were 4 participants (12.90%) with Stage 1, 3

participants (9.68%) with Stage 2, 4 participants (58.06%) with Stage 3, and 18 participants (58.06%) with Stage 4 (Table 2.2, Figure 2.1).

Table 2.2: Participants

Participants and diagnosis	Number (n=31)	Percent
Stage 1	4	12.90
Stage 2	3	9.68
Stage 3	4	12.90
Stage 4	18	58.06
Family member or carer	3	9.68

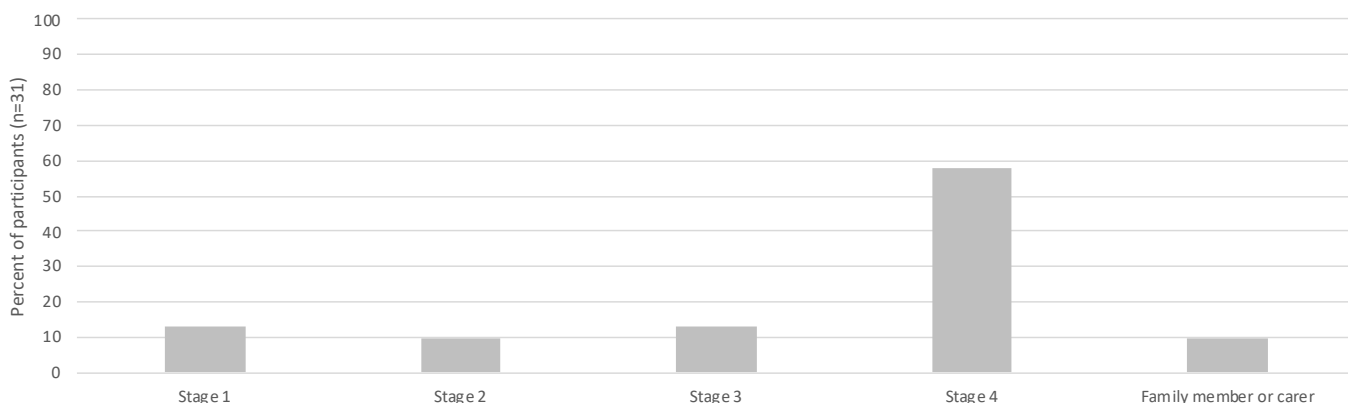


Figure 2.1: Participants

Other health conditions

Participants were asked about health conditions, other than lung cancer that they had to manage. Participants could choose from a list of common health conditions and could specify other conditions.

Almost all of the participants had at least one other condition that they had to manage (n=30, 96.77%), the

maximum number reported was 7 other conditions, with a median of 2.00 other conditions (IQR = 2.00) (Table 2.3, Figure 2.2). The most commonly reported health condition was sleep problems (n=11, 35.48%), followed by depression (n=9, 29.03%), anxiety (n=9, 29.03%), and arthritis (n=9, 29.03%) (Table 2.4, Figure 2.3).

Table 2.3: Number of other health conditions

Number of other conditions	Number (n=31)	Percent
No other conditions	1	3.23
1 to 2	15	48.39
3 to 4	11	35.48
5 or more	4	12.90

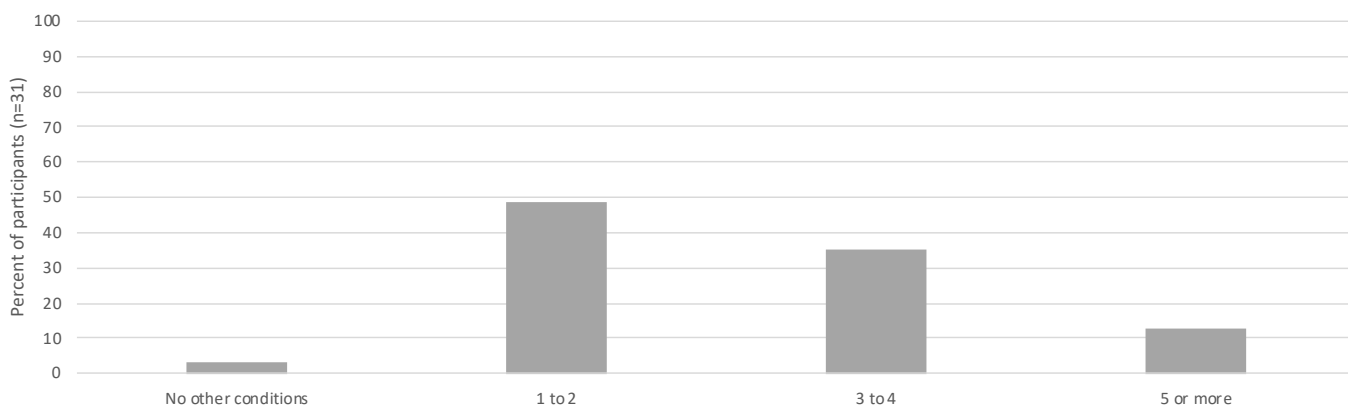


Figure 2.2: Number of other health conditions

Table 2.4: Other health conditions

Other conditions	Number (n=31)	Percent
Sleep problems	11	35.48
Depression	9	29.03
Anxiety	9	29.03
Arthritis	9	29.03
Hypertension	8	25.81
Asthma	6	19.35
Chronic pain	6	19.35
COPD	3	9.68
Chronic kidney disease	3	9.68
Arrhythmias	3	9.68
Chronic heart failure	1	3.23
Angina	1	3.23
Diabetes	1	3.23

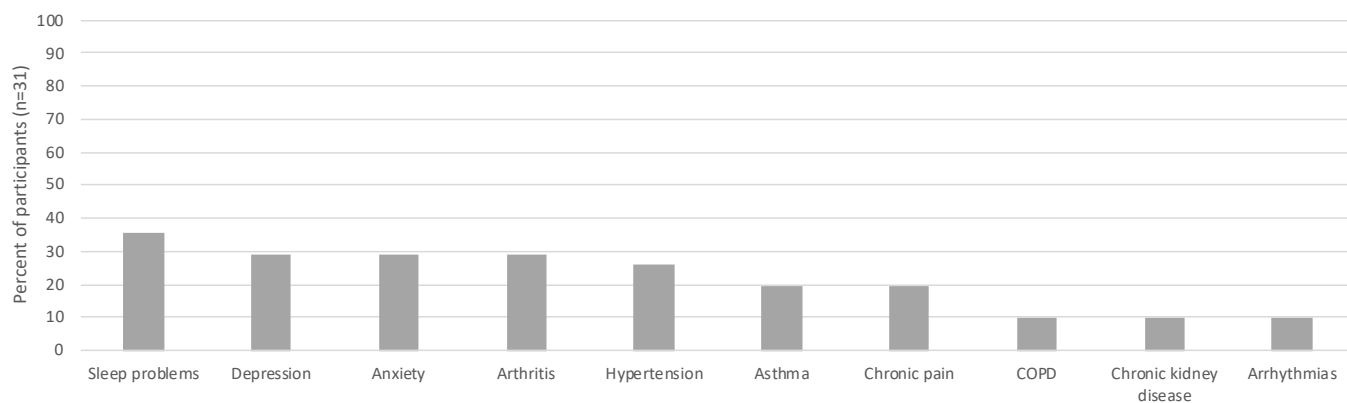


Figure 2.3: Other health conditions (% of all participants)

Subgroup analysis

Subgroup analysis are included throughout the study and the subgroups are listed in Table 2.5.

There were 29 participants (90.63%) that had been diagnosed with lung cancer, and 3 participants (9.38%) that were family members or carers to people with lung cancer. Comparisons by participant type were not made because there were too few family members and carers.

Comparisons were made by cancer stage, there were 11 participants (37.93%) with non-metastatic lung cancer and, 18 participants (62.07%) with metastatic lung cancer.

Comparisons were made by gender, there were 23 female participants (71.88%), and 9 male participants (28.13%).

Participants were grouped according to age, with comparisons made between participants aged 35 to 64 (n=18, 56.25%), and participants aged 65 or older (n=14, 43.75%).

Comparisons were made by education status, between those with trade or high school qualifications (n=17, 53.13%), and those with a university qualification (n=15, 46.88%).

The location of participants was evaluated by postcode using the Australian Statistical Geography Maps (ASGS) Remoteness areas accessed from the Australian Bureau of Statistics. There were 3 participants (9.38%) living in regional or remote areas and 29 participants (90.63%) living in metropolitan areas. Comparisons were not made because there were too few participants lived in regional or remote areas.

Comparisons were made by socioeconomic status, using the Socio-economic Indexes for Areas (SEIFA) (www.abs.gov.au), SEIFA scores range from 1 to 10, a higher score denotes a higher level of advantage. Participants with a mid to low SEIFA score of 1-6, Mid to low status (n=12, 37.50%) compared to those with a higher SEIFA score of 7-10, Higher status (n=20, 62.50%).

Table 2.5: Subgroups

Subgroup	Definition	Number (n=32)	Percent
Type	Person with	29	90.63
	Carer	3	9.38
Stage (n=29)	Non-metastatic	11	37.93
	Metastatic	18	62.07
Gender	Female	23	71.88
	Male	9	28.13
Age	Aged 35 to 64	18	56.25
	Aged 65 or older	14	43.75
Education	Trade or high school	17	53.13
	University	15	46.88
Location	Regional or remote	3	9.38
	Metropolitan	29	90.63
Economic status	Mid to low status	12	37.50
	Higher status	20	62.50

Baseline health

The Short Form Health Survey 36 (SF36) measures baseline health, or the general health of an individual. The SF36 comprises nine scales: physical functioning, role functioning/physical, role functioning/emotional, energy and fatigue, emotional well-being, social function, pain, general health, and health change from one year ago. The scale ranges from 0 to 100, a higher score denotes better health or function.

Summary statistics for the entire cohort are displayed alongside the possible range of each scale in Table 2.6, for scales with a normal distribution, the mean and SD should be used as a central measure, and median and IQR for scales that do not have a normal distribution.

The overall scores for the cohort were in the second highest quintile for SF36 Physical functioning (median=70.00, IQR=55.00), SF36 Emotional well-being (mean=69.03, SD=20.03), SF36 Social functioning (median=62.50, IQR=56.25), SF36 Pain (mean=62.02, SD=24.74), indicating good physical functioning, good emotional well-being, good social functioning, and mild pain.

The overall scores for the cohort were in the middle quintile for SF36 Energy/Fatigue (mean=42.58, SD=24.52), SF36 General health (mean=44.52, SD=15.62), SF36 Health change (median=50.00, IQR=50.00), indicating moderate energy, moderate general health, and health that is about the same as a year ago

The overall scores for the cohort were in the second lowest quintile for SF36 Role functioning/emotional (median=33.33, IQR=100.00), indicating poor emotional role functioning.

The overall scores for the cohort were in the lowest quintile for FALSE, SF36 Role functioning/physical (median=0.00, IQR=75.00), indicating very poor physical role functioning.

SF36 Physical functioning scale measures health limitations in physical activities such as walking, bending, climbing stairs, exercise, and housework. On average, physical activities were slightly limited for participants in this study.

SF36 Role functioning/physical scale measures how physical health interferes with work or other activities. On average, physical health almost always interfered with work or other activities for participants in this study.

SF36 Role functioning/emotional scale measures how emotional problems interfere with work or other activities. On average, emotional problems often interfered with work or other activities for participants in this study.

SF36 Energy/fatigue scale measures the proportion of energy or fatigue experienced. On average, participants were sometimes fatigued.

The **SF36 Emotional well-being scale** measures how a person feels, for example happy, calm, depressed or anxious. On average, participants had good emotional well-being.

The **SF36 Social functioning scale** measures limitations on social activities due to physical or emotional problems. On average, social activities were slightly limited for participants in this study.

The **SF36 Pain scale** measures how much pain, and how pain interferes with work and other activities. On average, participants had mild pain.

The **SF36 General health scale** measures perception of health. On average, participants reported average health.

The **SF36 Health change scale** measures health compared to a year ago. On average, participants

reported that their health is about the same as a year ago.

Table 2.6: SF36 summary statistics

SF36 scale (n=31)	Mean	SD	Median	IQR	Possible range	Quintile
Physical functioning	62.58	31.99	70.00	55.00	0 to 100	4
Role functioning/physical	34.68	44.10	0.00	75.00	0 to 100	1
Role functioning/emotional	47.31	47.74	33.33	100.00	0 to 100	2
Energy/Fatigue*	42.58	24.52	40.00	37.50	0 to 100	3
Emotional well-being*	69.03	20.03	68.00	28.00	0 to 100	4
Social functioning	59.27	30.61	62.50	56.25	0 to 100	4
Pain*	62.02	24.74	57.50	35.00	0 to 100	4
General health*	44.52	15.62	40.00	20.00	0 to 100	3
Health change	49.19	26.21	50.00	50.00	0 to 100	3

*Normal distribution, use mean and SD as central measure. Possible range 0-100

SF36 scales by participant type

There were 29 participants (93.55%) that had been diagnosed with lung cancer, and 2 participants (6.45%) that were family members or carers to people with lung cancer. Comparisons were not

made because there were too few family members and carers. Summary statistics are displayed in Table 2.7.

Table 2.7: SF36 by participant type summary statistics

SF36 scale	Group	Number (n=31)	Percent	Mean	SD	Median	IQR	Quintile
Physical functioning	Person with lung cancer	29	93.55	60.52	32.00	65.00	60.00	4
	Family member or carer	2	6.45	92.50	10.61	92.50	7.50	NA
Role functioning physical	Person with lung cancer	29	93.55	35.34	45.08	0.00	75.00	1
	Family member or carer	2	6.45	25.00	35.36	25.00	25.00	NA
Role functioning emotional	Person with lung cancer	29	93.55	50.57	47.66	33.33	100.00	2
	Family member or carer	2	6.45	0.00	0.00	0.00	0.00	NA
Energy/fatigue*	Person with lung cancer	29	93.55	43.28	24.79	40.00	35.00	3
	Family member or carer	2	6.45	32.50	24.75	32.50	17.50	NA
Emotional well-being*	Person with lung cancer	29	93.55	70.34	19.99	72.00	32.00	4
	Family member or carer	2	6.45	50.00	8.49	50.00	6.00	NA
Social functioning	Person with lung cancer	29	93.55	62.07	29.60	62.50	50.00	4
	Family member or carer	2	6.45	18.75	8.84	18.75	6.25	NA
Pain*	Person with lung cancer	29	93.55	61.29	24.36	57.50	35.00	4
	Family member or carer	2	6.45	72.50	38.89	72.50	27.50	NA
General health*	Person with lung cancer	29	93.55	44.48	16.11	40.00	20.00	3
	Family member or carer	2	6.45	45.00	7.07	45.00	5.00	NA
Health change	Person with lung cancer	29	93.55	50.86	26.29	50.00	50.00	3
	Family member or carer	2	6.45	25.00	0.00	25.00	0.00	NA

*Normal distribution, use mean and SD as central measure. Possible range 0-100

Comparisons of SF36 scales by lung cancer stage

Comparisons were made by cancer stage, there were 11 participants (37.93%) with non-metastatic lung cancer and, 18 participants (62.07%) with metastatic lung cancer.

Boxplots of each SF36 scale by **lung cancer stage** are displayed in Figures 2.4 to 2.12, summary statistics are displayed 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).

No significant differences were observed between participants by **lung cancer stage** for any of the SF36 scales.

Table 2.8: SF36 by lung cancer stage summary statistics and T-test

SF36 scale	Group	Number (n=29)	Percent	Mean	SD	T	dF	p-value
Energy/fatigue	Non-metastatic	11	37.93	42.73	24.33	-0.10	27	0.9244
	Metastatic	18	62.07	43.61	24.00			
Emotional well-being	Non-metastatic	11	37.93	73.82	19.30	1.09	27	0.2847
	Metastatic	18	62.07	65.78	19.22			
Social functioning	Non-metastatic	11	37.93	70.45	26.97	1.69	27	0.1027
	Metastatic	18	62.07	51.39	30.88			
Pain	Non-metastatic	11	37.93	55.91	24.96	-0.88	27	0.3887
	Metastatic	18	62.07	64.44	25.75			
General health	Non-metastatic	11	37.93	49.55	19.68	1.26	27	0.2187
	Metastatic	18	62.07	42.22	11.79			

Table 2.9: SF36 by lung cancer stage summary statistics and Wilcoxon test

SF36 scale	Group	Number (n=29)	Percent	Median	IQR	W	p-value
Physical functioning	Non-metastatic	11	37.93	70.00	47.50	96.50	0.9281
	Metastatic	18	62.07	70.00	50.00		
Role functioning physical	Non-metastatic	11	37.93	0.00	100.00	113.00	0.4932
	Metastatic	18	62.07	0.00	68.75		
Role functioning emotional	Non-metastatic	11	37.93	66.67	83.33	119.50	0.3264
	Metastatic	18	62.07	0.00	100.00		
Health change	Non-metastatic	11	37.93	50.00	50.00	106.00	0.7564
	Metastatic	18	62.07	50.00	43.75		

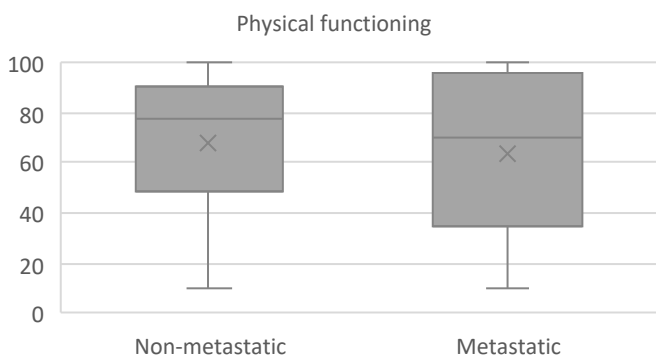


Figure 2.4: Boxplot of SF36 Physical functioning by lung cancer stage

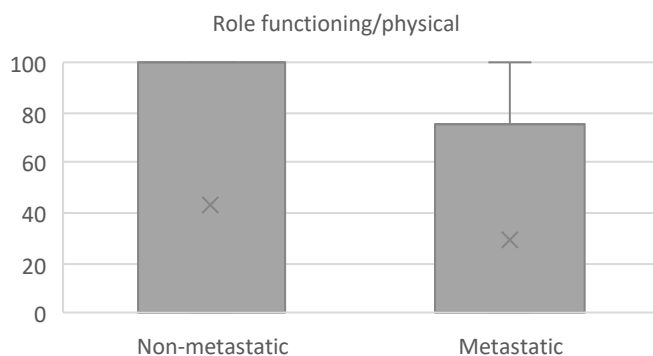


Figure 2.5: Boxplot of SF36 Role functioning/physical by lung cancer stage

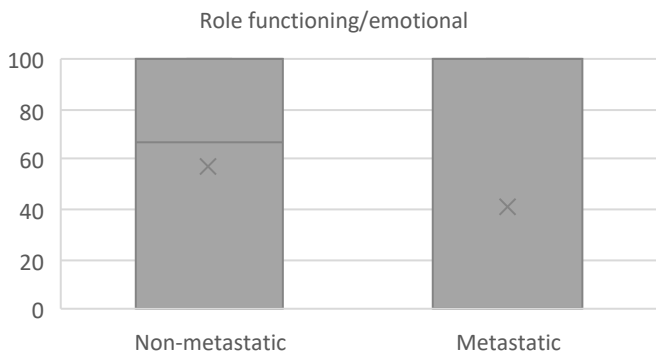


Figure 2.6: Boxplot of SF36 Role functioning/emotional by lung cancer stage

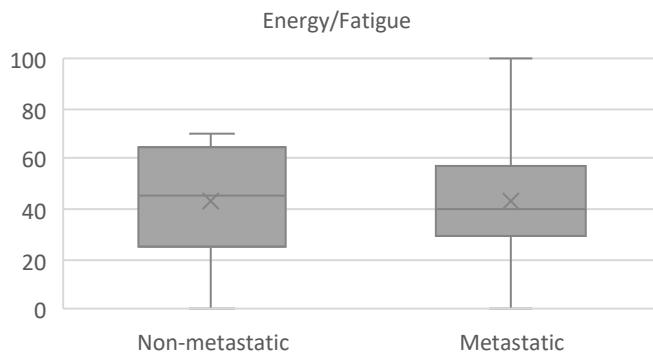


Figure 2.7: Boxplot of SF36 Energy/fatigue by lung cancer stage

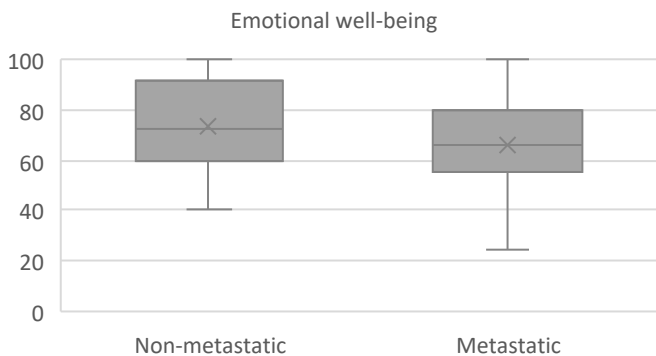


Figure 2.8: Boxplot of SF36 Emotional well-being by lung cancer stage

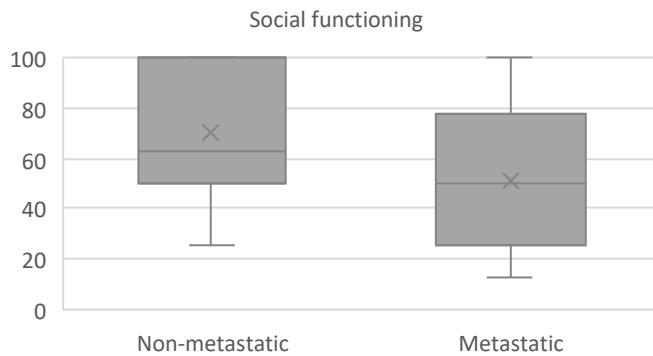


Figure 2.9: Boxplot of SF36 Social functioning by lung cancer stage

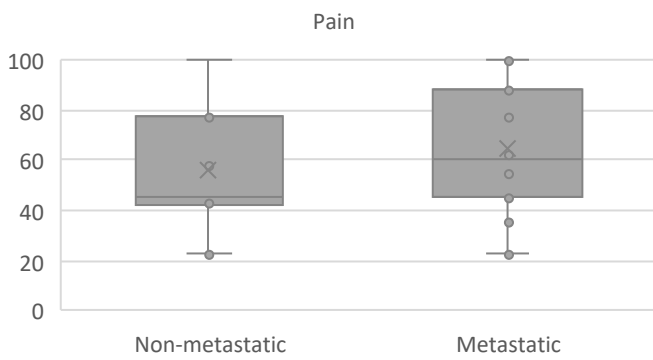


Figure 2.10: Boxplot of SF36 Pain by a lung cancer stage

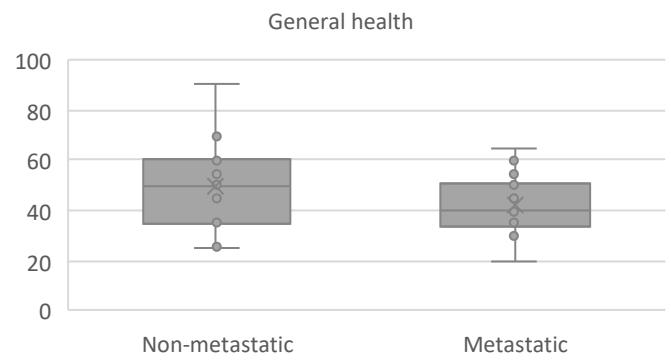


Figure 2.11: Boxplot of SF36 General health by lung cancer stage

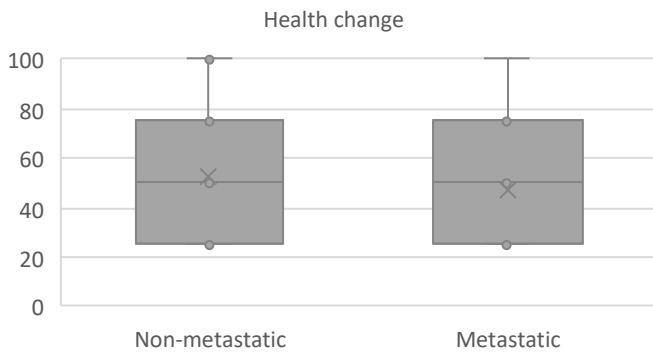


Figure 2.12: Boxplot of SF36 Health change by lung cancer stage

Comparisons of SF36 scales by gender

Comparisons were made by gender, there were 23 female participants (74.19%), and 8 male participants (25.81%).

Boxplots of each SF36 scale by **gender** are displayed in Figures 2.13 to 2.21, summary statistics are displayed 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).

Wilcoxon rank sum tests with continuity correction indicated that the median score for the **SF36 Physical functioning scale** [$W = 35.00$, $p = 0.0104$] was significantly lower females (Median = 55.00, IQR = 65.00) compared males (Median = 87.50, IQR = 20.00).

A two sample t-test indicated that the mean score for the **SF36 Pain scale** [$t(29) = -2.39$, $p = 0.0237$] was significantly lower females (Mean = 56.20, SD = 24.05) compared to males (Mean = 78.75, SD = 19.36.)

SF36 Physical functioning scale measures health limitations in physical activities such as walking, bending, climbing stairs, exercise, and housework. On average, males scored higher than females. This indicates that physical activities were not limited for males, and were slightly limited for females.

SF36 Pain scale measures how much pain, and how pain interferes with work and other activities. On average, males scored higher than females. This indicates males had mild pain, and females had moderate pain.

Table 2.10: SF36 by gender summary statistics and T-test

SF36 scale	Group	Number (n=31)	Percent	Mean	SD	T	dF	p-value
Energy/fatigue	Female	23	74.19	39.35	25.91	-1.26	29	0.2190
	Male	8	25.81	51.88	18.31			
Emotional well-being	Female	23	74.19	67.83	20.63	-0.56	29	0.5784
	Male	8	25.81	72.50	19.06			
Social functioning	Female	23	74.19	57.61	29.37	-0.51	29	0.6158
	Male	8	25.81	64.06	35.63			
Pain	Female	23	74.19	56.20	24.05	-2.39	29	0.0237*
	Male	8	25.81	78.75	19.36			
General health	Female	23	74.19	42.39	16.71	-1.30	29	0.2042
	Male	8	25.81	50.63	10.50			

*Statistically significant at p<0.05

Table 2.11: SF36 by gender summary statistics and Wilcoxon test

SF36 scale	Group	Number (n=31)	Percent	Median	IQR	W	p-value
Physical functioning	Female	23	74.19	55.00	65.00	35.00	0.0104*
	Male	8	25.81	87.50	20.00		
Role functioning physical	Female	23	74.19	0.00	75.00	65.00	0.1787
	Male	8	25.81	62.50	100.00		
Role functioning emotional	Female	23	74.19	0.00	100.00	64.00	0.1740
	Male	8	25.81	100.00	75.00		
Health change	Female	23	74.19	50.00	50.00	92.00	1.0000
	Male	8	25.81	37.50	50.00		

*Statistically significant at p<0.05

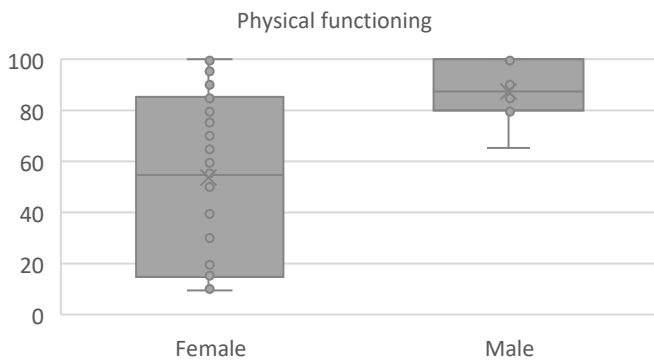


Figure 2.13: Boxplot of SF36 Physical functioning by gender

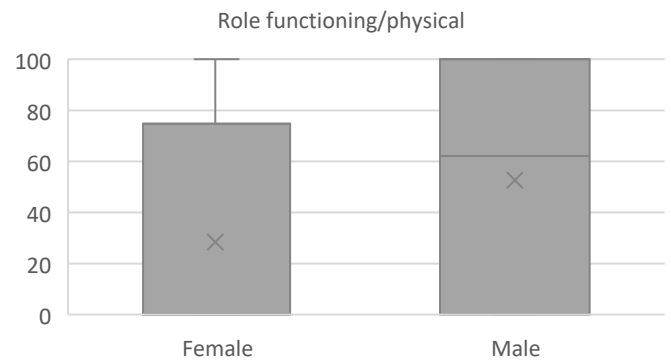


Figure 2.14: Boxplot of SF36 Role functioning/physical by gender



Figure 2.15: Boxplot of SF36 Role functioning/emotional by gender

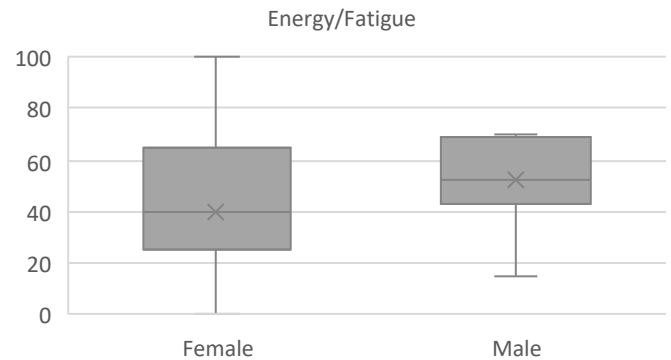


Figure 2.16: Boxplot of SF36 Energy/fatigue by gender

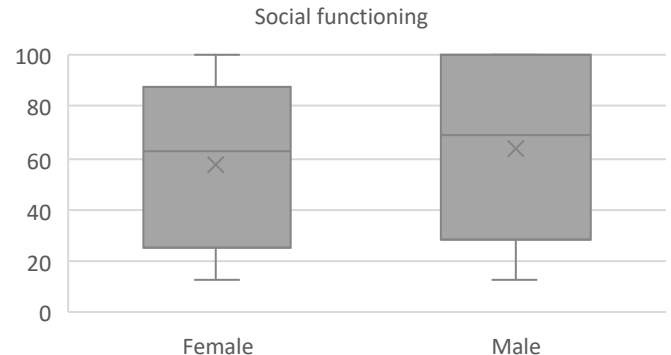
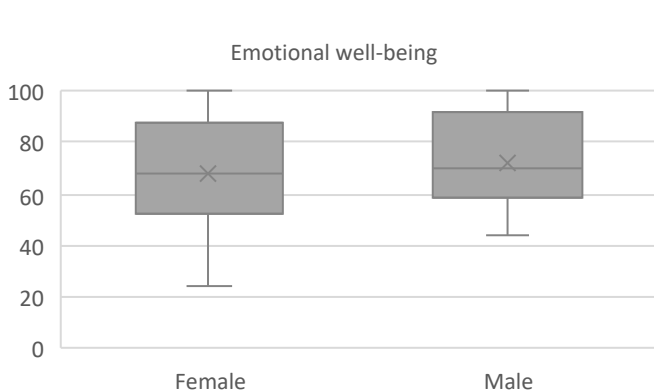


Figure 2.17: Boxplot of SF36 Emotional well-being by gender

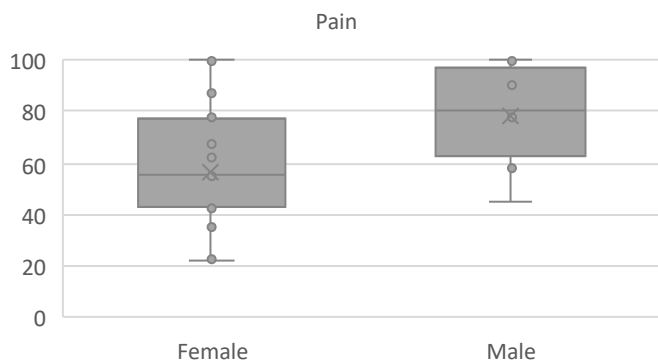


Figure 2.18: Boxplot of SF36 Social functioning by gender

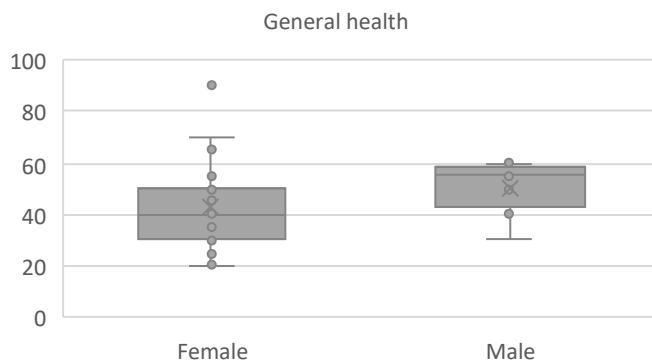


Figure 2.19: Boxplot of SF36 Pain by a gender

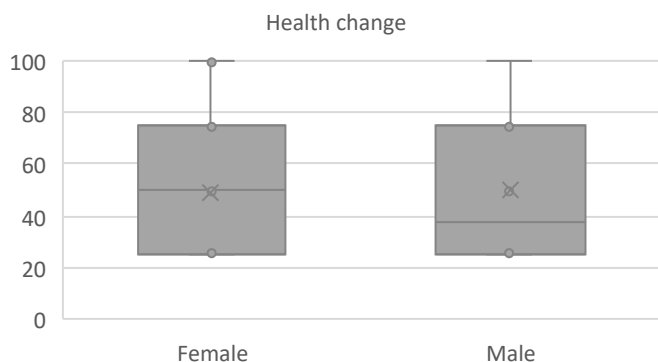


Figure 2.20: Boxplot of SF36 General health by gender

Figure 2.21: Boxplot of SF36 Health change by gender

Comparisons of SF36 scales by age

Participants were grouped according to age, with comparisons made between participants aged 35 to 64 (n=17, 54.84%), and participants aged 65 or older (n=14, 45.16%).

Boxplots of each SF36 scale by **age** are displayed in Figures 2.22 to 2.30, summary statistics are displayed 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).

No significant differences were observed between participants by **age** for any of the SF36 scales.

Table 2.12: SF36 by age summary statistics and T-test

SF36 scale	Group	Number (n=31)	Percent	Mean	SD	T	dF	p-value
Energy/fatigue	Aged 35 to 64	17	54.84	40.88	28.95	-0.42	29	0.6783
	Aged 65 or older	14	45.16	44.64	18.65			
Social functioning	Aged 35 to 64	17	54.84	63.24	30.45	0.79	29	0.4366
	Aged 65 or older	14	45.16	54.46	31.24			
Pain	Aged 35 to 64	17	54.84	65.44	22.19	0.85	29	0.4049
	Aged 65 or older	14	45.16	57.86	27.80			
General health	Aged 35 to 64	17	54.84	41.76	15.30	-1.08	29	0.2873
	Aged 65 or older	14	45.16	47.86	15.90			

Table 2.13: SF36 by age summary statistics and Wilcoxon test

SF36 scale	Group	Number (n=31)	Percent	Median	IQR	W	p-value
Physical functioning	Aged 35 to 64	17	54.84	70.00	50.00	130.50	0.6610
	Aged 65 or older	14	45.16	70.00	55.00		
Role functioning/physical	Aged 35 to 64	17	54.84	0.00	100.00	140.00	0.3603
	Aged 65 or older	14	45.16	0.00	43.75		
Role functioning/emotional	Aged 35 to 64	17	54.84	66.67	100.00	133.50	0.5429
	Aged 65 or older	14	45.16	16.67	100.00		
Emotional well-being	Aged 35 to 64	17	54.84	72.00	24.00	126.00	0.7957
	Aged 65 or older	14	45.16	62.00	34.00		
Health change	Aged 35 to 64	17	54.84	50.00	50.00	124.50	0.8329
	Aged 65 or older	14	45.16	37.50	50.00		

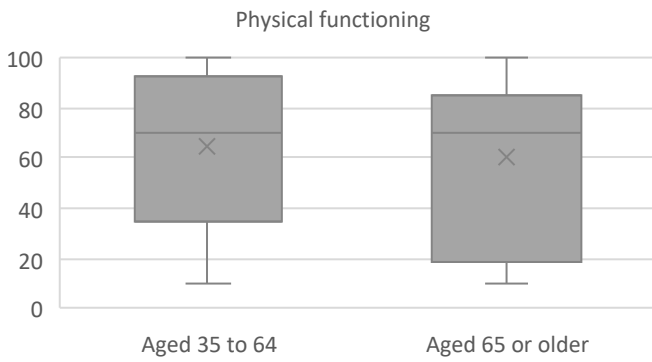


Figure 2.22: Boxplot of SF36 Physical functioning by age

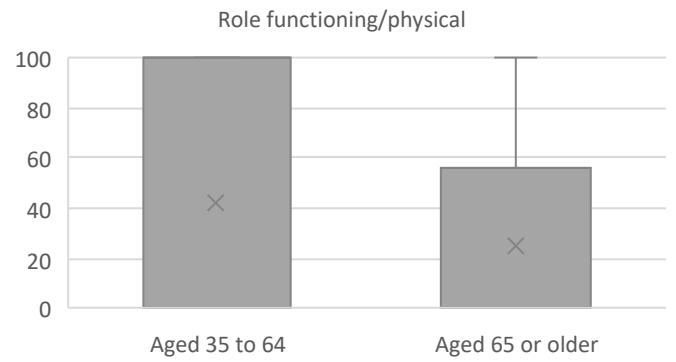


Figure 2.23: Boxplot of SF36 Role functioning/physical by age



Figure 2.24: Boxplot of SF36 Role functioning/emotional by age

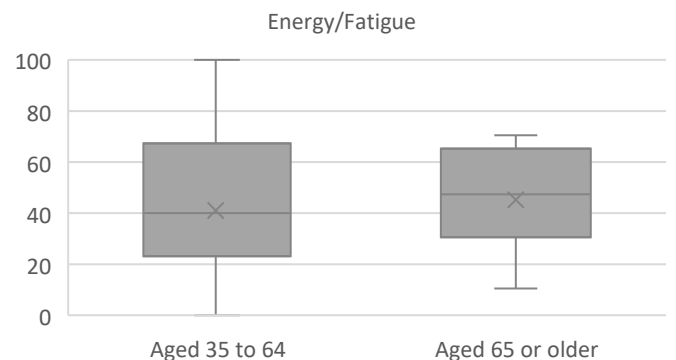


Figure 2.25: Boxplot of SF36 Energy/fatigue by age



Figure 2.26: Boxplot of SF36 Emotional well-being by age

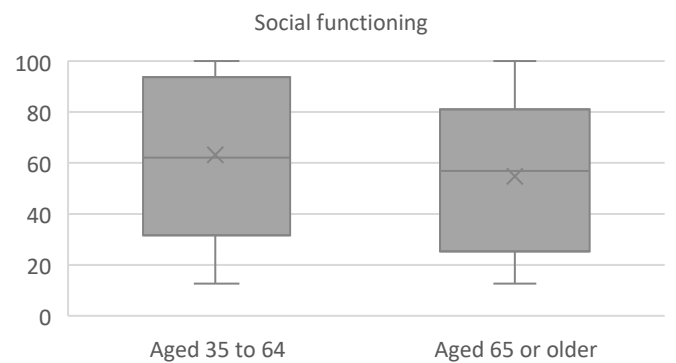


Figure 2.27: Boxplot of SF36 Social functioning by age

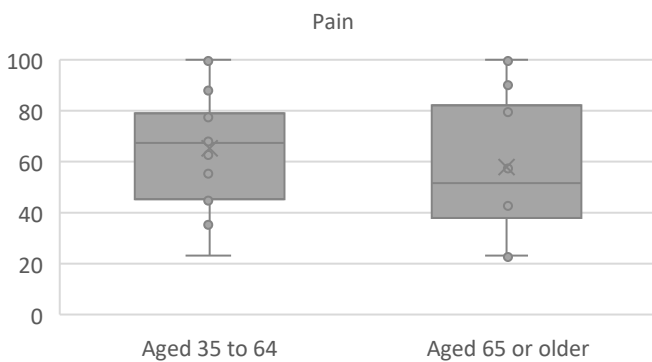


Figure 2.28: Boxplot of SF36 Pain by age

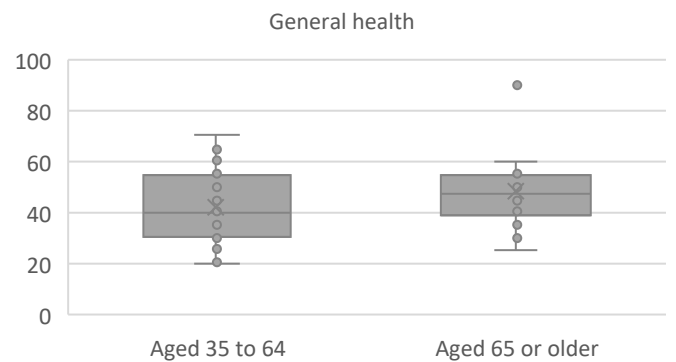


Figure 2.29: Boxplot of SF36 General health by age

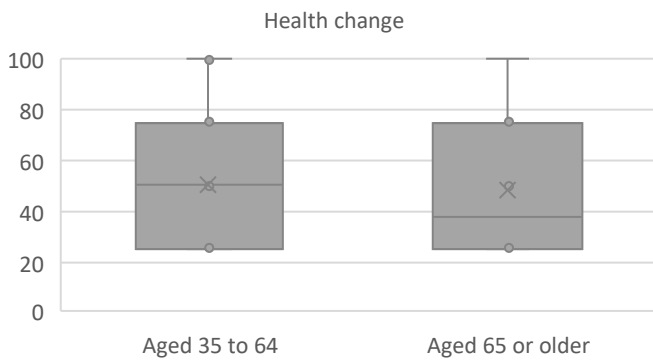


Figure 2.30: Boxplot of SF36 Health change by age

Comparisons of SF36 scales by education

Comparisons were made by education status, between those with trade or high school qualifications (n=17, 54.84%), and those with a university qualification (n=14, 45.16%).

Boxplots of each SF36 scale by **education** are displayed in Figures 2.31 to 2.39, summary statistics are displayed in Tables 2.14 and 2.15.

A two-sample t-test was used when assumptions for normality and variance were met (Table 2.14), or when assumptions for normality and variance were not met, a Wilcoxon rank sum test with continuity correction was used (Table 2.15).

No significant differences were observed between participants by **education** for any of the SF36 scales.

Table 2.14: SF36 by education summary statistics and T-test

SF36 scale	Group	Number (n=31)	Percent	Mean	SD	T	dF	p-value
Energy/fatigue	Trade or high school	17	54.84	42.94	25.98	0.09	29	0.9299
	University	14	45.16	42.14	23.59			
Emotional well-being	Trade or high school	17	54.84	68.24	22.56	-0.24	29	0.8118
	University	14	45.16	70.00	17.24			
Pain	Trade or high school	17	54.84	55.74	25.11	-1.60	29	0.1211
	University	14	45.16	69.64	22.87			

Table 2.15: SF36 by education summary statistics and Wilcoxon test

SF36 scale	Group	Number (n=31)	Percent	Median	IQR	W	p-value
Physical functioning	Trade or high school	17	54.84	65.00	65.00	104.50	0.5768
	University	14	45.16	77.50	47.50		
Role functioning/physical	Trade or high school	17	54.84	0.00	75.00	118.00	0.9822
	University	14	45.16	0.00	75.00		
Role functioning/emotional	Trade or high school	17	54.84	33.33	100.00	114.00	0.8449
	University	14	45.16	50.00	100.00		
Social functioning	Trade or high school	17	54.84	50.00	37.50	84.00	0.1660
	University	14	45.16	75.00	34.38		
General health	Trade or high school	17	54.84	40.00	20.00	133.00	0.5897
	University	14	45.16	42.50	23.75		
Health change	Trade or high school	17	54.84	50.00	50.00	149.00	0.2132
	University	14	45.16	25.00	25.00		

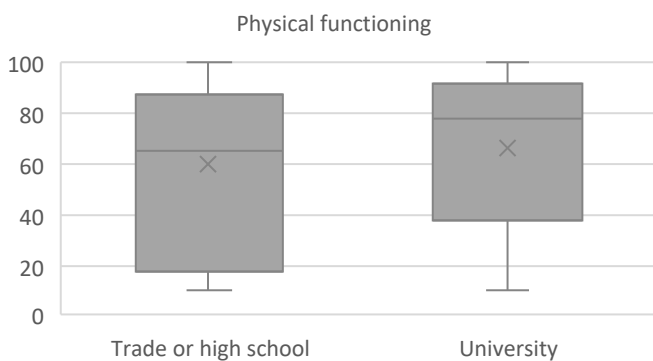


Figure 2.31: Boxplot of SF36 Physical functioning by education

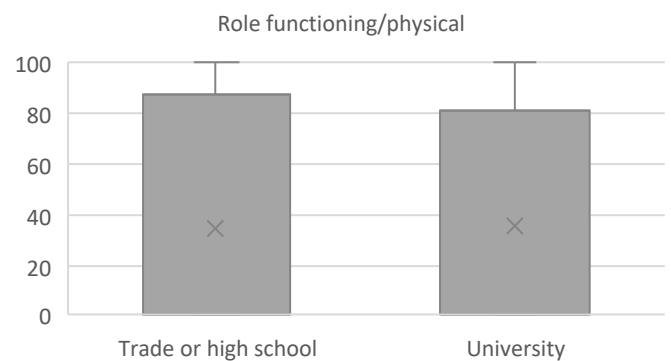


Figure 2.32: Boxplot of SF36 Role functioning/physical by education

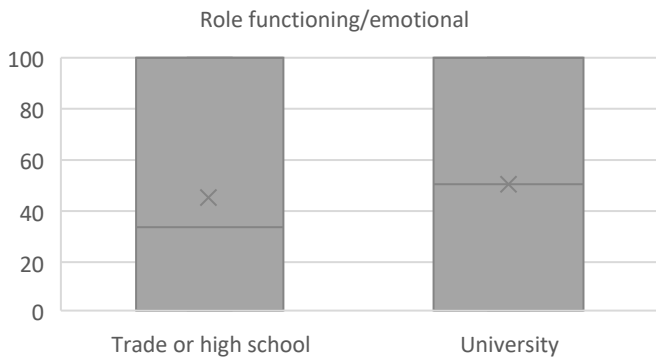


Figure 2.33: Boxplot of SF36 Role functioning/emotional by education

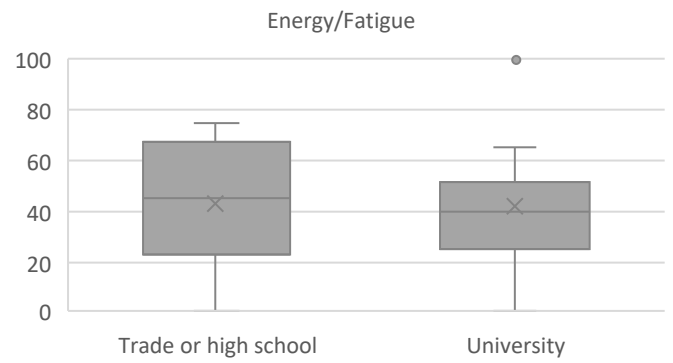


Figure 2.34: Boxplot of SF36 Energy/fatigue by education

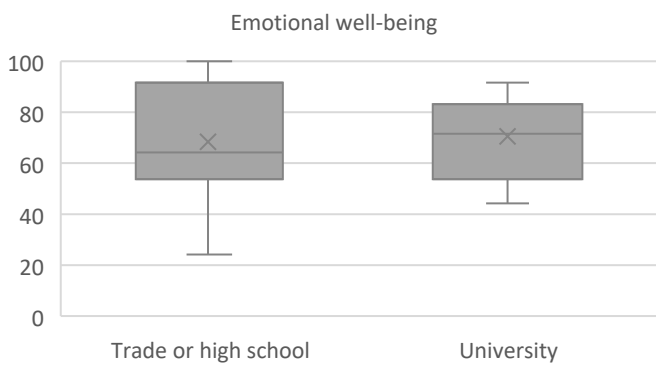


Figure 2.35: Boxplot of SF36 Emotional well-being by education

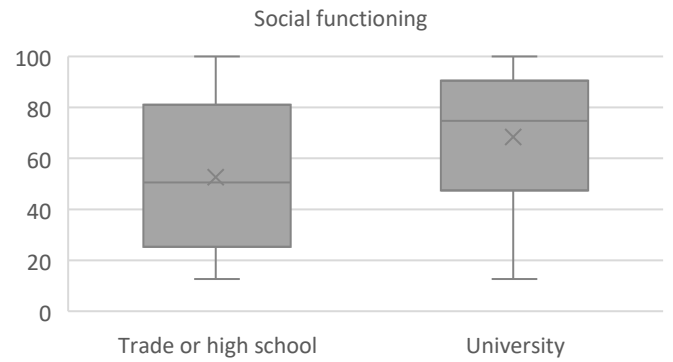


Figure 2.36: Boxplot of SF36 Social functioning by education

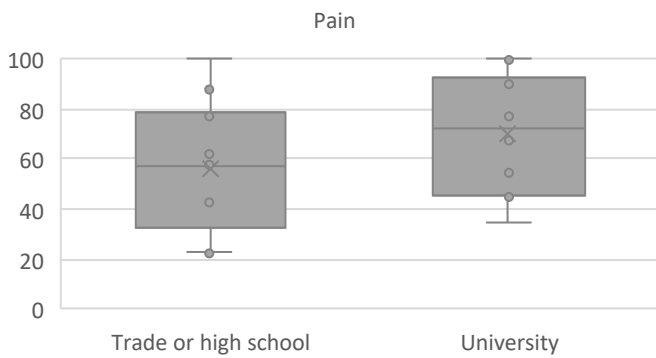


Figure 2.37: Boxplot of SF36 Pain by education

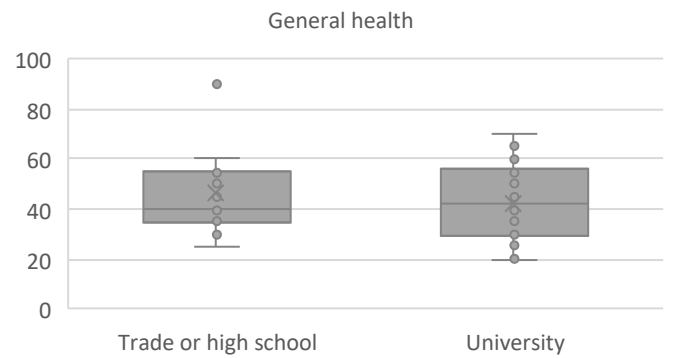


Figure 2.38: Boxplot of SF36 General health by education

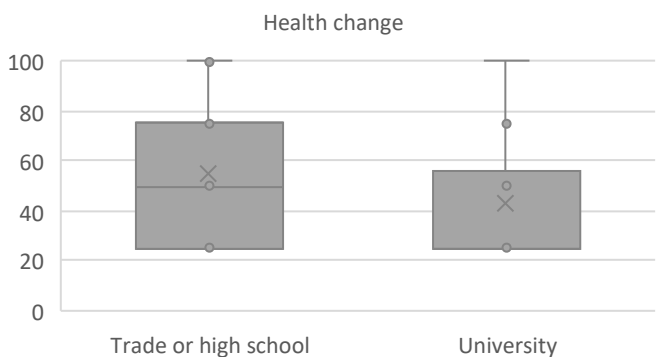


Figure 2.39: Boxplot of SF36 Health change by education

Comparisons of SF36 scales by location

The location of participants was evaluated by postcode using the Australian Statistical Geography Maps (ASGS) Remoteness areas accessed from the Australian Bureau of Statistics. There were 2 participants (6.45%) living in regional or remote

areas and 29 participants (93.55%) living in metropolitan areas. Comparisons were not made because there were too few participants lived in regional or remote areas. Summary statistics are displayed in Table 2.16.

Table 2.16: SF36 by location summary statistics

SF36 scale	Group	Number (n=31)	Percent	Mean	SD	Median	IQR	Quintile
Physical functioning	Regional or remote	2	6.45	55.00	56.57	55.00	40.00	3
	Metropolitan	29	93.55	63.10	31.27	70.00	50.00	NA
Role functioning physical	Regional or remote	2	6.45	0.00	0.00	0.00	0.00	1
	Metropolitan	29	93.55	37.07	44.63	0.00	75.00	NA
Role functioning emotional	Regional or remote	2	6.45	50.00	70.71	50.00	50.00	3
	Metropolitan	29	93.55	47.13	47.57	33.33	100.00	NA
Energy/fatigue*	Regional or remote	2	6.45	20.00	28.28	20.00	20.00	1
	Metropolitan	29	93.55	44.14	24.02	45.00	35.00	NA
Emotional well-being*	Regional or remote	2	6.45	68.00	33.94	68.00	24.00	4
	Metropolitan	29	93.55	69.10	19.71	68.00	24.00	NA
Social functioning	Regional or remote	2	6.45	56.25	26.52	56.25	18.75	3
	Metropolitan	29	93.55	59.48	31.28	62.50	62.50	NA
Pain*	Regional or remote	2	6.45	62.50	7.07	62.50	5.00	4
	Metropolitan	29	93.55	61.98	25.58	57.50	35.00	NA
General health*	Regional or remote	2	6.45	42.50	31.82	42.50	22.50	3
	Metropolitan	29	93.55	44.66	15.00	40.00	20.00	NA
Health change	Regional or remote	2	6.45	50.00	35.36	50.00	25.00	3
	Metropolitan	29	93.55	49.14	26.29	50.00	50.00	NA

*Normal distribution, use mean and SD as central measure. Possible range 0-100

Comparisons of SF36 scales by socioeconomic status

Comparisons were made by socioeconomic status, using the Socio-economic Indexes for Areas (SEIFA) (www.abs.gov.au), SEIFA scores range from 1 to 10, a higher score denotes a higher level of advantage. Participants with a mid to low SEIFA score of 1-6, Mid to low status (n=12, 37.50%) compared to those with a higher SEIFA score of 7-10, Higher status (n=20, 62.50%).

Boxplots of each SF36 scale by **socioeconomic status** are displayed in Figures 2.40 to 2.48, summary statistics are displayed in Tables 2.17 and 2.18.

A two-sample t-test was used when assumptions for normality and variance were met (Table 2.17), or when assumptions for normality and variance were

not met, a Wilcoxon rank sum test with continuity correction was used (Table 2.18).

A two sample t-test indicated that the mean score for the SF36 Energy/fatigue scale [$t(29) = -2.66$, $p = 0.0127$] was significantly lower for participants in the Mid to low status subgroup (Mean = 28.18, SD = 25.62) compared to participants in the Higher status subgroup (Mean = 50.50, SD = 20.45.)

SF36 Energy/fatigue scale measures the proportion of energy or fatigue experienced. On average, participants in the higher status subgroup scored higher than participants in the lower status subgroup. This indicates that participants in the higher status subgroup were sometimes fatigued, and participants in the lower status subgroup were often fatigued.

Table 2.17: SF36 by socioeconomic status summary statistics and T-test

SF36 scale	Group	Number (n=31)	Percent	Mean	SD	T	dF	p-value
Energy/Fatigue	Mid to low status	11	35.48	28.18	25.62	-2.66	29	0.0127*
	Higher status	20	64.52	50.50	20.45			
Emotional well-being	Mid to low status	11	35.48	64.36	23.22	-0.96	29	0.3443
	Higher status	20	64.52	71.60	18.16			
Pain	Mid to low status	11	35.48	52.95	25.64	-1.55	29	0.1327
	Higher status	20	64.52	67.00	23.39			
General health	Mid to low status	11	35.48	42.27	20.54	-0.59	29	0.5620
	Higher status	20	64.52	45.75	12.59			

Table 2.18: SF36 by socioeconomic status summary statistics and Wilcoxon test

SF36 scale	Group	Number (n=31)	Percent	Median	IQR	W	p-value
Physical functioning	Mid to low status	11	35.48	40.00	65.00	70.50	0.1059
	Higher status	20	64.52	77.50	33.75		
Role functioning/physical	Mid to low status	11	35.48	0.00	50.00	92.50	0.4301
	Higher status	20	64.52	0.00	100.00		
Role functioning/emotional	Mid to low status	11	35.48	0.00	100.00	95.00	0.5121
	Higher status	20	64.52	50.00	100.00		
Social functioning	Mid to low status	11	35.48	50.00	25.00	99.00	0.6610
	Higher status	20	64.52	62.50	75.00		
Health change	Mid to low status	11	35.48	50.00	37.50	140.50	0.1879
	Higher status	20	64.52	25.00	31.25		

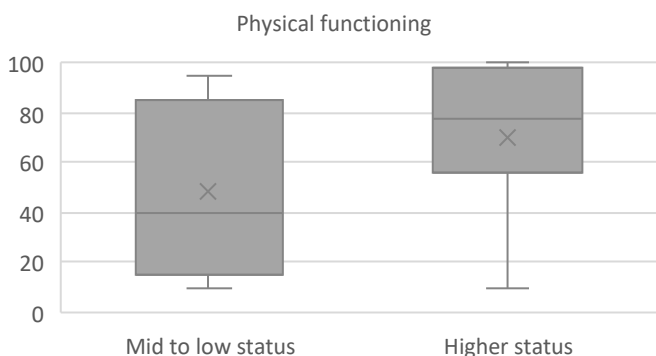


Figure 2.40: Boxplot of SF36 Physical functioning by socioeconomic status

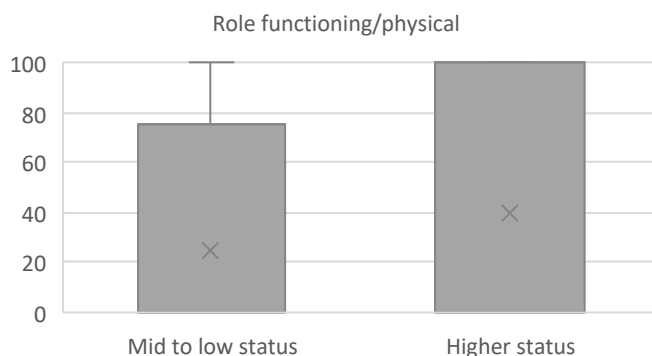


Figure 2.41: Boxplot of SF36 Role functioning/physical by socioeconomic status

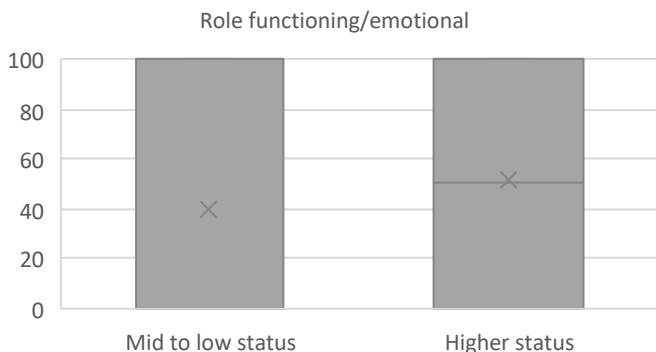


Figure 2.42: Boxplot of SF36 Role functioning/emotional by socioeconomic status

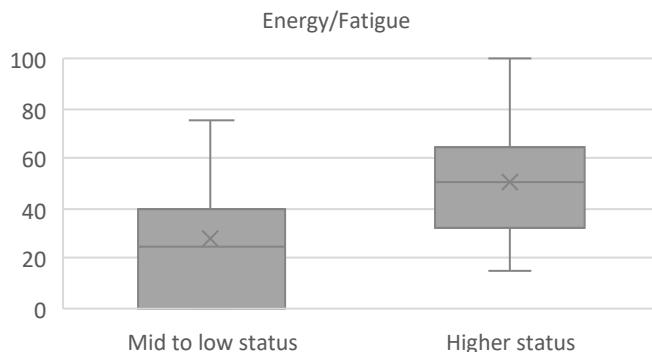


Figure 2.43: Boxplot of SF36 Energy/fatigue by socioeconomic status

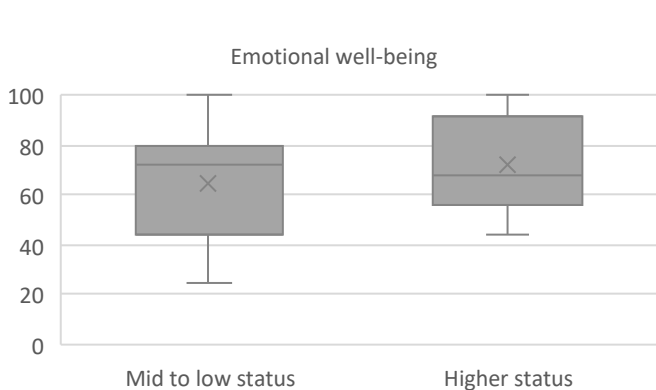


Figure 2.44: Boxplot of SF36 Emotional well-being by socioeconomic status

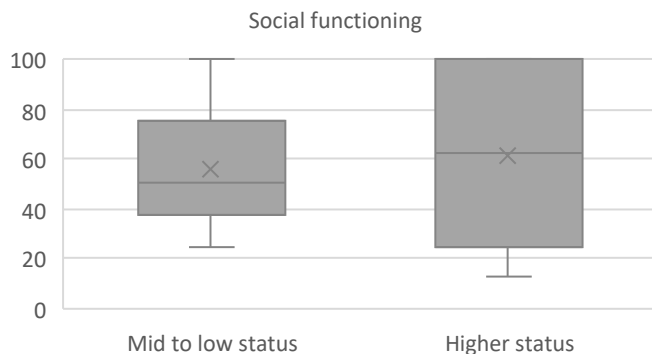


Figure 2.45: Boxplot of SF36 Social functioning by socioeconomic status

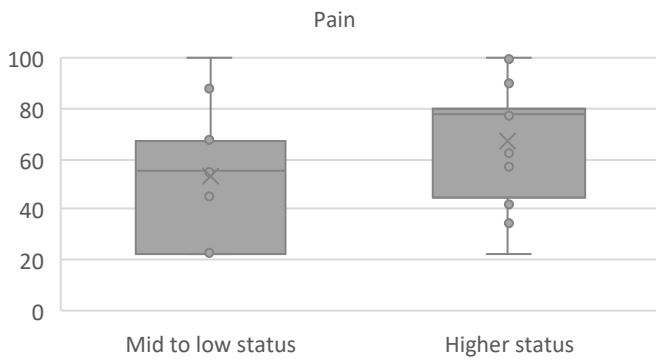


Figure 2.46: Boxplot of SF36 Pain by socioeconomic status

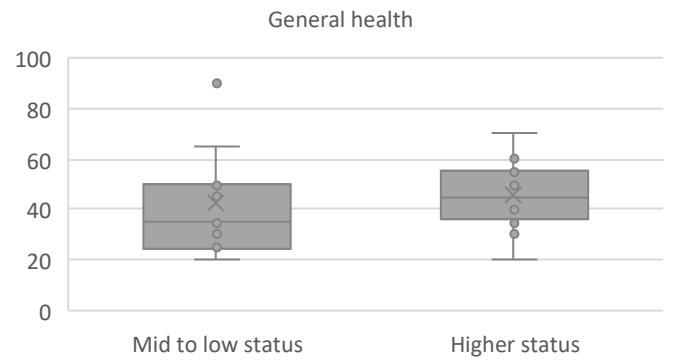


Figure 2.47: Boxplot of SF36 General health by socioeconomic status

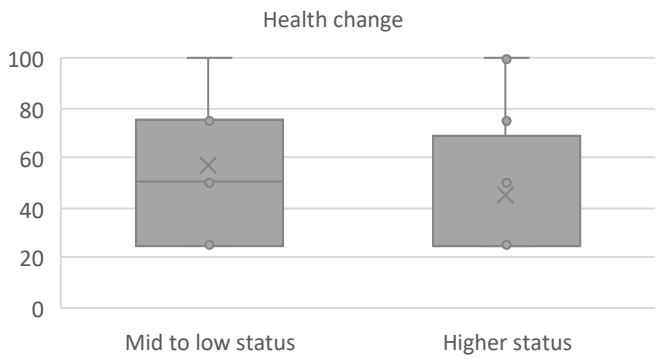


Figure 2.48: Boxplot of SF36 Health change by socioeconomic status