

## Section 2

### Demographics

## Section 2 Summary: Demographics

### Participants

- In this PEEK study, 28 participants with amyloidosis, and 8 carers to people with amyloidosis were recruited, 14 females (38.89%) and 22 males (61.11%), aged mostly between 55 and 74 (n=27, 75.00%), and most participants identified as Caucasian or white (n=33, 91.67%).
- Participants were most frequently from Queensland (n=14, 38.89%), New South Wales (n=11, 30.56%), and Western Australia (n=6, 16.67%). Most participants were from major cities (n=27, 75.00%) and they lived in all levels of advantage, defined by Socio-economic Indexes for Areas (SEIFA) with 25 participants (69.44%) from an area with a high SEIFA score of 7 to 10 (more advantage), and 11 participants (30.56%) from an area of mid to low SEIFA scores of 1 to 6 (less advantaged).

### 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, where a higher score denotes better health or function.
- The **“SF36 Role functioning/emotional”** scale measures how emotional problems interfere with work or other activities. On average, any emotional problems of the participants in this study slightly interfered with work or other activities. The **“SF36 Emotional well-being”** scale measures how a person feels, for example happy, calm, depressed or anxious. On average, the participants in this study participants felt happy and calm most of the time, and anxious and depressed a little of the time.
- The **“SF36 Physical functioning”** measures health limitations in physical activities such as walking, bending, climbing stairs, exercise, and housework. On average, physical activities for participants in this study moderately limited. The **“SF36 Role functioning/physical”** scale measures how physical health interferes with work or other activities. On average, physical health of the participants in this study interfered quite a bit with work or other activities.
- The **“SF36 Social functioning”** scale measures the limitations on social activities due to physical or emotional problems. On average for the participants in this study, social activities were slightly limited.
- The **“SF36 Role Energy/Fatigue”** scale measures the amount of energy or fatigue. On average the participants in this study had moderate energy/fatigue, that is, felt tired some of the time and had energy some of the time.
- The **“SF36 Pain”** scale measures the amount of pain, and how pain interferes with work and other activities. On average, the participants in this study had moderate pain.

## Demographics

In this PEEK study, 28 participants with amyloidosis, and 8 carers to people with amyloidosis were recruited (Table 2.1). There were 14 females (38.89%) and 22 males (61.11%), aged mostly between 55 and 74 (n=27, 75.00%), and most participants identified as Caucasian/white (n=33, 91.67%). One participant with ATTR-CM, one participant with AL amyloidosis (cardiac) and three carers were unwell or unable to complete a full telephone interview.

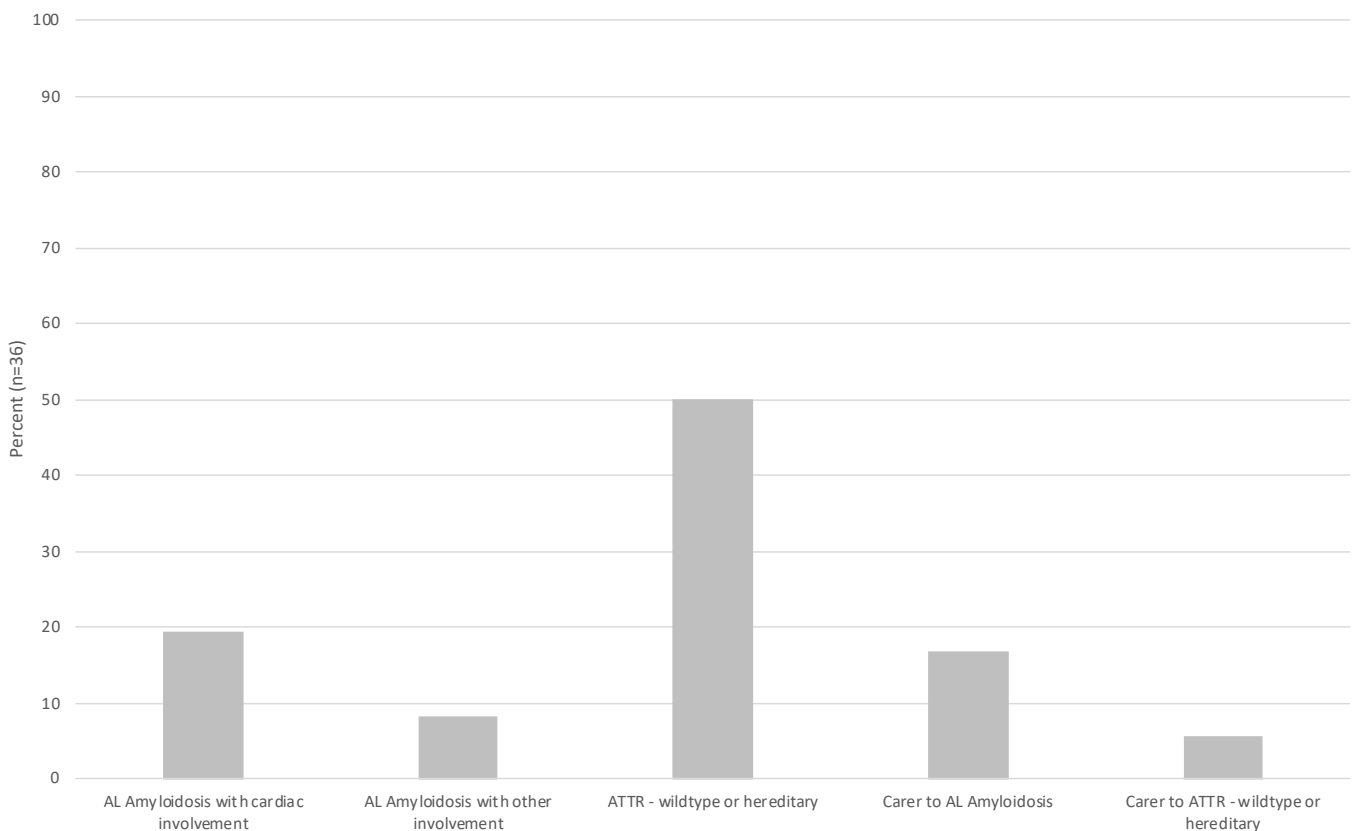
Participants were most frequently from Queensland (n=14, 38.89%), New South Wales (n=11, 30.56%), and Western Australia (n=6, 16.67%). Most

participants were from metropolitan areas (n=27, 75.00%) and they lived in all levels of advantage, defined by Socio-economic Indexes for Areas (SEIFA) ([www.abs.gov.au](http://www.abs.gov.au)), with 25 participants (69.44%) from an area with a high SEIFA score of 7 to 10 (more advantage), and 11 participants (30.56%) from an area of mid to low SEIFA scores of 1 to 6 (less advantaged).

Of the participants with amyloidosis (n=28), half had completed some university (n=14, 50.00%), and most were retired (n=17, 60.71%). The eight carers in the study cared for spouses (n=7, 87.50%), and grandchildren (n=1, 12.50%). The demographics of participants are listed in Table 2.2.

**Table 2.1: Participants and diagnosis**

Participants and diagnosis	Number (n=36)	Percent
AL Amyloidosis with cardiac involvement	7	19.44
AL Amyloidosis with other involvement	3	8.33
ATTR - wildtype or hereditary	18	50.00
Carer to AL Amyloidosis	6	16.67
Carer to ATTR - wildtype or hereditary	2	5.56



**Figure 2.1: Participants and diagnosis**

**Table 2.2: Demographics**

Demographic	Definition	Number (n=36)	Percent
Gender	Female	14	38.89
	Male	22	61.11
Age	25 to 34	1	2.78
	55 to 64	8	22.22
	65 to 74	19	52.78
	75 and older	8	22.22
Location	Metropolitan	27	75.00
	Inner regional	8	22.22
	Outer regional	1	2.78
State	Queensland	14	38.89
	New South Wales	11	30.56
	Western Australia	6	16.67
	Victoria	3	8.33
	South Australia	2	5.56
Socio-Economic Indexes for Areas (SEIFA)	1	0	0.00
	2	2	5.56
	3	2	5.56
	4	1	2.78
	5	3	8.33
	6	3	8.33
	7	1	2.78
	8	11	30.56
	9	2	5.56
	10	11	30.56
Race/ethnicity	Caucasian/white	33	91.67
	Other	3	8.33
Education (n=28)	High school degree or equivalent	5	17.86
	Some college but no degree	3	10.71
	Trade	6	21.43
	Associate degree	1	3.57
	Bachelor degree	5	17.86
	Graduate degree	8	28.57
Employment	Retired	17	60.71
	Employed, working part time	5	17.86
	Disabled, not able to work	2	7.14
	Disabled, not able to work, Retired	1	3.57
	Employed, working full time	1	3.57
	Employed, working part time, Full/part time study	1	3.57
	Not employed, looking for work	1	3.57
Carer status	Grandchildren	2	5.56
	Spouse	7	19.44
	I am not a carer	27	75.00

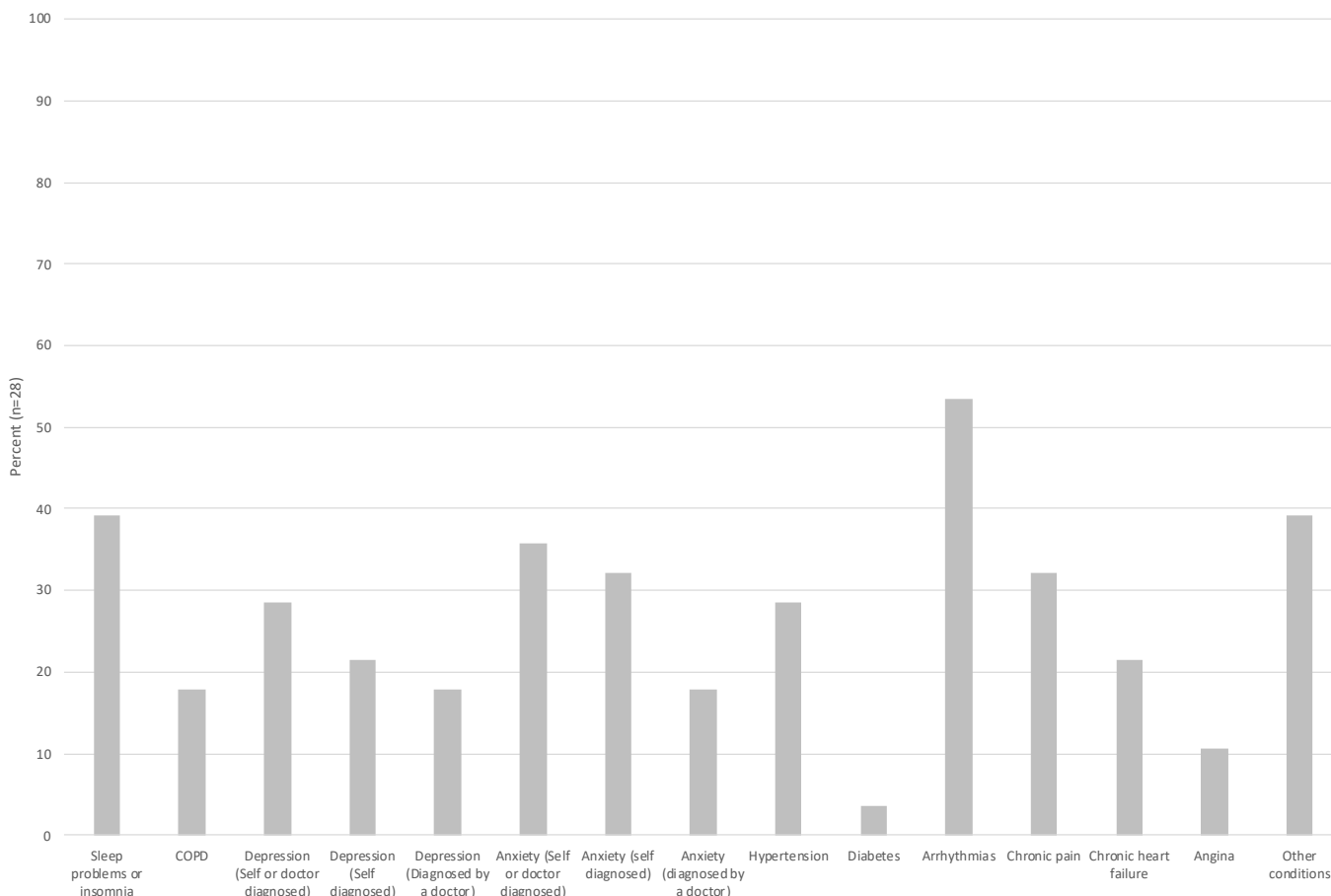
### Other health conditions

Participants with amyloidosis noted between zero and 11 other health conditions that they had to manage, with a median of three (Table 2.4). In the online questionnaire, participants selected the conditions that they had from a list (Table 2.3), and they had the option to specify other conditions (Table 2.5). The most commonly reported conditions were arrhythmias (n=15, 53.57%), sleep problems or insomnia (n=11, 39.29%), and anxiety (self or doctor diagnosed) (n=10, 35.71%).

Participants listed other conditions they had. These were coded according to the International Classification of Diseases 11th Revision and grouped according the ancestor chapter. The most common were diseases of the musculoskeletal system or connective tissue (n=4, 14.29%), followed by diseases of the circulatory system (n=3, 10.71) (Table 2.5).

**Table 2.3: Other health conditions**

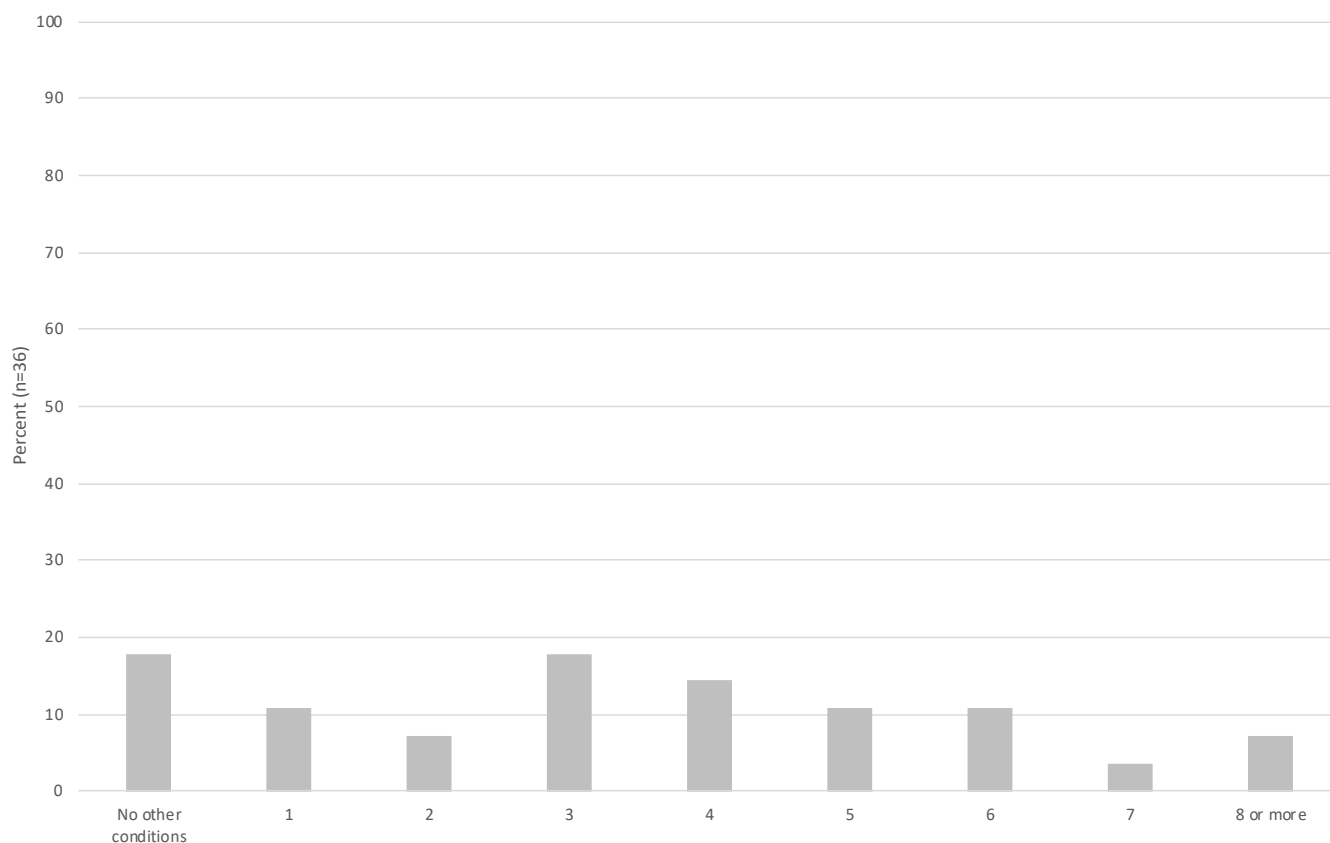
Other conditions	Number (n=36)	Percent
Sleep problems or insomnia	11	39.29
COPD	5	17.86
Depression (Self or doctor diagnosed)	8	28.57
Depression (Self diagnosed)	6	21.43
Depression (Diagnosed by a doctor)	5	17.86
Anxiety (Self or doctor diagnosed)	10	35.71
Anxiety (self diagnosed)	9	32.14
Anxiety (diagnosed by a doctor)	5	17.86
Hypertension	8	28.57
Diabetes	1	3.57
Arrhythmias	15	53.57
Chronic pain	9	32.14
Chronic heart failure	6	21.43
Angina	3	10.71
Other conditions	11	39.29



**Figure 2.2: Other health conditions**

**Table 2.4: Number of other health conditions**

Number of other conditions	Number (n=36)	Percent
No other conditions	5	17.86
1	3	10.71
2	2	7.14
3	5	17.86
4	4	14.29
5	3	10.71
6	3	10.71
7	1	3.57
8 or more	2	7.14



**Figure 2.3: Number of other health conditions**

**Table 2.5: Participant specified other conditions**

Type of other conditions	Number (n=36)	Percent
Diseases of the musculoskeletal system or connective tissue	4	14.29
Diseases of the circulatory system	3	10.71
Diseases of the genitourinary system	2	7.14
Diseases of the nervous system	2	7.14
Conditions related to sexual health	1	3.57
Diseases of the respiratory system	1	3.57
Diseases of the visual system	1	3.57
Endocrine, nutritional or metabolic diseases	1	3.57
Neoplasms	1	3.57

### Subgroup analysis

Subgroup analysis are included throughout the study and the subgroups are listed in Table 2.6.

**Participant type** were grouped according to diagnosis; *ATTR-cardiac* group include participants diagnosed with hereditary or wild type ATTR (n=18, 50.00%). *All cardiac* includes all participants diagnosed with amyloidosis that have cardiac involvement, this group includes participants diagnosed with AL amyloidosis and ATTR (n=25, 64.44%). The *AL amyloidosis* subgroup includes all participants diagnosed with AL amyloidosis, including any organ involvement (n=10, 27.78%). The final participant type are *Carers* to people with any type of amyloidosis (n=8, 22.22%).

Comparisons were made by **gender**, between *Males* (n=22, 61.11) and *Females* (n=14, 38.89%). The **Location** of participants was evaluated by postcode

using the Australian Statistical Geography Maps (ASGS) Remoteness areas accessed from the Australian Bureau of Statistics. Those living in a major city, *Metropolitan* (n=27, 75.00%) were compared to those living in regional/rural areas, *Regional or remote* (n=9, 25.00%).

Participants were grouped according to **age**, with comparisons made between participants *Aged 55 to 64* (n=8, 22.86%), *Aged 65 to 74* (n=19, 54.29%), and *Aged 75 or older* (n=8, 22.86%). One participant was aged in the 25 to 34 year-old age bracket and was excluded from age comparisons.

Education status was collected only for participants diagnosed with amyloidosis (n=28). Comparisons were made by **education** status, between those with a university qualification, *University* (n= 14, 50.00%), and those with trade or high school qualifications, *Trade or high school* (n=14, 50.00%).

Comparisons were made by Socio-economic Indexes for Areas (**SEIFA**) ([www.abs.gov.au](http://www.abs.gov.au)). SEIFA scores range from one to 10, a higher score denotes a higher level of advantage. Participants with a higher

SEIFA score of seven to 10, *Higher SEIFA* (n=25, 69.44%) compared to those with a mid to low SEIFA score of one to six, *Mid to low SEIFA* (n=11, 30.56%).

**Table 2.6: Subgroups**

Subgroup	Definition	Number (n=36)	Percent
Participant type	ATTR-Cardiac	18	50.00
	All cardiac	25	69.44
	AL amyloidosis	10	27.78
Gender	Carer	8	22.22
	Male	22	61.11
Location	Female	14	38.89
	Regional or remote	9	25.00
Age	Metropolitan	27	75.00
	Aged 55 to 64	8	22.86
	Aged 65 to 74	19	54.29
Education	Aged 75 or older	8	22.86
	Trade or high school	14	50.00
Socio-Economic Indexes for Areas (SEIFA)	University	14	50.00
	Mid to low SEIFA	11	30.56
	Higher SEIFA	25	69.44

### 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 2.7. 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 second highest quintile for **“SF36 Role functioning/emotional”** (Median = 66.67, IQR = 66.67), **“SF36 Emotional well-being”** (Median = 76.00, IQR = 20.00), and **“SF36 Social functioning”** (Median = 62.50, IQR = 40.63) indicating good emotional role functioning, emotional well-being, and social functioning.

The overall scores for the cohort were in the middle of the scale for **“SF36 Physical functioning”** (Median = 52.50, IQR = 57.50), **“SF36 Energy/Fatigue”** (Mean = 43.33, SD = 25.41), **“SF36 Pain”** (Mean = 59.58, SD = 24.39), and **“SF36 General health”** (Mean = 46.81, SD = 22.46) indicating moderate scores.

The overall scores for the cohort were in the second lowest quintile for **“SF36 Role functioning/physical”** (Median=25.00, IQR =100.00), and **“SF36 Health change”** (Median=37.50, IQR =25.00) indicating poor physical functioning role, and worse health compared to a year ago.

Comparisons of SF36 have been made based on **Participant type** (Figures 2.4 to 2.12, Tables 2.8 to 2.11), **Gender** (Figures 2.13 to 2.21, Tables 2.12 to 2.13), **Age** (Figures 2.22 to 2.30, Tables 2.14 to 2.15), **Education**, (Figures 2.31 to 2.39, Tables 2.16 to 2.17), **Location** (Figures 2.40 to 2.48, Tables 2.18 to 2.19), and **SEIFA** (Figures 2.49 to 2.57, Tables 2.20 to 2.21).

**Table 2.7: SF36 summary statistics**

SF36 scale (n=36)	Mean	SD	Median	IQR	Possible range	Quintile
Physical functioning	53.47	31.82	52.50	57.50	0 to 100	3
Role functioning/physical	37.50	43.30	25.00	100.00	0 to 100	2
Role functioning/emotional	62.04	41.52	66.67	66.67	0 to 100	4
Energy/Fatigue*	43.33	25.41	45.00	35.00	0 to 100	3
Emotional well-being	72.44	17.44	76.00	20.00	0 to 100	4
Social functioning	60.76	28.99	62.50	40.63	0 to 100	4
Pain*	59.58	24.39	55.00	32.50	0 to 100	3
General health*	46.81	22.46	45.00	41.25	0 to 100	3
Health change	40.28	24.11	37.50	25.00	0 to 100	2

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

### Comparisons of SF36 scales by participant type

**Participant type** groups participants according to diagnosis. The *ATTR-cardiac* group includes participants diagnosed with hereditary or wild type ATTR (n=18, 50.00%). *All cardiac* includes all participants diagnosed with amyloidosis that have cardiac involvement, this group includes participants diagnosed with AL amyloidosis and ATTR (n=25, 64.44%). The *AL amyloidosis* group includes all participants diagnosed with AL amyloidosis, including any organ involvement (n=10, 27.78%). The final participant type are *Carers* to people with any type of amyloidosis (n=8, 22.22%).

Boxplots of each SF36 scale by participant type are displayed in Figures 2.4 to 2.12. Summary statistics are displayed in Tables 2.8 and 2.10.

A one-way ANOVA test was used when the assumptions for response variable residuals were normally distributed and variances of populations were equal (Table 2.8). A Tukey HSD test was used post hoc to identify the source of any differences identified in the one-way ANOVA test (Table 2.9).

When the assumptions for normality of residuals was not met, a Kruskal-Wallis test was used (Table 2.10). Post hoc pairwise comparisons using Wilcoxon rank sum test was used to identify the source of any differences identified in the Kruskal-Wallis test (Table 2.11).

A one way ANOVA test indicated a statistically significant difference in the **“SF36 General health”** scale between groups,  $F(3, 57) = 4.84, p = 0.0046$  (Table 2.8). Post hoc comparisons using the Tukey HSD test indicated that the mean score for participants in the *Carer* subgroup (Mean = 66.88, SD = 14.62) was significantly higher compared to participants in the *ATTR-cardiac* subgroup (Mean =

36.11, SD = 18.52,  $p = 0.0043$ ); and participants in the *Carer* subgroup (Mean = 66.88, SD = 14.62) was significantly higher compared to participants in the *AL amyloidosis* subgroup (Mean = 50.00, SD = 23.45,  $p = 0.0106$ ).

A Kruskal-Wallis test indicated a statistically significant difference in the **“SF36 Role functioning/physical”** scale between groups ( $\chi^2(3) = 15.03, p = 0.0018$ ). Wilcoxon rank sum tests between groups indicated that participants in the *Carer* subgroup (Median = 100.00, IQR = 31.25), scored significantly higher than participants in the *ATTR-cardiac* subgroup (Median = 0.00, IQR = 18.75,  $p = 0.0054$ ); and participants in the *Carer* subgroup (Median = 100.00, IQR = 31.25), scored significantly higher than participants with participants in the *All cardiac* subgroup (Median = 0.00, IQR = 25.00,  $p = 0.007$ ).

**“SF36 Role functioning/physical”** measures how physical health interferes with work or other activities. On average, participants in the *Carer* subgroup scored higher than participants in the *ATTR-cardiac* and *All cardiac* subgroups. This indicates that physical health did not at all interfere with work or other activities for participants in the *Carer* subgroup, compared to extremely interfered with work or other activities for participants in the *ATTR-cardiac* and *All cardiac* subgroups.

The **“SF36 General health”** measures perception of health. On average, participants in the *Carer* subgroup scored higher than participants in the *ATTR-cardiac* and *AL amyloidosis* subgroups. This indicates that participants in the *Carer* subgroup reported good health, compared to participants in the *ATTR-cardiac* subgroup who reported poor general health, and participants in the *AL amyloidosis* subgroup who reported moderate general health.



**Table 2.8: SF36 by participant type ANOVA test and summary statistics**

SF36 Scale	Group	Number (n=36)	Percent	Mean	SD	Source of difference	Sum of squares	dF	Mean Square	f	p-value
Energy/Fatigue	ATTR-cardiac	18	50.00	37.22	26.25	Between groups	2063.00	3	687.70	1.02	0.3890
	All-cardiac	25	69.44	37.80	26.85	Within groups	38293.00	57	671.80		
	AL amyloidosis	10	27.78	46.00	28.07	Total	40356.00	60			
	Carer	8	22.22	53.75	17.68						
Pain	ATTR-cardiac	18	50.00	50.42	22.23	Between groups	3588.00	3	1196.10	2.29	0.0878
	All-cardiac	25	69.44	53.60	22.35	Within groups	29747.00	57	521.90		
	AL amyloidosis	10	27.78	70.00	23.00	Total	33335.00	60			
	Carer	8	22.22	67.19	25.62						
General health	ATTR-cardiac	18	50.00	36.11	18.52	Between groups	6066.00	3	2022.00	4.84	0.0046*
	All-cardiac	25	69.44	40.00	21.94	Within groups	23825.00	57	418.00		
	AL amyloidosis	10	27.78	50.00	23.45	Total	29891.00	60			
	Carer	8	22.22	66.88	14.62						

\*Statistically significant at p<0.05

**Table 2.9: SF36 by participant type post hoc Tukey HSD test**

SF36 General health	Subgroup	Difference	Upper	Lower	p adjusted
General health	All-cardiac -ATTR-cardiac	3.89	-12.84	20.61	0.9268
	AL amyloidosis - ATTR-cardiac	13.89	-7.45	35.23	0.3217
	Carer - ATTR-cardiac	30.76	7.77	53.75	0.0043*
	AL amyloidosis - All-cardiac	10.00	-10.24	30.24	0.5622
	Carer - All-cardiac	26.88	4.90	48.85	0.0106*
	Carer - AL amyloidosis	16.88	-8.79	42.54	0.3129

\*Statistically significant at p<0.05

**Table 2.10: SF36 by participant type Kruskal-Wallis test and summary statistics**

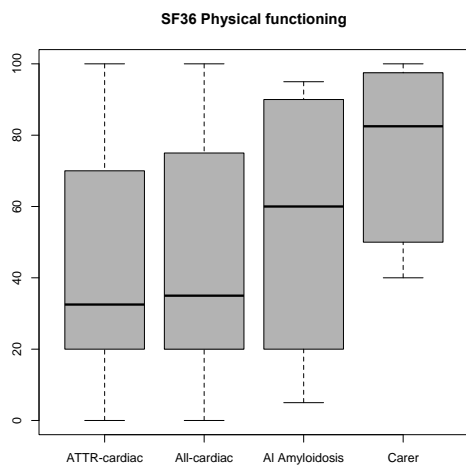
SF36 Scale	Group	Number (n=36)	Percent	Median	IQR	C <sup>2</sup>	dF	p-value
Physical functioning	ATTR-cardiac	18	50.00	32.50	47.50	7.17	3	0.0667
	All-cardiac	25	69.44	35.00	55.00			
	AL amyloidosis	10	27.78	60.00	58.75			
	Carer	8	22.22	82.50	43.75			
Role functioning/physical	ATTR-cardiac	18	50.00	0.00	18.75	15.03	3	0.0018*
	All-cardiac	25	69.44	0.00	25.00			
	AL amyloidosis	10	27.78	25.00	93.75			
	Carer	8	22.22	100.00	31.25			
Role functioning/emotional	ATTR-cardiac	18	50.00	66.67	100.00	0.66	3	0.8829
	All-cardiac	25	69.44	100.00	100.00			
	AL amyloidosis	10	27.78	100.00	58.33			
	Carer	8	22.22	66.67	16.67			
Emotional well-being	ATTR-cardiac	18	50.00	72.00	15.00	5.51	3	0.1380
	All-cardiac	25	69.44	72.00	16.00			
	AL amyloidosis	10	27.78	82.00	12.00			
	Carer	8	22.22	76.00	12.00			
Social functioning	ATTR-cardiac	18	50.00	62.50	46.88	4.11	3	0.2494
	All-cardiac	25	69.44	62.50	37.50			
	AL amyloidosis	10	27.78	75.00	50.00			
	Carer	8	22.22	68.75	28.13			
Health change	ATTR-cardiac	18	50.00	25.00	25.00	4.79	3	0.1881
	All-cardiac	25	69.44	25.00	25.00			
	AL amyloidosis	10	27.78	50.00	25.00			
	Carer	8	22.22	50.00	12.50			

\*Statistically significant at p<0.05

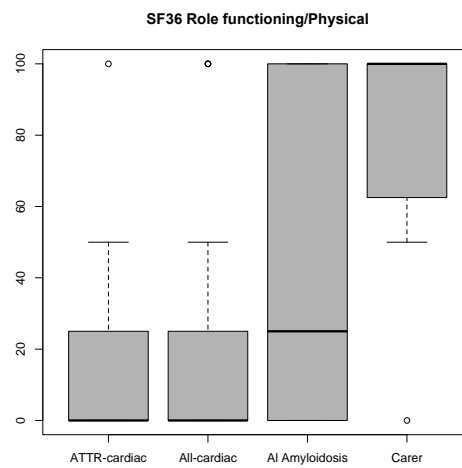
**Table 2.11: SF36 by participant type post hoc pairwise Wilcoxon rank sum test**

SF36 Scale	Subgroup	ATTR-cardiac	All-cardiac	AL amyloidosis
SF36 Role functioning/physical	All-cardiac	0.4415	-	-
	AL amyloidosis	0.0564	0.1259	-
	Carer	0.0054*	0.007*	0.2561

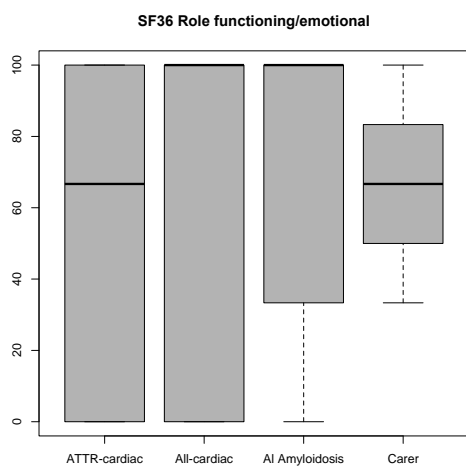
\*Statistically significant at p<0.05



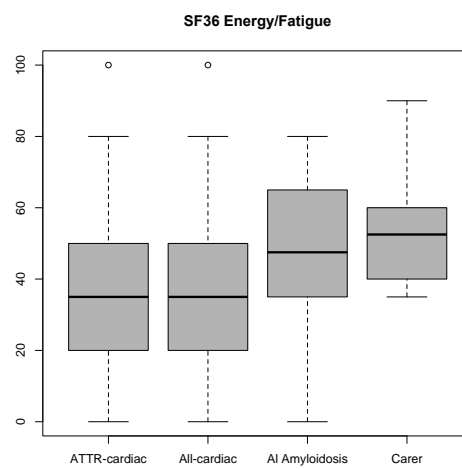
**Figure 2.4: Boxplot of SF36 Physical functioning by participant type**



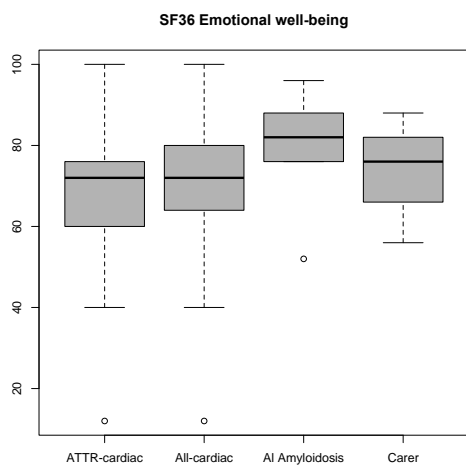
**Figure 2.5: Boxplot of SF36 Role functioning/physical by participant type**



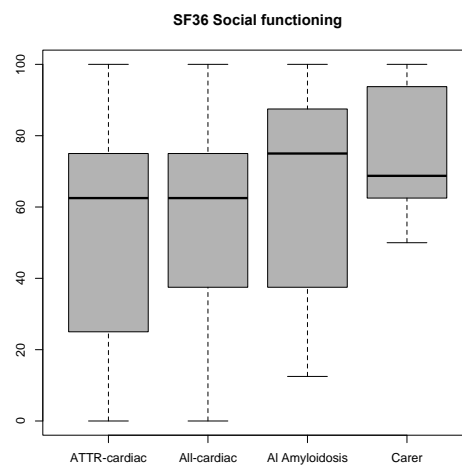
**Figure 2.6: Boxplot of SF36 Role functioning/emotional by participant type**



**Figure 2.7: Boxplot of SF36 Energy/fatigue by participant type**



**Figure 2.8: Boxplot of SF36 Emotional well-being by participant type**



**Figure 2.9: Boxplot of SF36 Social functioning by participant type**

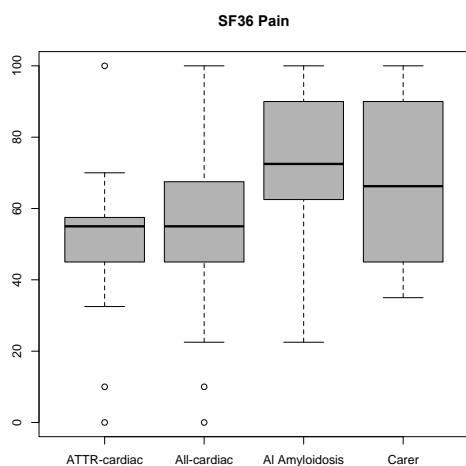


Figure 2.10: Boxplot of SF36 Pain by participant type

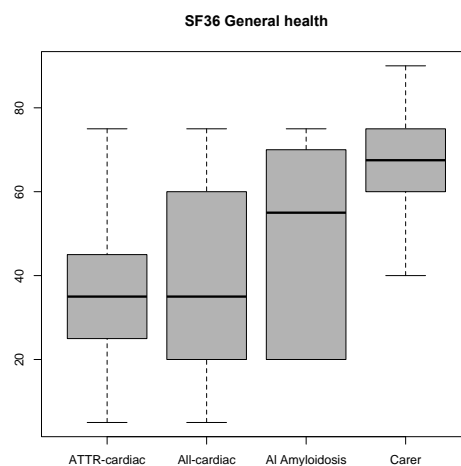


Figure 2.11: Boxplot of SF36 General health by participant type

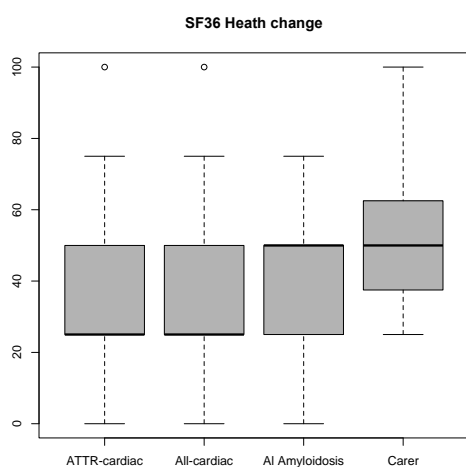


Figure 2.12: Boxplot of SF36 Health change by participant type

### Comparisons of SF36 scales by gender

Comparisons were made by **gender**, between *Males* (n=22, 61.11%) and *Females* (n=14, 38.89%).

Boxplots of each SF36 scale by **gender** are displayed in Figures 2.13 to 2.21, summary statistics are displayed in Tables 2.12 to 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).

A two sample t-test indicated that the mean score for the **“SF36 General health”** [t(34) = -2.63, p = 0.0128] was significantly higher for participants in the *Female* subgroup (Mean = 58.21, SD = 22.33) compared to participants in the subgroup *Male* (Mean = 39.55, SD = 19.75).

Wilcoxon rank sum tests with continuity correction indicated that the median score for the **“SF36 Physical functioning”** [W = 85.00, p = 0.0256] was significantly higher for participants in the *Female* subgroup (Median = 77.50, IQR = 46.25) compared to participants in the *Male* subgroup (Median = 40.00, SD = 40.00).

Wilcoxon rank sum tests with continuity correction indicated that the median score for the **“SF36 Role functioning/physical”** [W = 86.50, p = 0.0198] was significantly higher for participants in the *Female* subgroup (Median = 87.50, IQR = 93.75) compared to participants in the *Male* subgroup (Median = 0.00, SD = 25.00).

**“SF36 Physical functioning”** measures health limitations in physical activities such as walking, bending, climbing stairs, exercise, and housework. On average, *Female* participants scored higher than *Male* participants. This indicates that physical

activities were slightly limited for *Female* participants, compared to moderately limited for *Male* participants.

“SF36 Role functioning/physical” measures how physical health interferes with work or other activities. On average, *Female* participants scored higher than *Male* participants. This indicates that physical health did not at all interfere with work or other activities for *Female* participants, compared to

extremely interfered with work or other activities for *Male* participants.

The “SF36 General health” measures perception of health. On average, *Female* participants scored higher than *Male* participants. This indicates that *Female* participants reported moderate health, compared to *Male* participants who reported poor general health.

**Table 2.12: SF36 by gender summary statistics and two sample t-test**

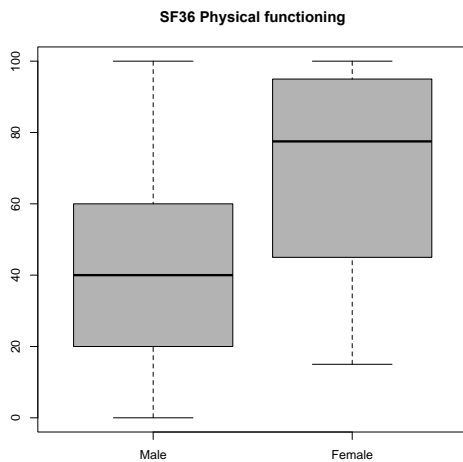
SF36 Scale	Group	Number (n=36)	Percent	Mean	SD	t	dF	p-value
Energy/Fatigue	Female	14	38.89	52.50	24.00	-1.78	34	0.0841
	Male	22	61.11	37.50	25.06			
Pain	Female	14	38.89	67.68	22.31	-1.63	34	0.1133
	Male	22	61.11	54.43	24.74			
General health	Female	14	38.89	58.21	22.33	-2.63	34	0.0128*
	Male	22	61.11	39.55	19.75			

\*Statistically significant at  $p < 0.05$

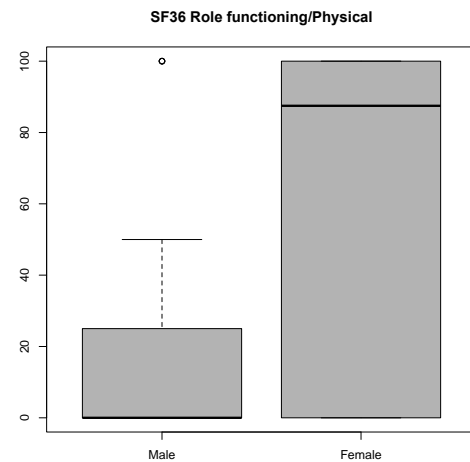
**Table 2.13: SF36 by gender summary statistics and Wilcoxon rank sum tests with continuity correction**

SF36 Scale	Group	Number (n=36)	Percent	Median	IQR	W	p-value
Physical functioning	Female	14	38.89	77.50	46.25	85.00	0.0256*
	Male	22	61.11	40.00	40.00		
Role functioning/physical	Female	14	38.89	87.50	93.75	86.50	0.0198*
	Male	22	61.11	0.00	25.00		
Role functioning/emotional	Female	14	38.89	66.67	58.33	145.00	0.7684
	Male	22	61.11	83.33	91.67		
Emotional well-being	Female	14	38.89	78.00	8.00	107.50	0.1331
	Male	22	61.11	72.00	18.00		
Social functioning	Female	14	38.89	62.50	46.88	111.00	0.1626
	Male	22	61.11	62.50	37.50		
Health change	Female	14	38.89	50.00	25.00	113.00	0.1612
	Male	22	61.11	25.00	25.00		

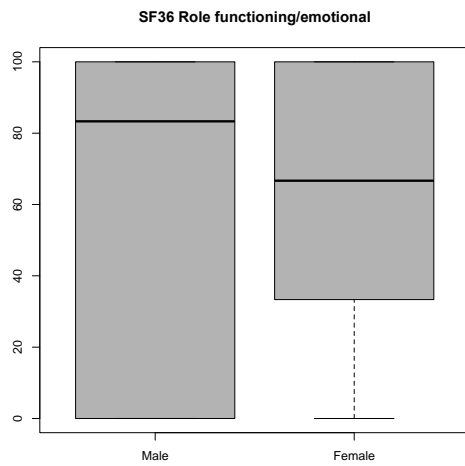
\*Statistically significant at  $p < 0.05$



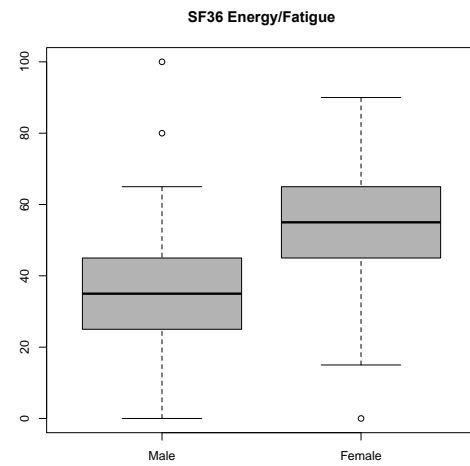
**Figure 2.13: Boxplot of SF36 Physical functioning by gender**



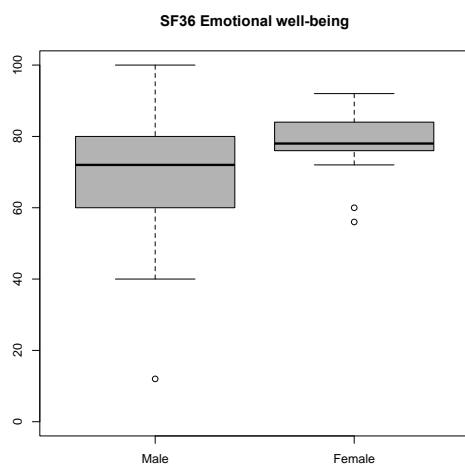
**Figure 2.14: Boxplot of SF36 Role functioning/physical by gender**



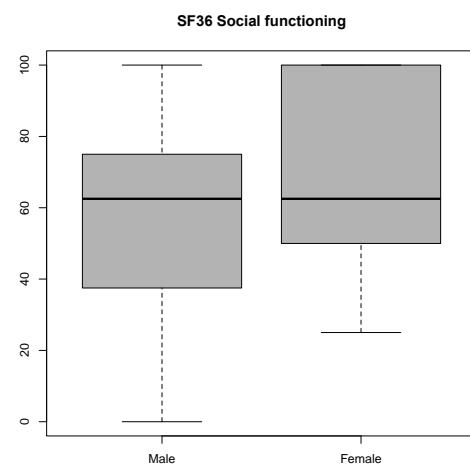
**Figure 2.15: Boxplot of SF36 Role functioning/emotional by gender**



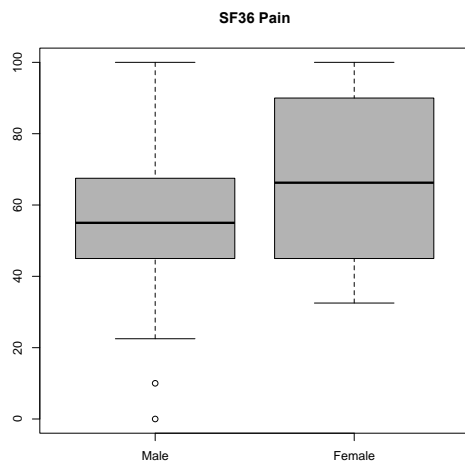
**Figure 2.16: Boxplot of SF36 Energy/fatigue by gender**



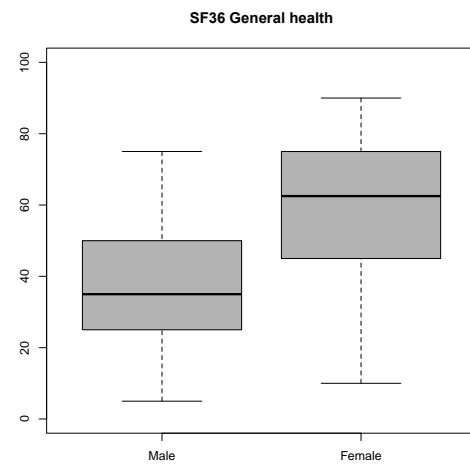
**Figure 2.17: Boxplot of SF36 Emotional well-being by gender**



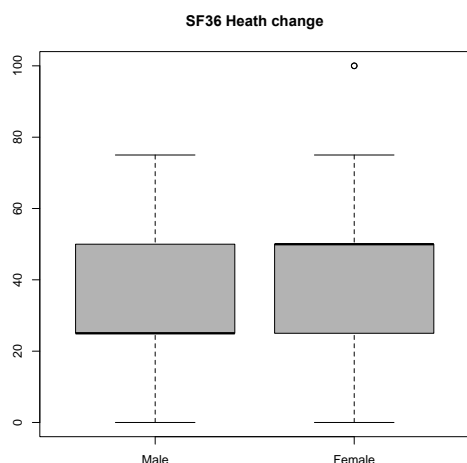
**Figure 2.18: Boxplot of SF36 Social functioning by gender**



**Figure 2.19: Boxplot of SF36 Pain by 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 55 to 64* (n=8, 22.86%), *Aged 65 to 74* (n=19, 54.29%), and *Aged 75 or older* (n=8, 22.86%). One participant was aged in the 25 to 34 year old age bracket and was excluded from age comparisons.

Boxplots of each SF36 scale by **age** are displayed in Figures 2.22 to 2.30. Summary statistics are displayed in Tables 2.14 and 2.15.

A one-way ANOVA test was used when the assumptions for response variable residuals were normally distributed and variances of populations were equal (Table 2.14).

When the assumptions for normality of residuals was not met, a Kruskal-Wallis test was used (Table 2.15).

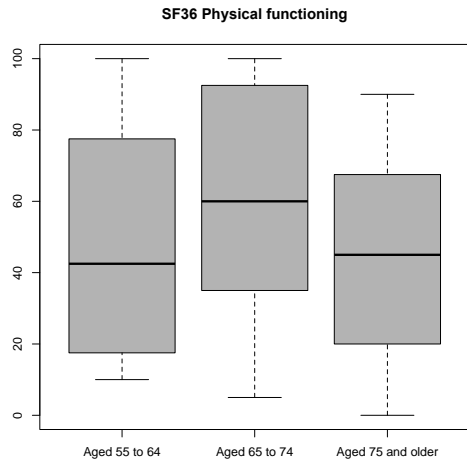
No significant differences were observed between participants in the subgroups *Aged 55 to 64*, *Aged 65 to 74*, and *Aged 75 or older* for any of the SF36 scales.

**Table 2.14: SF36 by age ANOVA test and summary statistics**

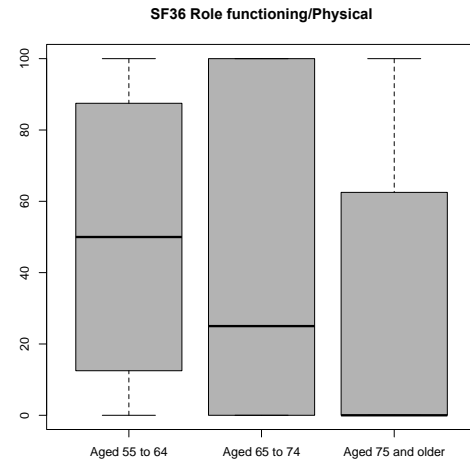
SF36 Scale	Group	Number (n=35)	Percent	Mean	SD	Source of difference	Sum of squares	dF	Mean Square	f	p-value
Physical functioning	Aged 55 to 64	8	22.86	48.13	33.69	Between groups	1827	2	913.30	0.88	0.4250
	Aged 65 to 74	19	54.29	60.53	32.01	Within groups	33263	32	1039.50		
	Aged 75 and older	8	22.86	44.38	31.33	Total	35090	34			
Energy/Fatigue*	Aged 55 to 64	8	22.86	38.13	31.05	Between groups	439	2	219.60	0.35	0.7090
	Aged 65 to 74	19	54.29	46.84	21.36	Within groups	20229	32	632.20		
	Aged 75 and older	8	22.86	45.63	27.44	Total					
Emotional well-being	Aged 55 to 64	8	22.86	65.50	26.87	Between groups	548	2	274.10	0.87	0.4290
	Aged 65 to 74	19	54.29	75.37	11.72	Within groups	10100	32	315.60		
	Aged 75 and older	8	22.86	72.50	19.18	Total					
Social functioning	Aged 55 to 64	8	22.86	48.44	28.69	Between groups	1696	2	847.80	0.98	0.3870
	Aged 65 to 74	19	54.29	65.79	29.71	Within groups	27724	32	866.40		
	Aged 75 and older	8	22.86	60.94	29.46	Total					
Pain	Aged 55 to 64	8	22.86	61.88	20.60	Between groups	112	2	55.80	0.09	0.9170
	Aged 65 to 74	19	54.29	60.53	24.90	Within groups	20488	32	640.30		
	Aged 75 and older	8	22.86	56.88	30.14	Total					
General health	Aged 55 to 64	8	22.86	39.38	22.11	Between groups	2655	2	1327.50	2.98	0.0651
	Aged 65 to 74	19	54.29	55.53	19.85	Within groups	14263	32	445.70		
	Aged 75 and older	8	22.86	36.88	23.14	Total					
Health change	Aged 55 to 64	8	22.86	37.50	23.15	Between groups	1341	2	670.30	1.14	0.3320
	Aged 65 to 74	19	54.29	46.05	26.70	Within groups	18766	32	586.50		
	Aged 75 and older	8	22.86	31.25	17.68	Total					

**Table 2.15: SF36 by age Kruskal-Wallis test**

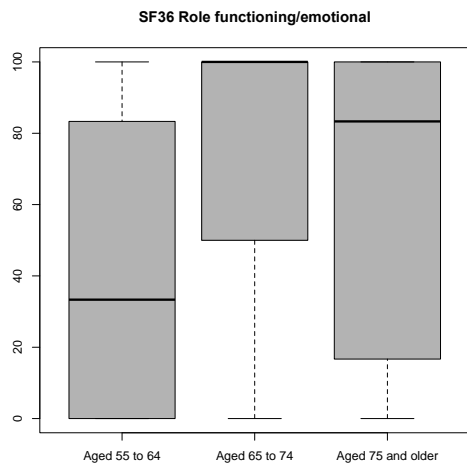
SF36 Scale	Group	Number (n=35)	Percent	Median	IQR	C <sup>2</sup>	dF	p-value
Role functioning/physical	Aged 55 to 64	8	22.86	50.00	62.50	1.41	2	0.4939
	Aged 65 to 74	19	54.29	25.00	100.00			
	Aged 75 and older	8	22.86	0.00	43.75			
Role functioning/emotional	Aged 55 to 64	8	22.86	33.33	75.00	2.89	2	0.2360
	Aged 65 to 74	19	54.29	100.00	50.00			
	Aged 75 and older	8	22.86	83.33	75.00			



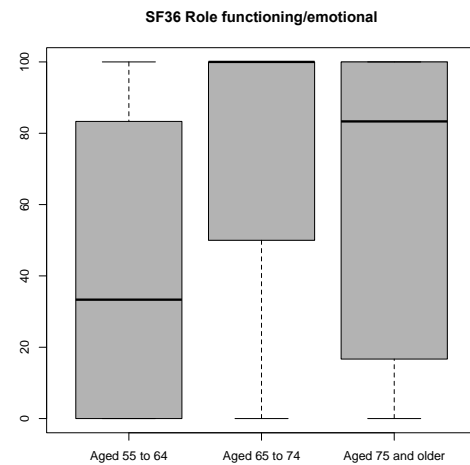
**Figure 2.22: Boxplot of SF36 Physical functioning by age**



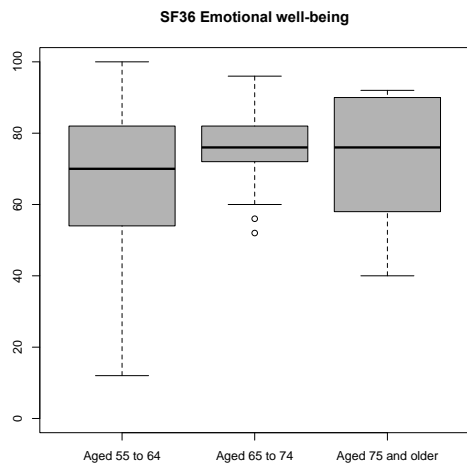
**Figure 2.23: Boxplot of SF36 Role functioning/physical by age**



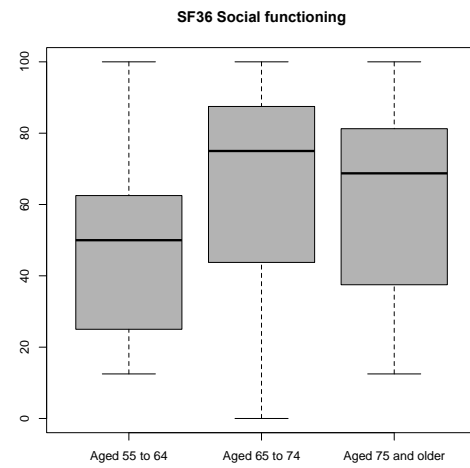
**Figure 2.24: Boxplot of SF36 Role functioning/emotional by age**



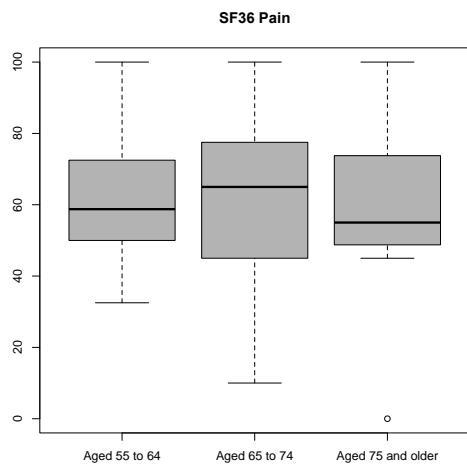
**Figure 2.25: Boxplot of SF36 Energy/fatigue by age**



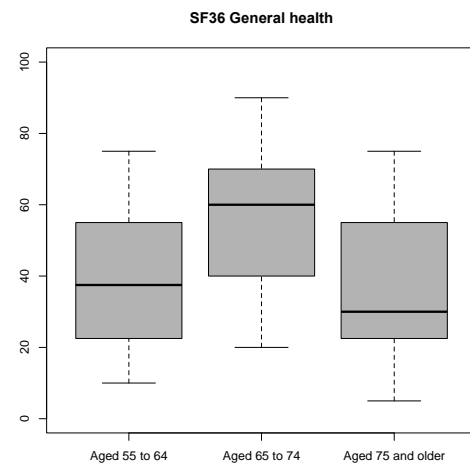
**Figure 2.26: Boxplot of SF36 Emotional well-being by age**



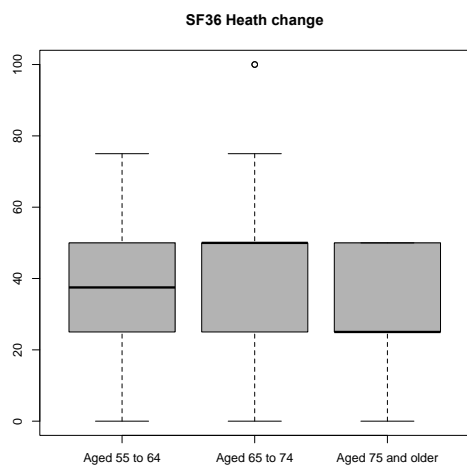
**Figure 2.27: Boxplot of SF36 Social functioning by age**



**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

Education status was collected only for participants diagnosed with amyloidosis (n=28).

Comparisons were made by **education** status, between those with a university qualification, *University* (n= 14, 50.00%), and those with trade or high school qualifications, *Trade or high school* (n=14, 50.00%).

Boxplots of each SF36 scale by **education** are displayed in Figures 2.31 to 2.39, summary statistics

are displayed in Tables 2.16 to 2.17. A two-sample t-test was used when assumptions for normality and variance were met (Table 2.16), or when assumptions for normality and variance were not met, a Wilcoxon rank sum test with continuity correction was used (Table 2.17).

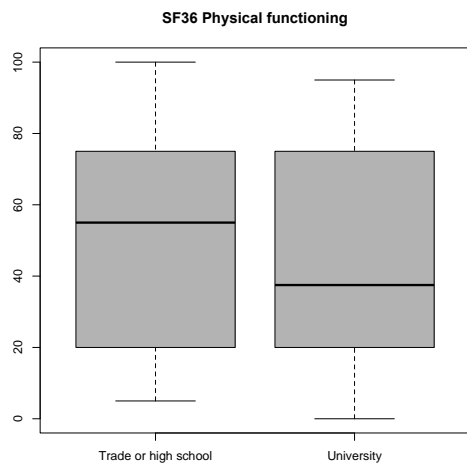
No significant differences were observed between participants in the *Trade or high school* subgroup compared to those in the *University* subgroup for any of the SF36 scales.

**Table 2.16: SF36 by education summary statistics and two sample t-test**

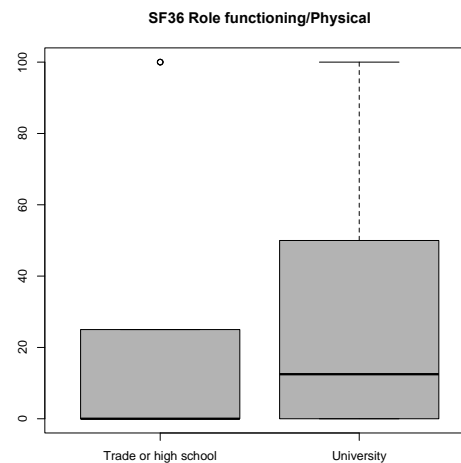
SF36 Scale	Group	Number (n=28)	Percent	Mean	SD	t	dF	p-value
Physical functioning	Trade or high school	14	50.00	48.21	30.86	0.15	26	0.8832
	University	14	50.00	46.43	32.78			
Energy/Fatigue*	Trade or high school	14	50.00	44.29	28.00	0.77	26	0.4472
	University	14	50.00	36.43	25.83			
Social functioning	Trade or high school	14	50.00	58.93	33.77	0.38	26	0.7047
	University	14	50.00	54.46	27.56			
Pain	Trade or high school	14	50.00	61.25	25.94	0.84	26	0.4087
	University	14	50.00	53.57	22.31			
General health	Trade or high school	14	50.00	45.71	18.90	1.17	26	0.2516
	University	14	50.00	36.43	22.82			

**Table 2.17: SF36 by education summary statistics and Wilcoxon rank sum tests with continuity correction**

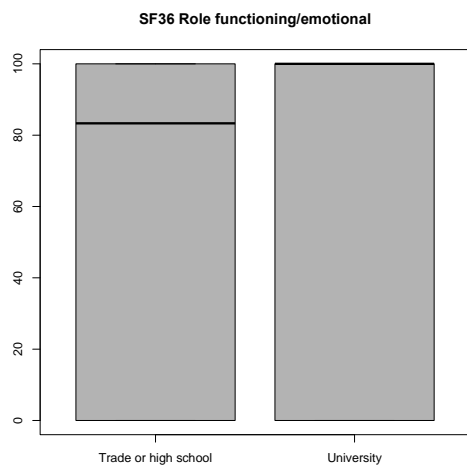
SF36 Scale	Group	Number (n=28)	Percent	Median	IQR	W	p-value
Role functioning/physical	Trade or high school	14	50.00	0.00	25.00	87.50	0.6081
	University	14	50.00	12.50	43.75		
Role functioning/emotional	Trade or high school	14	50.00	83.33	91.67	94.00	0.8591
	University	14	50.00	100.00	91.67		
Emotional well-being	Trade or high school	14	50.00	74.00	27.00	103.50	0.8173
	University	14	50.00	76.00	14.00		
Health change	Trade or high school	14	50.00	37.50	25.00	111.00	0.5372
	University	14	50.00	25.00	25.00		



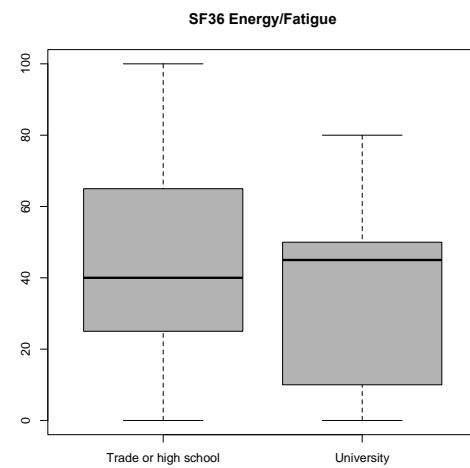
**Figure 2.31: Boxplot of SF36 Physical functioning by education**



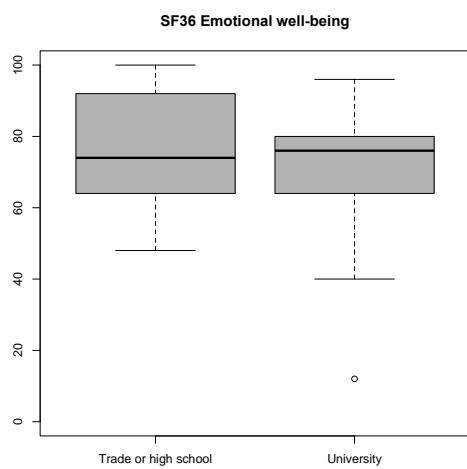
**Figure 2.32: Boxplot of SF36 Role functioning/physical by education**



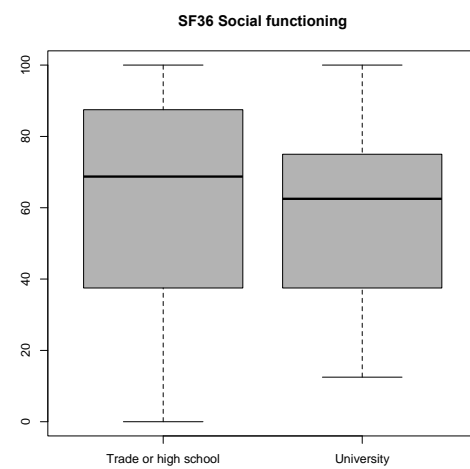
**Figure 2.33: Boxplot of SF36 Role functioning/emotional by education**



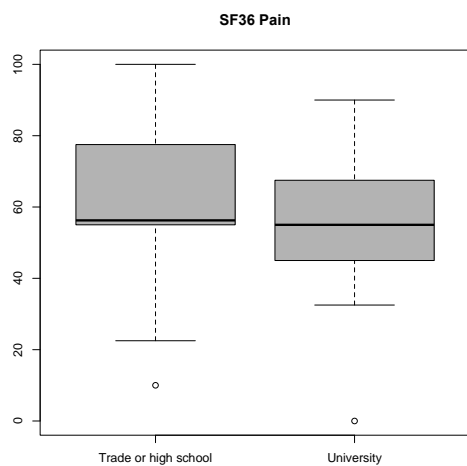
**Figure 2.34: Boxplot of SF36 Energy/fatigue by education**



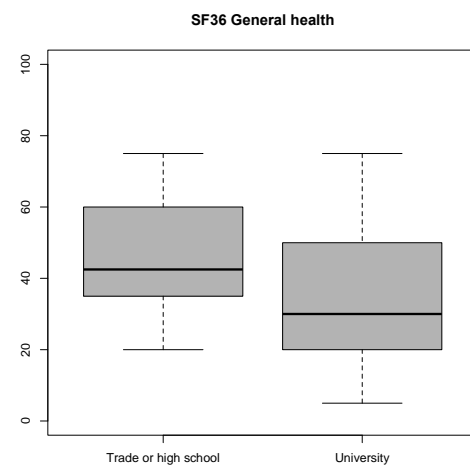
**Figure 2.35: Boxplot of SF36 Emotional well-being by education**



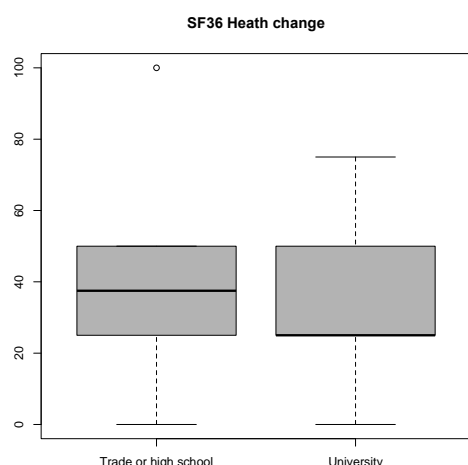
**Figure 2.36: Boxplot of SF36 Social functioning by education**



**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. Those living in a major city, *Metropolitan* (n=27, 75.00%) were compared to those living in regional and rural areas, *Regional or remote* (n=9, 25.00%).

Boxplots of each SF36 scale by **location** are displayed in Figures 2.40 to 2.48. Summary statistics are displayed in Tables 2.18 to 2.19.

A two-sample t-test was used when assumptions for normality and variance were met (Table 2.18), or when assumptions for normality and variance were not met, a Wilcoxon rank sum test with continuity correction was used (Table 2.19).

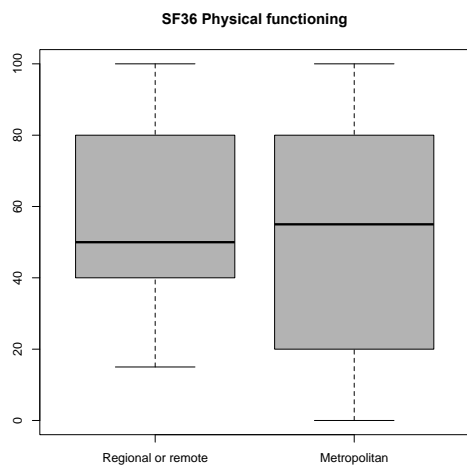
No significant differences were observed between participants in the *Metropolitan* subgroup compared to those in the *Regional or remote* subgroup for any of the SF36 scales.

**Table 2.18: SF36 by location summary statistics and two sample t-test**

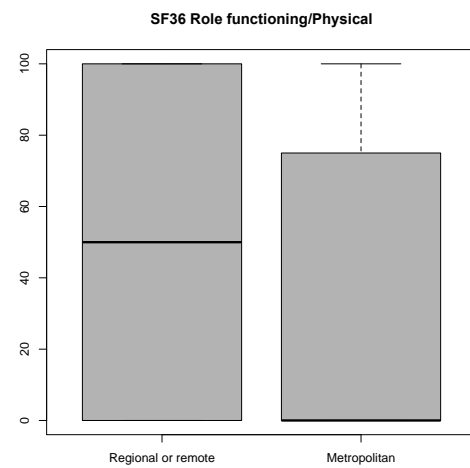
SF36 Scale	Group	Number (n=36)	Percent	Mean	SD	T	dF	p-value
Physical functioning	Regional or remote	9	25.00	58.89	29.77	0.58	34.00	0.5630
	Metropolitan	27	75.00	51.67	32.82			
Energy/Fatigue	Regional or remote	9	25.00	51.67	21.79	1.14	34.00	0.2619
	Metropolitan	27	75.00	40.56	26.29			
Pain	Regional or remote	9	25.00	57.78	23.86	-0.25	34.00	0.8018
	Metropolitan	27	75.00	60.19	24.98			
General health	Regional or remote	9	25.00	50.00	21.65	0.49	34.00	0.6292
	Metropolitan	27	75.00	45.74	23.03			

**Table 2.19: SF36 by location summary statistics and Wilcoxon rank sum tests with continuity correction**

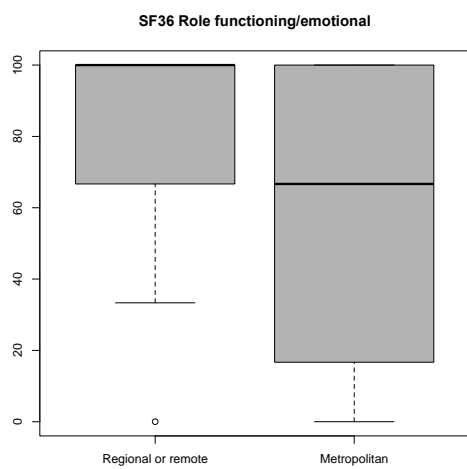
SF36 Scale	Group	Number (n=38)	Percent	Median	IQR	W	p-value
Role functioning/physical	Regional or remote	9	25.00	50.00	100.00	146.50	0.3374
	Metropolitan	27	75.00	0.00	75.00		
Role functioning/emotional	Regional or remote	9	25.00	100.00	33.33	156.00	0.1847
	Metropolitan	27	75.00	66.67	83.33		
Emotional well-being	Regional or remote	9	25.00	76.00	16.00	151.50	0.2782
	Metropolitan	27	75.00	76.00	20.00		
Social functioning	Regional or remote	9	25.00	62.50	12.50	127.00	0.8533
	Metropolitan	27	75.00	62.50	43.75		
Health change	Regional or remote	9	25.00	50.00	50.00	141.50	0.4476
	Metropolitan	27	75.00	25.00	25.00		



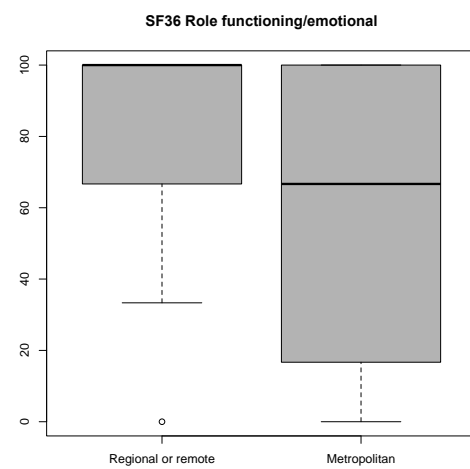
**Figure 2.40: Boxplot of SF36 Physical functioning by location**



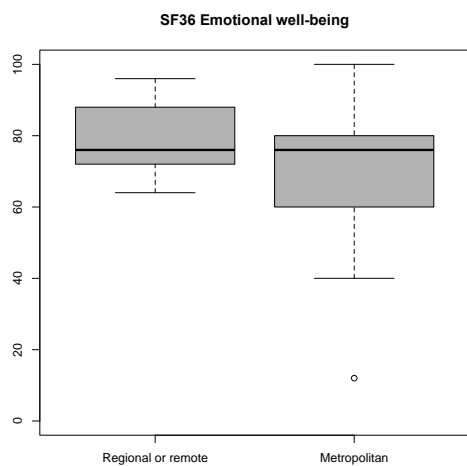
**Figure 2.41: Boxplot of SF36 Role functioning/physical by location**



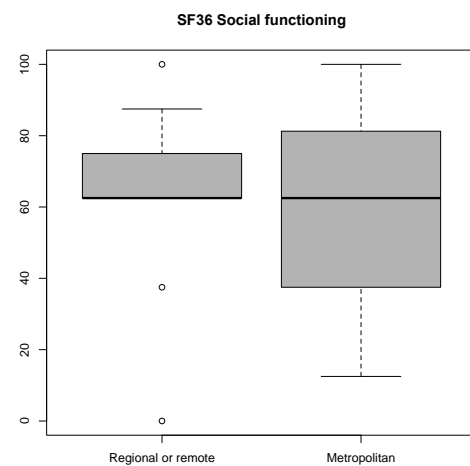
**Figure 2.42: Boxplot of SF36 Role functioning/emotional by location**



**Figure 2.43: Boxplot of SF36 Energy/fatigue by location**



**Figure 2.44: Boxplot of SF36 Emotional well-being by location**



**Figure 2.45: Boxplot of SF36 Social functioning by location**

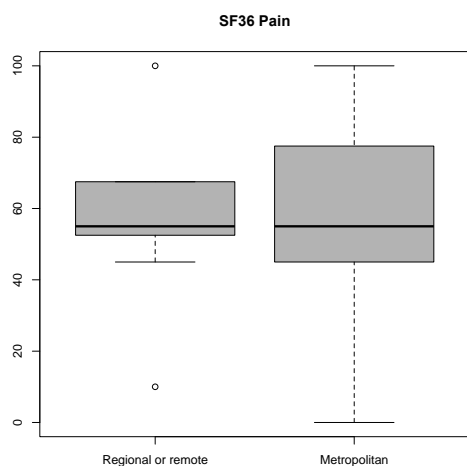


Figure 2.46: Boxplot of SF36 Pain by location

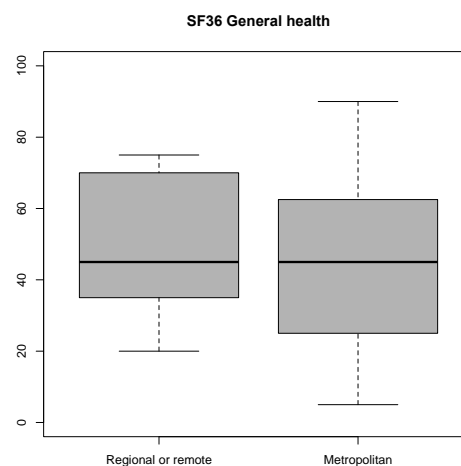


Figure 2.47: Boxplot of SF36 General health by location

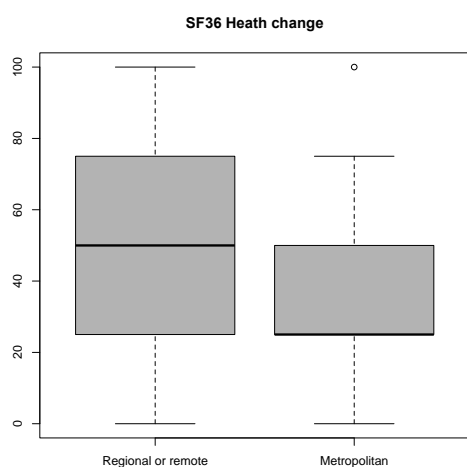


Figure 2.48: Boxplot of SF36 Health change by location

### Comparisons of SF36 scales by SEIFA

Comparisons were made by 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 higher SEIFA score of 7-10, *High SEIFA* (n=25, 69.44%) compared to those with a mid to low SEIFA score of 1-6, *Mid to low SEIFA* (n=11, 30.56%).

Boxplots of each SF36 scale by SEIFA are displayed in Figures 2.49 to 2.57, summary statistics are

displayed in Tables 2.20 to 2.21. A two-sample t-test was used when assumptions for normality and variance were met (Table 2.20), or when assumptions for normality and variance were not met, a Wilcoxon rank sum test with continuity correction was used (Table 2.21).

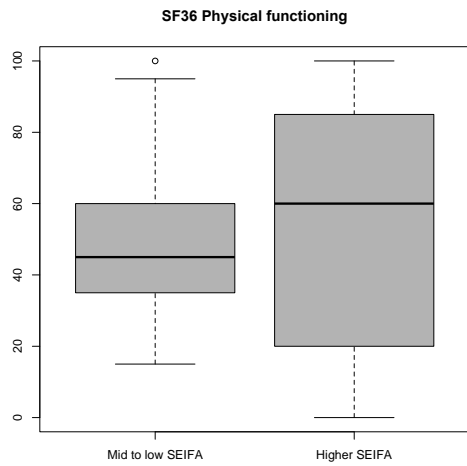
No significant differences were observed between participants in the *High SEIFA* subgroup compared to those in the *Mid to low SEIFA* subgroup for any of the SF36 scales.

Table 2.20: SF36 by SEIFA summary statistics and two sample t-test

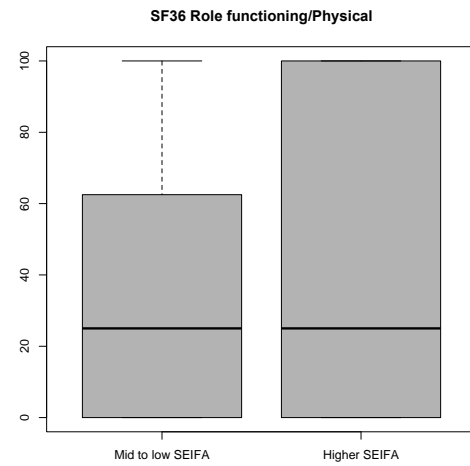
SF36 Scale	Group	Number (n=36)	Percent	Mean	SD	T	dF	p-value
Pain	Mid to low SEIFA	11	30.56	56.82	24.32	-0.45	34.00	0.6584
	Higher SEIFA	25	69.44	60.80	24.82			
General health	Mid to low SEIFA	11	30.56	45.91	19.21	-0.16	34.00	0.8765
	Higher SEIFA	25	69.44	47.20	24.11			

**Table 2.21: SF36 by SEIFA summary statistics and Wilcoxon rank sum tests with continuity correction**

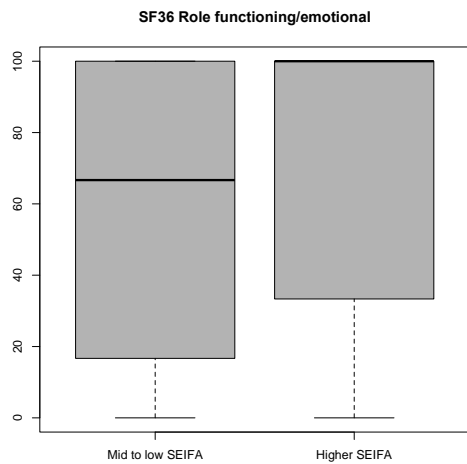
SF36 Scale	Group	Number (n=36)	Percent	Median	IQR	W	p-value
Physical functioning	Mid to low SEIFA	11	30.56	45.00	25.00	133.50	0.9042
	Higher SEIFA	25	69.44	60.00	65.00		
Role functioning/physical	Mid to low SEIFA	11	30.56	25.00	62.50	132.00	0.8540
	Higher SEIFA	25	69.44	25.00	100.00		
Role functioning/emotional	Mid to low SEIFA	11	30.56	66.67	83.33	116.50	0.4522
	Higher SEIFA	25	69.44	100.00	66.67		
Energy/Fatigue*	Mid to low SEIFA	11	30.56	35.00	20.00	100.00	0.2015
	Higher SEIFA	25	69.44	50.00	25.00		
Emotional well-being	Mid to low SEIFA	11	30.56	72.00	12.00	108.00	0.3163
	Higher SEIFA	25	69.44	76.00	28.00		
Social functioning	Mid to low SEIFA	11	30.56	62.50	31.25	130.50	0.8212
	Higher SEIFA	25	69.44	62.50	50.00		
Health change	Mid to low SEIFA	11	30.56	50.00	25.00	162.50	0.3697
	Higher SEIFA	25	69.44	25.00	25.00		



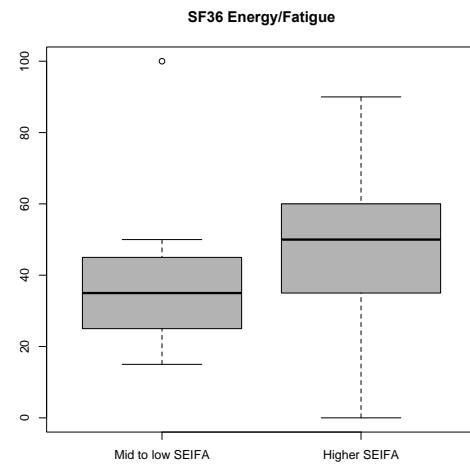
**Figure 2.49: Boxplot of SF36 Physical functioning by SEIFA**



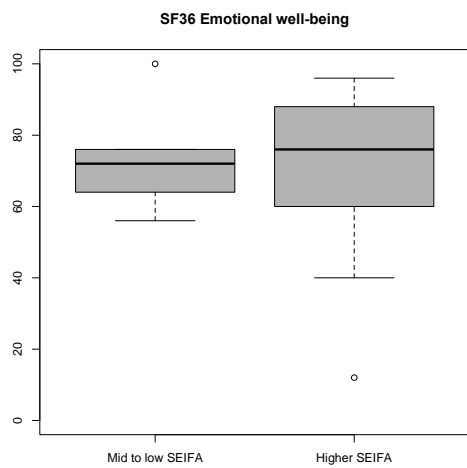
**Figure 2.50: Boxplot of SF36 Role functioning/physical by SEIFA**



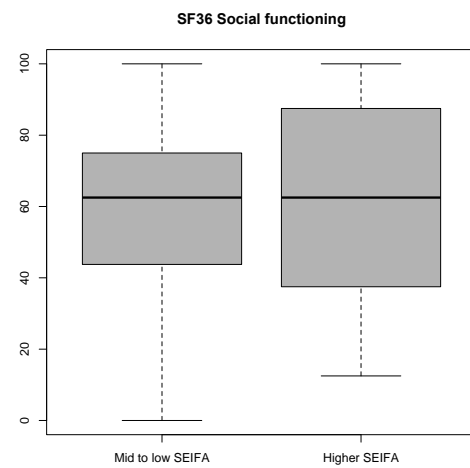
**Figure 2.51: Boxplot of SF36 Role functioning/emotional by SEIFA**



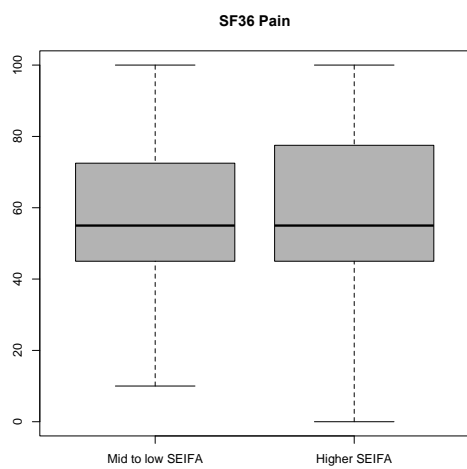
**Figure 2.52: Boxplot of SF36 Energy/fatigue by SEIFA**



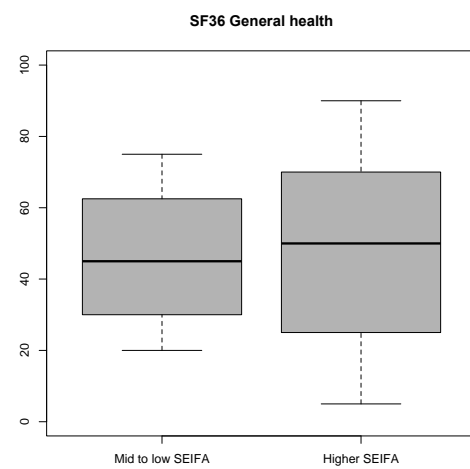
**Figure 2.53: Boxplot of SF36 Emotional well-being by SEIFA**



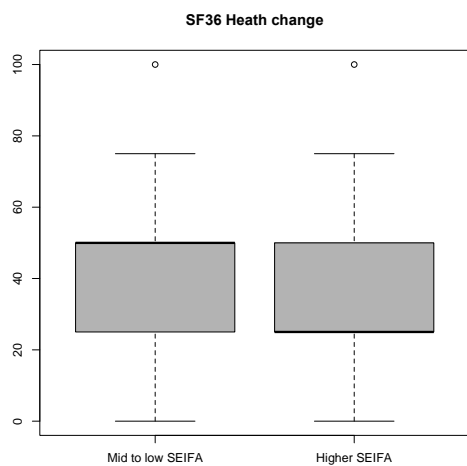
**Figure 2.54: Boxplot of SF36 Social functioning by SEIFA**



**Figure 2.55: Boxplot of SF36 Pain by SEIFA**



**Figure 2.56: Boxplot of SF36 General health by SEIFA**



**Figure 2.57: Boxplot of SF36 Health change by SEIFA**