CHAPTER 4

Results

4.1 Demographics of participants

Demographic data for participants in the neck pain and control groups are shown in Table 1. Two outliers (one neck pain and one control) were excluded from the analysis. There were no significant differences in age, weight, height and BMI between the neck pain and control groups (all $p > 0.05$), except for the VAS and NDI scores ($p < 0.05$).

Table 1 Demographic data of the participants

Variables	(mean ± sd)		*p*-value
	Neck pain (n = 23)	Control (n = 23)	
Gender			
Male : Female (n)	2 : 21	2 : 21	-
Age (yrs)	27.52 ± 5.33	27.00 ± 5.46	0.75
Weight (kg)	54.52 ± 7.50	53.28 ± 7.84	0.59
Height (cm)	160.57 ± 6.93	161.09 ± 5.96	0.79
BMI (kg/m^2)	21.17 ± 2.76	20.48 ± 2.32	0.37
VAS (0-10)	5.16 ± 1.95	0.53 ± 0.84	<0.01
NDI (0-100)	22.35 ± 8.15	3.39 ± 3.22	<0.01

Values represent mean ± sd

BMI = Body Mass Index, VAS = Visual Analog Scale, NDI = Neck Disability Index

4.2 Thickness of the lower trapezius

Table 2 shows the mean values and standard deviations for the left and right sides of the lower trapezius thickness between the neck pain and control groups. The results of Independent *t*-test revealed no significant differences between groups in the thickness of the lower trapezius both sides in all conditions (all $p > 0.05$), except for that on the right side at resting at 0° of shoulder abduction condition, which the neck pain group had smaller thickness than the control group ($p < 0.05$).

The results of dependent *t*-test revealed no differences in the thickness of the lower trapezius between the left and right sides in all conditions in the neck pain group (all $p > 0.05$). In the control group, the thickness of the lower trapezius on the right side was greater than that on the left side in all condition (all $p < 0.05$).

Table 2 Thickness of the lower trapezius muscle in the neck pain and control groups

	Thickness (mm)	
	Neck pain group (n = 23)	Control group (n = 23)
At rest 0°		
Left	2.38 ± 0.94	2.54 ± 0.91
Right	2.55 ± 0.66 [a]	2.96 ± 0.98 [b]
At rest 120°		
Left	2.88 ± 1.14	2.99 ± 0.95
Right	3.14 ± 0.90	3.32 ± 1.02 [b]
At contraction 120°		
Left	4.37 ± 2.58	4.44 ± 1.98
Right	4.57 ± 1.94	5.28 ± 2.39 [b]
Difference in thickness at 120°		
Left	1.49 ± 1.89	1.45 ± 1.32
Right	1.43 ± 1.46	1.96 ± 1.70 [b]

Values are presented as mean ± SD

[a] $p < 0.05$ compared between neck pain and control groups

[b] $p < 0.05$ compared between the left and right sides