

## CHAPTER 4

### Results

#### 4.1. Demographics of participants

Participant demographics and neck pain features are presented in Table 2. There were no significant differences between the two groups in age and BMI (all  $p > 0.05$ ) but NDI scores ( $p < 0.05$ ).

Table 2 Demographic data for participants

Variables	Neck pain (n = 20)	Controls (n = 20)	<i>p</i> -value
Age (yrs)	25.65 ± 3.69	25.80 ± 4.55	0.91
BMI (kg/m <sup>2</sup> )	20.46 ± 2.94	21.68 ± 2.35	0.16
NDI (0-100)	18.70 ± 7.03	2.40 ± 2.30	< 0.01
VAS (0-100)	47.65 ± 19.06	-	-
History of neck pain (yrs)	1.36 ± 0.88	-	-
Right-hand dominance (n)	20	20	-
Right-sides symptoms (n)	20	-	-

Values are presented as mean ± SD

#### 4.2 Thickness of the lower trapezius muscle

The mean values and standard deviations at the right and left sides of lower trapezius thickness are presented in Table 3. Independent *t*-test analysis revealed that thickness of the right lower trapezius muscle in the neck pain group was less than that in the control group ( $p < 0.05$ ). There was no significant difference in the left lower trapezius between the neck pain and control groups ( $p > 0.05$ ).

The dependent *t*-test results showed significant differences between the right and left sides of the lower trapezius muscle thickness for the control group ( $p < 0.05$ ) but not for neck pain group ( $p > 0.05$ ).

Table 3 Thickness of the lower trapezius muscle in the neck pain and control groups

	Thickness (mm)	
	Right	Left
Neck pain group (n = 20)	2.76 ± 0.66	2.78 ± 0.67
Control group (n = 20)	3.28 ± 0.75 <sup>a</sup>	2.93 ± 0.84 <sup>b</sup>

Values are presented as mean ± SD

<sup>a</sup>  $p < 0.05$  compared between neck pain and control groups

<sup>b</sup>  $p < 0.05$  compared between the right and left sides

#### 4.3 Correlations of the lower trapezius thickness and neck pain characteristics

The lower trapezius muscle thickness on the symptomatic side was not correlated with VAS and NDI scores (both  $p > 0.05$ ).

Table 4 Correlations between the lower trapezius thickness and NDI, and VAS scores

	Thickness (mm)	<i>p</i> -value
NDI (0-100)	0.05	0.85
VAS (0-100)	-0.01	0.68

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