

STRESS AMONG POLICE OFFICERS: A COMPARATIVE STUDY BETWEEN BEGIN/END OF SHIFT DURING TWO WEEKS

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EVIDENCE-BASED POLICING: new perspectives of cooperation between practice, education and police science.

Lisbon, Portugal, 5-8 October 2015

1. Background & Aim

Recently, the European Agency for Safety and Health at Work (2014) alerts for occupational stress, creating the Wealthy Places campaign. Policing is broadly considered to be one of the most stressful professions in modern society, since police operations occur on adverse working conditions with occasional violence or verbal confrontation (Kuo, 2015; Lucas et al., 2012; Rakhase, 2014; Solana et al., 2013). On a daily basis, police officers experience the stress of dealing with risks and threats, but also the stress associated with their anticipation, leading researchers to develop interventions to prevent and treat stress (Patterson et al., 2014). During stressful situations the person tends to interpret situations as a threat, which increases the risk of aggressive responses by misinterpretation of situations (Griffin & Bernard, 2003; Neely & Cleveland, 2012; Queirós et al., 2013). Recent stress studies apply longitudinal measures, trying to identify stress level with daily data (Adams et al., 2014; Oerlemans & Bakker, 2014; Taylor, 2015), and to understand what change happens and why it happens in the socio-cultural context (Carduff et al., 2015).

This study aims to identify stress levels during two working weeks, among police officers from Municipal Police of Porto, comparing the begin and the end of daily shifts.

2. Methods

Participants: The sample was composed by 65 police officers from Municipal Police of Porto, a police force from municipality that includes police officers from Portuguese National Police (PSP - Polícia de Segurança Pública). They were all males, with mean age of 46 years old

Instruments: A small questionnaire was prepared, with items already used among firefighters (Gomes et al., 2012; alpha 0.90 and significantly correlated), composed by 4 questions about physical and psychological symptoms of stress (muscular tension; physical fatigue or body pain; thinking difficulty; anger, stress or nervous). Each question was evaluated on a 5 points Likert scale of symptom intensity, where 1 means little and 5 much. A total of 482 answers were collected during 14 working days. Despite not all participants contributed with all 14 days data collection, they have data from the beginning and end of data collection period, as well several different days.

Procedure: After formal authorization of Municipal Police of Porto, participants voluntarily fulfilled a printed questionnaire before and after daily shift work, during two weeks and using an individual code allowing intra-subject comparisons.

Data analysis: IBM-SPSS-21 was used to perform descriptive, correlation (R Pearson) and t-test paired analysis.

3. Results

Results showed statistical differences ($p = .000$) for all the 4 questions, with the end of the shift presenting higher values during all the two weeks (Table 1 and Figure 1). This differences were also statistically different for day 1 and day 14 (Figure 2) with p values ranging, respectively between ,010 and ,034, and between ,001 and ,036. No statistical significant differences were found when comparing beginning and end of the first and last day of two weeks data collection (Figure 3) neither when comparing differences intensity (Figure 4), suggesting that stress levels were constant, thus chronic, and, on a long term, having the risk to elicit burnout (Keltly & Gordon, 2015; Kuo, 2015; Maslach, 2011).

4. Conclusions

Data were coherent with studies showing that police officers experience a greater burden of cardiovascular disease than persons in the general population (Charles et al., 2015). Additionally, police officers, because of the link between exposure to traumatic experiences and pathogenic consequences, are considered to be at high risk of developing posttraumatic stress, psychological distress, and poor physical health (Terte et al., 2014). Thus, occupational stress and burnout result in high costs for both the organization and the individual at a financial and human level, and stress and burnout are associated with inefficiency, an increase in workplace-related accidents, absenteeism, substance abuse and early retirement (Keltly et al., 2015). Actually, recovery experiences from stress are an important concern, with researchers discussing the importance of daily recovery instead of holiday recovery to chronic stress (Demerouti et al., 2012; Sonnentag, 2001). Since police officers are in charge of citizens' safety and are at the frontline of a rapidly changing and complex world, understanding and managing factors threatening the physical and mental health of police officers is important in order for them to be able to fulfill their duties and better protect the citizens (Jong-Min et al., 2015).

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Table 1. Mean, S.D., t-test and correlation between physical and psychological symptoms at beginning and end of the shift

	Mean	S.D.	t student (sig) Beginning-end	Beginning Muscular tension	Beginning Physical fatigue or body pain	Beginning Thinking difficulty	Beginning Anger, stress or nervous	End Muscular tension	End Physical fatigue or body pain	End Thinking difficulty
Beginning Muscular tension	1.81	1.076	-12.056 (0.000)**							
Beginning Physical fatigue or body pain	1.94	1.116	-13.076 (0.000)**	.827**						
Beginning Thinking difficulty	1.81	1.047	-11.971 (0.000)**	.768**	.751**					
Beginning Anger, stress or nervous	1.88	0.989	-13.322 (0.000)**	.606**	.565**	.649**				
End Muscular tension	2.52	1.313	-	.533**	.497**	.430**	.367**			
End Physical fatigue or body pain	2.80	1.373	-	.436**	.475**	.379**	.312**	.880**		
End Thinking difficulty	2.60	1.401	-	.418**	.410**	.470**	.330**	.794**	.816**	
End Anger, stress or nervous	2.78	1.392	-	.295**	.289**	.278**	.404**	.723**	.754**	.791**

** p < 0,010

Figure 1. Mean differences between shift beginning and end

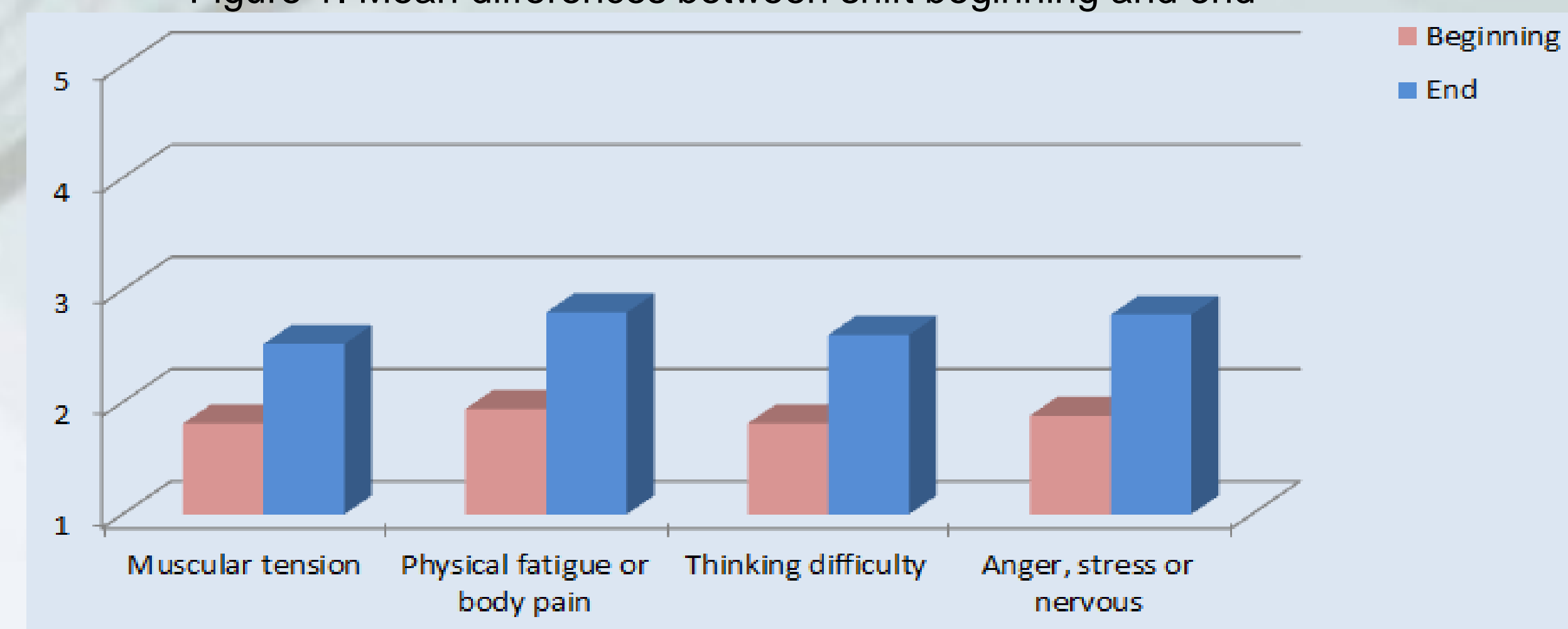


Figure 2. Mean of shift beginning and end comparing day 1 and day 14

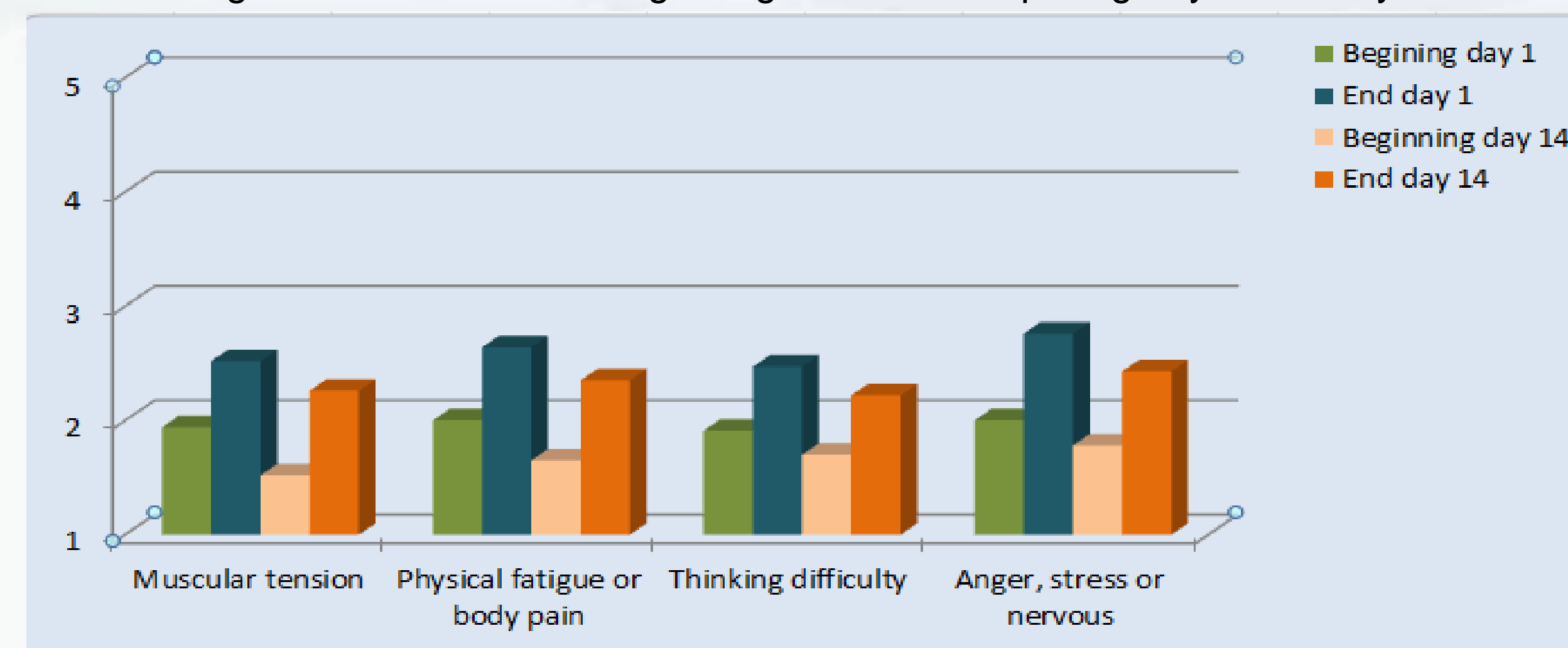


Figure 3. Mean of day 1 and day 14 comparing shift beginning and end

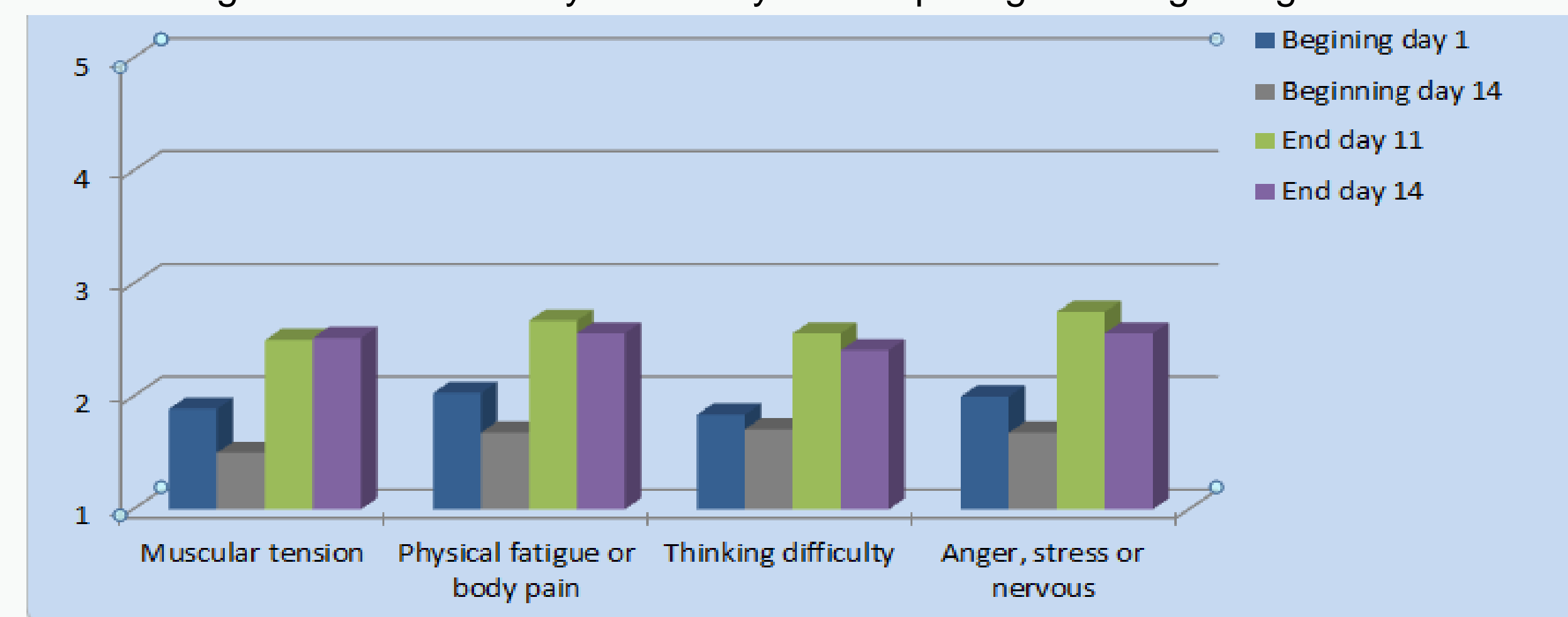


Figure 4. Mean differences between day 1 and day 14

