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# Affective Touch perception in patients suffering from Fibromyalgia

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## Abstract

Fibromyalgia (FM) is a syndrome characterized by persistent and widespread chronic pain in the absence of inflammatory or structural musculoskeletal abnormalities. Although the etiopathogenesis of FM remains unclear, it is often regarded as a central sensitization syndrome in which the perception of pain is amplified. Recent studies have observed a soothing effect of gentle touch on pain perception, suggesting that there may be a relationship between nociception and the Affective Touch (AT) system. The aim of the present study was therefore to explore AT perception in FM patients compared to healthy controls. All participants were screened for general symptomatology and basic somatosensory functions, including tactile acuity and sensitivity. AT perception was assessed by asking participants to rate the pleasantness of AT optimal and non-AT optimal stimulations, performed at a speed of either 3 cm/s or 30 cm/s, respectively. The initial screening revealed that FM patients were more psychologically distressed, and that the two groups were comparable in terms of basic somatosensory functions. AT results revealed significant main effects of both group and stimulation speed, as well as a significant interaction between group and speed. As opposed to the control group, which rated CT optimal stimulations as significantly more pleasant than non-optimal ones, FM patients did not differentiate between the two speeds. Furthermore, FM patients rated CT optimal stimulations specifically as significantly less pleasant than healthy controls. These findings confirm and extend previous results, suggesting that chronic pain may be associated with an impaired perception of touch pleasantness.

**Keywords:** Fibromyalgia, chronic pain, Affective Touch, pleasant touch, gentle touch

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