Upper-thoracic (tense) breathing pattern: Relationship to respiration, tension/anxiety and general distress

Jan van Dixhoorn, *Els Anthonissen*

Centre for Breathing Therapy, Amersfoort, The Netherlands

Background. In a previous study it was shown that unexplained dyspnea in patients with stress related complaints was partly mediated by an upper thoracic (dysfunctional) breathing pattern. In this study one purpose was to replicate these findings on a larger population. Secondly, the presence of the breathing pattern in patients with different diagnostic labels was studied, as well as its relationship to general condition. **Methods.** A total of 208 patients referred to the breathing therapy practice of the second author were included. Their diagnostic labels included tension problems ($n = 69$), hyperventilation complaints ($n = 31$), anxiety ($n = 15$), sleeping problems ($n = 15$), headache ($n = 8$), burnout ($n = 8$), and a rest group ($n = 62$) of many small categories. Manual assessment respiratory movement (MARM) and questionnaire data, including Nijmegen Questionnaire (NQ), a NQ subset of four respiratory items (Dyspnea) and General Distress (GD), were obtained at the start and end of treatment. **Results.** The presence of upper thoracic breathing (MARM > 105) was significantly associated with higher values for NQ, in particular the dyspnea items, but was unrelated to GD. MARM, NQ and Dyspnea differed significantly between groups. They were highest for patients with hyperventilation complaints, followed by patients with tension, anxiety and burnout, and lowest for patients with headache and sleeping problems, with the rest group showing average values. There were no significant differences between the groups for GD. **Discussion.** Upper thoracic breathing seems in particular related to functional breathing problems and to tension/anxiety, but not to general distress. A possible mechanism for the specific breathing pattern and the concomitant form change of the thorax with breathing will be discussed.