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## Functional somatic complaints in pediatric age: alexithymia or anxiety and depression? An outstanding debate

Daniela Smirni

S.I.P.Ped; Department of Psychology, Educational Science and Human Movement, University of Palermo, Italy

In daily pediatric clinical practice, recurrent somatic functional disorders, often medically unexplained, appear widespread among children and adolescents, resulting in frequent seeking to pediatric services and negatively impacting on the quality of life, school attendance and academic achievement.<sup>1</sup>

Several studies have suggested a direct relationship between such somatic complaints and emotions.<sup>2</sup> Already at the end of the 19th century, James regarded emotional experience as directly resulting from the perception of somatic changes occurring in one's body under emotional conditions.<sup>3</sup> In front of a bear, a sequence of sympathetic changes distresses the body. In the James' perspective, perception of these reactions would cause emotion. I am afraid because I have perceived changes in my body and I'm afraid because I realize I'm running away, and not I'm running away because I was afraid. More recently, Sifneos pointed out psychosomatic disorders as an expression of a poor ability to identify and manage one's own emotions.<sup>4</sup> According to alexithymia construct, denoting any bodily signal in terms of somatic disease, along a difficulty in recognizing physical sensations as somatic expression of emotions appear as the core of alexithymia.<sup>5</sup> Actually, somatic signals are not automatically symptoms of an alteration of physiological parameters. An increase in heart rate may be a symptom of a disease, but it may be also a somatic expression of an emotion or the result of a non-emotional event such as running. Recognizing one's emotions allows to clearly assess and differentiate somatic emotional responses and actual symptoms of disease. On these assumptions, somatic complaints in pediatric age should be referred to the difficulty in understanding bodily expression of emotions and in differentiating from the actual somatic disturbance.<sup>6</sup> Moreover, poor emotion awareness may result in a difficulty to cope adequately with emotions,<sup>3,7</sup> especially with internalizing ones. Unconscious or unsolved anxiety and depression may result both in increasing or extending physiological arousal and in somatic symptoms.<sup>8</sup> Several studies have shown evidence for a relationship between anxiety and depression, alexithymia, and somatic complaints.9,10

However, recent studies suggest that just focusing on the direct relationship between emotional awareness and somatic complaints may be a simplified perspective,<sup>8,11</sup> as functional somatic complaints are often associated with anxiety and depression symptoms,<sup>9</sup> increased levels of stress, stronger negative affect, supporting the hypothesis that poor emotion awareness might have an impact on anxiety and depression and secondarily on somatic complaints.<sup>11</sup> Therefore, the debate may be viewed as an outstanding issue and future research are required: whether and to what extent the impact of emotion awareness on somatic complaints in children and adolescents are mediated by anxiety and depression, or it must be thought as a direct association between alexithymia and somatic functional disorders. It seems, however, that much of this relationship can be mediated by experiencing internalizing emotions as anxiety and depression.<sup>11</sup>

Answer to such debate may be crucial for a targeted therapeutic treatment primarily aimed at recovering anxiety and depression or improving emotional awareness in children with functional somatic complaints. Probably, increased emotional awareness may be for benefit of children with functional somatic disorders. However, such an intervention may improve anxious and depressive symptoms, reducing further exacerbations of recurrent somatic complaints.

Finally, a relationship between alexithymia, anxiety and executive functioning was found,<sup>12</sup> and emotional awareness and modulation was associated with stronger executive function, such as inhibition, impulse control, behaviour modulation, and flexibility.<sup>13</sup> Therefore, an executive function training should be included in the context of treatment for alexithymia.

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## Developmental transitions of children with congenital heart disease: from childhood to middle adulthood

Elisabeth Utens,1 Jolien Roos-Hesselink2

<sup>1</sup>Department of Child and Adolescent Psychiatry, Erasmus Medical Center Sophia-Children's Hospital, Rotterdam, the Netherlands; <sup>2</sup>Department of Adult Congenital Heart Disease, Erasmus University Medical Centre, Rotterdam, the Netherlands

## Introduction

In every transitional phase in their development, children born with a