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Technology-Assisted Emotion Recognition for Autism Spectrum Disorder (ASD) Children: A Systematic Literature Review (Article) (Open Access)

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Abstract   ⌄ View references (55)

The information about affective states in individuals with autism spectrum disorder (ASD) is difficult to obtain as they usually suffer from deficits in facial expression. Affective state conditions of individuals with ASD were associated with impaired regulation of speech, communication, and social skills leading towards poor socio- emotion interaction. It is conceivable that the advance of technology could offer a psychophysiological alternative modality, particularly useful in persons who cannot verbally communicate their emotions as affective states such as individuals with ASD. The study is focusing on the investigation of technology-assisted approach and its relationship to affective states recognition . A systematic review was executed to summarize relevant research that involved technology-assisted implementation to identify the affective states of individuals with ASD using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach. The output from the online search process obtained from six publication databases on relevant studies published up to 31 July 2020 was analyzed. Out of 391 publications retrieved, 20 papers met the inclusion and exclusion criteria set in prior. Data were synthesized narratively despite methodological and heterogeneity variations. In this review, some research methods, systems, equipment and models to address all the related issues to the technology-assisted and affective states concerned were presented. As for the consequence, it can be assumed that the emotion recognition with assisted by technology, for evaluating and classifying affective states could help to improve efficacy in therapy sessions between therapists and individuals with ASD. This review will serve as a concise reference for providing general overviews of the current state-of-the-art studies in this area for practitioners, as well as for experienced researchers who are searching for a new direction for future works. © 2013 IEEE.

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