***Special issue on Role of Smart Sensors and Wearable Devices in Empowering Emotional Well-being of Adults with Autism Disorder***

**Recently, a surge in the manufacturing of gadgets that analyse psychological health and anxiety has emerged to speed the discovery and consequent treatment of individuals with autism disorder's physical and emotional well-being. Additionally, to discover and evaluate the latest modern intelligent gadgets and wireless sensors are used to detect depression, anxiousness, stress, and the physiological phenomena associated with their observation. The objective of providing real-time input on physiological responses, stress assessment, and even emotion recognition is rapidly approaching technical reality. Providing a feasible solution that continually monitors an individual's physiological parameters and analyses mental well-being might be a highly beneficial tool for people with autism disorder. The technologies available for physiological and motion observation have conversed extensively and their characteristics and context awareness. Having similar technologies would be especially beneficial for some groups who have fast fluctuating emotional responses, including those with the well-being of adults with autism disorder and intellectual limitations.**

**Wearable sensing technologies provide a viable option that may assist and supplement current behavioural therapies to empower individuals with autism disorder's physical and emotional well-being. Furthermore, intelligent sensors and wearable technology use Heart Rate Variability (HRV) metrics to determine the periods among two subsequent peaks inside an ECG signal while monitored with an ECG sensor. Additionally, wristbands equipped with photoplethysmography (PPG) sensors will be used. The PPG sensor provides a separate concept for calculating the heartbeat and estimated heart rate variability value. It measures Blood Volume Pulse (BVP). Emerging advances in neuroscience have enabled the detection of emotional states using EEG information. Individuals' wearable sensors and gadgets are gathered into three categories: head-mounted techniques, body-worn innovations, and accessory and clothing-based advancements.**

**Head-mounted technologies are carried on the head, such as lenses or gadgets used as a headband or fitted hat. Further, these wearable sensors and gadgets are employed to collect information on head position, gaze behaviour, pulse, and electroencephalography (EEG) metrics. Additionally, body-worn technology comprises accelerometer sensors, chest belts sensors, and electromyography sensors that were used. Apart from that, accessories and clothing-based technologies enable wrist-worn gadgets, sensory garments, and neck-worn technology. Furthermore, Wearable sensors and gadgets are used to monitor physiological data such as electrodermal, sensation, and heart rate. Besides these sensors, AMI Motion Tracker Sleep Monitor monitors the start, intensity, and sleep duration in individuals with autistic disorder.**

**The passive remote measuring technique gathers information autonomously from activity monitors and cell phones to evaluate if the user's speech and behaviour patterns were consistent with a period of depression in adults with autism disorder. Although the previous method lacked visible experimental evidence, it would potentially become one of the top techniques for depression detection in the years ahead. Additional research is required to develop remote measuring equipment capable of accurately determining sleep disruption, decreased socialization, physical engagement, mood swings, phonation, and cognitive performance, all of which are essential indications of depression. Wearable technology would continue to improve their potential to empower adults with autism disorder physical and emotional well-being.**

***Topics of inters:***

* **Real-time AI-based data analysis on wearable sensors**
* **Stress assessment and emotion recognition using Smart Sensors and Wearable Devices**
* **Human-machine interfaces using Smart Sensors and Wearable Devices**
* **Enhancement in Body sensor network for autism disorder in adults**
* **Advancement in virtual and augmented reality technologies using Smart Sensors and Wearable Devices for autism disorder in adults**
* **Next-generation wearable technologies for autism disorder in adults**
* **Edge-Based decentralized wearable computing for autism disorder in adults**
* **Head-Mounted Technologies for empowering adults with autism disorder**
* **Body-Worn Technologies for empowering adults with autism disorder**
* **Accessory and Clothing-based Technologies for empowering adults with autism disorder**

***Important Dates:***

* **Submission​: ​20 Oct, 2023**
* **First decision: 5 Jane. 2024 ​**
* **Revision and resubmission deadline: 10 Mar. 2024**
* **Paper acceptance: 25 May. 2024**

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