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PUBTEXTO

General Perspective of Autonomous Sensory Meridian Response (ASMR) For Reducing Anxiety and Stress in Integrative Medicine (IM)

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Abstract

Recently, Autonomous Sensory Meridian Response (ASMR) has been in focus. It is a sense of thrilling feeling with pleasure or joy that appears from the nape of the neck to the head scalp region. ASMR has been often found by the triggers of sound, music and video, which can induce relaxation and smooth sleep with reducing anxiety and stress. It is often caused by the triggers of sound, music and video, and shows possible relationship with anxiety, trait, neuroticism and misophonia. Based on auditory sensation, ASMR may play a main role for Brain–computer interface (BCI) from now on.

Keywords: Autonomous Sensory Meridian Response (ASMR); Music; Relaxation; Medial Prefrontal Cortex (MPFC); Brain–Computer Interface (BCI)

Commentary

In recent years, a phenomenon has been drawing attention in the field of medicine, art and music [1]. It is a sense of thrilling feeling with pleasure or joy that appears from the nape of the neck to the head scalp region. Medically speaking, it has been called as “Autonomous Sensory Meridian Response (ASMR)” [2]. ASMR has been developed by a variety of auditory and visual incentives and stimuli such as music or video. Such sensation or reaction comes to the neck and head, when a person is moved or impressed by fantastic events. As some research progress, ASMR seems to be effective in relaxation of body and soul, smooth sleeping and various stress reduction.

Thus, ASMR has been related to broad region, where integrative medicine (IM) can cover [3]. Authors have been involved in IM for years concerning music therapy, hospital arts and others [4, 5]. The definition of ASMR was presented by Jennifer Allen in 2010. ASMR is a specific sound which provides pleasure, and it has been used for coined word in young generation [6]. ASMR has been characterized for its static-like sensation, and it may be involved in the mindfulness, flow, absorption and other factors. From certain study, the ability of getting deep immersion with loss of reflective awareness seems to be important for contributing ASMR experience. ASMR based on auditory sensation has played a main role for the discussion of Brain–computer interface (BCI) [7]. Combined auditory and visual stimuli, comprehensive development of ASMR will be expected in medical and economic fields [8].

For the latest report, the associations among ASMR, anxiety, trait and neuroticism were investigated [9]. ASMR is often developed by the triggers of watching online video. Many people tend to watch ASMR videos in order to get relaxation or to lessen some stress and insomnia which are suggestive of increased anxiety. Another literature indicates that the higher trait neuroticism can be observed in who tends to experience emotionally negative feeling and anxiety. The study was conducted with two groups of ASMR-experiencers (n=36) and non-experiencers (n=28), who were set for watch ASMR video for reducing anxiety. The results showed that ASMR-experiencers showed significantly higher scores for trait anxiety, neuroticism and video engagement than non-experiencers.

ASMR can induce relaxation and smooth sleep with reducing anxiety and stress. It comprises somatosensation from adequate audiovisual triggers leading to positive emotion. Among them, auditory stimuli as music plays the most important role for evoking ASMR. Recently, there was the first study to compare brain activation from ASMR and classical music in the light of auditory stimulation [10]. As the protocol, 30 healthy subjects underwent fMRI associated with listening to ASMR and classical music. They were asked a questionnaire for moods and somatosensation, such as comfortable or tingling. As a result, ASMR showed more activated areas, especially in the medial prefrontal cortex (MPFC).

As to the experiment of ASMR, 10 kinds of binaural (listening by both ears) sound such as cutting vegetable sounds and 10 kinds of natural sounds such as river murmuring were selected [11].

The analyses included ASMR-related tingling pitch, closeness, loudness and comfort as well as expansion feeling as spatial feature quantity. Consequently, ASMR sensory levels revealed higher, in particular for shampoo sound and ear picks. Further, psychological quantity showed correlation with sound proximity (r=0.88). Physical aspects showed the importance of interaural time difference. In previous reports on ASMR, stimuli and triggers were analyzed and divided into 4 categories, which were vivid sounds, personal attention, whispering and slow movements. After that, other triggers were found from wider fields [12]. Consequently, recent classification includes 5 categories, which are repetitive sounds, mouth sounds, watching, touching and simulations [13]. Concerning theoretical ASMR, the brain can feel a sense of psychological stability for stimulating five sensations. From electroencephalography (EEG) point of view, delta waves of frontal/central areas, and gamma waves of occipital region showed the differences [14].

ASMR has been suggested to share common characteristics with misophonia, which reveals negative emotional and physiological responses by sound trigger [15]. Using the Misophonia Questionnaire (MQ), ASMR group showed higher results of traits of misophonia than control group. Depressive patients tend to have misophonia and anxiety. Totally 94 patients in admission were studied for MQ-validated misophonia questionnaire [16]. As a result, 8.5-12.8% of them seem to have misophonia. The questionnaire revealed 92.6% of accuracy, 66.7% of sensitivity and 96.3% of specificity. The degree of misophonia correlated with high extent of anxiety.

From personality point of view, various research for ASMR were observed. Among them, close relationship of misophonia was reported [17]. Misophonia has been evaluated for the phenomenon with difficulties of regulating emotions. As the opposite end of pathology for misophonia, ASMR can be found in the people with a sound sensitivity spectrum [18]. Those who experienced ASMR have reported more frequent chance of cognitive re-evaluation against emotionally arousing situations, which would suggest more effective application for regulating their emotions. Consequently, ASMR may contribute to provide preferable perspective for emotional and affective dimensions, happiness and well-being.

Regarding the contrast of ASMR and misophonia, we can compare the characteristic points. In ASMR, adequate sound or music can bring relaxation, while in misophonia certain sound may cause triggered unpleasant emotional response. The former may be due to increased parasympathetic activity with subjective happy feeling. In contrast, the latter may be due to increased sympathetic activity with decreased emotional wellbeing. For these puzzling situations, one possible perspective can be proposed [19]. It is the synesthetic cross-activation that exists between primary auditory cortex and adjacent insula in the brain, where equivocal phenomena can be explained. Furthermore, this hypothesis may suggest the inter-relationship between auditory mechanism and human wellbeing in modern soundscape.

Using music and sound, musicking can give human subjective well-being in the following 5 regions. They are Positive emotion, Engagement, Relationships, Meaning and Accomplishment that are PERMA model [20]. Taking most advantages of PERMA, one can obtain better daily well-being [21]. In summary, ASMR and related matters were described and discussed. ASMR would be involved in wider fields and this article becomes hopefully useful reference.

Conflict of Interest

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