

Anhedonia symptom of depressive disorder in adolescents

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Abstract. Major Depressive Disorder is a mental disorder that's common among adolescents, while anhedonia, characterized by the diminish in ability to enjoy pleasurable activities and loss of interest. The essay is written to examine factors that can contribute to onset of adolescent anhedonia in the context of MDD and its impacts on adolescents. The author read and analyze scientific studies published in National Library of Medicine, then combine her personal observation and experience with knowledge she had gained online. Past studies concluded that adolescent anhedonia is a result of a combination of varying factors such as reduced activities in the reward system, emotional neglect in childhood, social pressure. Adolescents who have anhedonia tend to be less motivated and have less expectation of future events, which will hinder their performance in school or outside of school. Despite of past studies that are conducted to help finding a cure for adolescent anhedonia, more research is needed to be conducted concentrating on adolescent with anhedonia as an individual.

1. Introduction

Major Depressive Disorder, often referred to as Depression, is a type of mood disorder that continues to raise concerns of society. MDD and General Anxiety Disorder have recently become two common disorders that cost the global economy one trillion dollars per year. According to criteria given by DSM-5, MDD is characterized by persistent feeling of sadness and loss of interest in enjoyable activities. Insomnia, appetite loss, cognitive deficit, fatigue and even having suicidal thought are also symptoms of MDD. MDD is pervasive in the world. Statistics provided by The Global Health Data show that there's an estimation of 251-310 million MDD patients, which's 3.4% of the global population and there is an increase of number of patients over time. Except for those who had received their diagnosis from official psychiatric hospitals, there are more people who suffer from symptoms of MDD but haven't received proper treatments due to a variety of reasons.

Among all age groups, adolescent(10-19 year old) depression patients, according to data shared by World Health Organization, make up of 3.9% of the whole adolescent population. Attention is given to adolescent depression due to the fact that adolescence is a sensitive period for people experience physical and mental transitions. MDD is likely to impact adolescent patients in a negative way by causing disruption to their brain functions, thus preventing them from being well acquainted with abilities in preparation for adulthood. The symptoms of adolescent depression are different from those of adulthood depression. One core symptom that defines adolescent depression is anhedonia, the diminish in ability to experience pleasure. Clinical

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psychologists used to focus more on symptoms such as persistent feeling of sadness and loss of energy, but anhedonia has become one target of clinical research and experiments because of several reasons: 1) Adolescents who exhibit signs of anhedonia will likely to deal with issues include but not limited to social impairment and school performance impairment, which would dampen their confidence and cause patients to end up with self-isolation or developing suicidal thoughts. 2) It is often difficult to detect anhedonia from some adolescents by mere observations and conversations because they sometimes are not able to describe and present their feelings clearly. Some of their behaviors would lead to misinterpretation from others; therefore, deeper investigation is required to be launched for the purpose of helping adolescents to get proper diagnosis 3) There are adolescents who present characteristics of anhedonia but no other signs of MDD, which make it hard to identify whether these characteristics are more associated with MDD or other mental disorders.

This essay aims to use anhedonia as a key word to examine different factors correlated to the symptom, thus helps readers to look at MDD among adolescents in a new perspective.

2. Methods

The methodology used in this review includes the following steps: 1) identify the research questions 2) look for relevant studies online 3) select appropriate studies from relevant studies found on website 4) collate, summarize and report results.

2.1 Identify the research questions

The review is written to answer the following questions: 1)what are the perceived antecedents and 2)outcomes of adolescent anhedonia? 3)how do environmental factors such as academic pressure and social relationship effect identification and diagnosis of adolescent anhedonia? 4)how do adolescent MDD patients who have anhedonia as a core symptom respond to their predicament

2.2 Searching for relevant studies

The commonly known words and phrases related to adolescent anhedonia are adolescent, Major Depressive Disorder, loss of interest, inability to have expectations, inability to enjoy pleasurable activitie, self-isolation, etc. In psychology literature, common academic vocabularies are anticipatory anhedonia and consummatory anhedonia. Thus, keywords that are chosen by these terms above are anhedonia, adolescent, depression, which will be entered in PubMed in National Library of Medicine. The literature search is conducted by the author to identify relevant studies published in peer-reviewed articles from 2012 available up to the most present date(December 1, 2022). Inclusion and exclusion criteria of these articles are defined by author. The search was limited to English scientific articles. Authors of these scientific articles can be from different countries.

2.3 Selecting appropriate resources

Primary research articles that have investigation and show results in topics regarding with perceived antecedents and/or outcomes of adolescent anhedonia and/or environmental effects on diagnosis and/or adolescents' responses are included. Studies are excluded: 1)If they didn't contain empirical data that supports the conclusions 2)If they didn't provide answers to research questions 3)If they are conducted among adults, elderly and children rather than adolescent, yet studies that compare and contrast characteristics of adolescent and adult anhedonia are included 4)If they focus on other symptoms of MDD such as consistently low-mood, trouble with concentration, increased irritability, fatigue, physical pain, suicidal thoughts, etc; however, studies that examine related symptoms while providing specific data on adolescent anhedonia in relation to research questions are included.

The inclusion and exclusion are applied to all studies from the database. The author screened the articles, then found out the differences and similarities of them by reading the abstracts until studies that met the criteria are selected. After selected the studies, the full articles are exposed so that the author could read the full articles and decided on inclusion of final articles for further analysis. Thus, out of all studies the author had read, eleven of them are chosen for further study.

2.4. Collating, summarizing and reporting the results

In order to report the findings, the author read and analyzed the content of articles that are chosen in the final round. This allows author to summarize the points from the studies in a descriptive format that aligns with the review objectives and provide an answer to the research questions. Furthermore, as a Chinese high school student who lives in China, where there is an estimation of 25% of adolescents reported feeling mild or severe depression, the author combines her observation of other adolescents inside and outside of her school with her personal experience as well as information she acquired from news associated with adolescent anhedonia. The author then compares and contrasts the real situation with findings from readings. In conclusion, the results are reached through a combination of review of relevant studies on authoritative scientific website and introspection achieved by individual experience in specific environment.

3. Conclusion

As mentioned in the introduction, anhedonia is one of the core symptoms of adolescent depression that draws attention of clinical psychologists. Among adolescent patients who can hardly be cured by common treatments, anhedonia is often found to be a major cause of resistance to antidepressant options such as serotonin-norepinephrine uptake inhibitors. Past scientific studies also illustrate the association between anhedonia and long-term maintenance of MDD symptoms. A combination of biological, psychological and environmental factors can be related to anhedonia among adolescents. For the biological factor, anhedonia is a result of dysfunction or altered function of one's reward system, which's also named as mesolimbic system. Inside a mentally healthy person's brain, ventral tegmental area, which is a crucial part of the reward system, plays a role in sending dopamine neurons to the nucleus accumbens in ventral striatum, an area responsible for signaling of the expectation of reward and monitor of errors in the prediction of reward; however, Anhedonia patients show deficit in activities of both ventral tegmental area and ventral striatum. Low level of activities in such areas might cause the inability of brain to generate sufficient dopamine when patients with anhedonia are engaging in pleasurable activities. It is also an explanation of anhedonia' resistance to present first-line antidepressant medications because most of the options focus on increasing level of serotonin in brain rather than enhancing activities of reward system and balancing connections of varying parts of the system. Disruption of reward system is a reason for patients with anhedonia to experience low-motivation and reduced interest in obtaining pleasure from activities, while adolescence is a period when reward system undergoes significant development, which causes it to be sensitive to outside factors; therefore, adolescents are more easily than adults to be effected negatively by anhedonia.

Adolescent anhedonia is not only caused by abnormalities in the brain, but also associated with the environment where an adolescent patient has spend his or her life. There are a variety of environmental issues include but not limit to the patient's childhood, social connections he or she maintains and stress, etc. that are crucial in shaping one's internal thoughts and defining his or her values. First, an adolescent who has negative memories regarding his or her childhood including the experience of being emotionally neglected or suffering from child abuse tends to have higher rate of exhibiting signs of anhedonia. The negative memories an adolescent has regarding his or her childhood would hinder him or her from navigating through his or her life like normal students do since he or she might have a hard time generating positive thoughts toward life to motivate him or her to perform well in school and engage in more activities. The accumulation of other problems such as having a hard time to remain long-term relationships with other people might also result in the adolescent being at risk of developing anhedonia. Moreover, even if an adolescent is not negatively effected by his or her childhood experiences, there is a possibily for him or her being influenced by the stress imposed by the society. Most adolescents are students who are required to finish tasks and achieve academic goals in schools during their daily life; however, in some places, especially in Asian countries, students are being stressful because they often need to gain their perfect scores to meet the demands of their teachers and parents. Their entertainment time is occupied by an astonished amount of homework. Spending much time in studying rather than getting touch with their own hobbies, it is easy for students to form a sense of learning-weariness and eventually show signs of anhedonia. Having anhedonia, rather than explicitly doing nothing, some students choose to drop out of their classes and play their games all day. Their parents often attribute their children's behaviors to laziness or direspect instead of having their children to be diagnosed and receive appropriate treatments.

4. Discussion

One of the biggets strength this essay has is that it is able to show is that the facts and related information regarding adolescent anhedonia are proved by researches as the essay takes references from research papers that are published in an authoritative website. The rearch papers chosen as the resources of this are those that are published in not more than 10 years; therefore, the information provided by them is not out-of-dated. While having references from other researches, this essay is written by an author, who a high school student who is able to provide unique insights based on her personal experience and her observation of surroundings

Although research papers from authoritative website were chosen as resource references, the size is relatively small; therefore, the result give by this essay might not be comprehensive. The author of this essay is not able to collect datas nor create charts since no experiment nor field reseearch was conducted before the writing of this

essay, so this essay is relatively subjective as it is based on personal opinions

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