Investigating the Impact of Anhedonia on Academic Performance: a Case Report

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Abstract

This case report represents a case of anhedonia in a university student (L) (a sixth-year medical school student at Al-Sham Private University, currently 23 years old, born in 2000).

(L)suffered from a significant loss of interest and pleasure in various aspects of her life, which led to academic, emotional, and social difficulties.

This study explores the impact of anhedonia on (L)'s academic performance using the Snaith-Hamilton Pleasure Scale, where symptoms of anhedonia were evaluated along with semi-regulated interviews conducted every two weeks, and to monitor her academic performance we relied on her GPA and class attendance rate.

The initial interview focused on the onset of anhedonia and its academic consequences, while the follow-up interview aimed to track progress and evaluate Laila's social relationships. Our results indicated a significant decrease in (L)'s ability to experience pleasure, accompanied by a noticeable decrease in her academic performance. Intervention procedures included counseling, cognitive-behavioral therapy (CBT) sessions, and behavioral activation techniques that were implemented by a specialized therapist, Dr. Ghena Najati. (L)'s symptoms gradually improved, leading to positive changes in her engagement, thinking patterns, motivations, and overall well-being.

The results highlight the usefulness of the Snaith-Hamilton Pleasure Scale in providing an accurate understanding of the impact of anhedonia and guiding interventions specifically designed to support affected students.

Keywords: Anhedonia, Academic Performance, Cognitive Behavioral Therapy, Behavioral Activation, Mental Health, Stress, Anxiety, Pleasure.

1. Introduction

Anhedonia: it is the lack of interest or the inability to experience enjoyment or pleasure from life's experiences. The person may not want to spend time with others or to engage in activities that used to make him happy [1].

As people's interests can change over time and they may lose interest in things that previously excited them, anhedonia describes an inability or decreased ability to feel pleasure, which involves a severe loss of interest in activities, hobbies, or experiences that a person used to enjoy or that are generally accepted to be enjoyable (such as music, sex, food, interaction with others). In general, individuals experiencing anhedonia will feel a sense of numbness or reduced sensation and have an overall negative outlook on life [2].

Anhedonia is a common symptom of many mental health conditions such as major depressive disorder and other depressive disorders, including dysthymic disorder, Mood dysregulation, premenstrual dysphoric disorder, and substance use disorder, it may also be a symptom in people with neuropsychiatric disorders, such as schizophrenia, psychosis, and post-traumatic stress disorder [2].

People with physical conditions such as chronic pain and Parkinson's disease may also experience anhedonia, and it also considers a prominent symptom of several neuropsychiatric disorders, most notably major depressive disorder (MDD) and schizophrenia [2].

2. Case Presentation

(L) is a pseudonym to maintain the privacy of the case. She is

a 23 years old sixth-year medical school student at Al-Sham Private University. She maintained good academic performance during her first and second academic years, with a cumulative average equivalent to 4/3.00 (80-85%). In her third academic year, she began to have gradual symptoms of anhedonia, such as loss of interest, loss of pleasure in activities that she previously enjoyed, and loss of motivation to perform her schoolwork. She noticed that her cumulative GPA declined at the end of the third year to the equivalent of 4/2.50 (70-75%), and then it became at the end of the fourth academic year equivalent to 4/2.25 (65%).

(L) also noticed that her attendance at clinical training courses in hospitals in her fourth academic year (clinical medicine school courses for practical student training that are held in hospitals during the fourth/fifth/sixth academic year) was not of any desired benefit and she did not want to attend them and was not interested in benefiting from them. Knowing that all the students around her had benefited from this training and had accumulated great theoretical and practical information, which made her feel even worse and prompted her to seek help from a specialist at the end of the fourth academic year.

3. Methodology
3.1 Evaluating Anhedonia
The Snaith-Hamilton Pleasure Scale (SHAPS) was used. This is a battery of quick tests created to evaluate the presense of anhedonia. Although this symptom has been widely investigated in clinical environments, individual differences in anhedonia also exist in the healthy populations [3].

The scale consists of 14 items, and each item contains a set of four response categories: definitely agree, agree, disagree, and strongly disagree, with any "disagree" responses scoring 1 and any "agree" responses scoring 0. Thus, the SHAPS is recorded as the sum of the 14 items with a total score ranging from 0 to 14. A higher total SHAPS score indicates higher levels of (L,)'s current state of anhedonia [4].

Semi-regulated interviews were conducted with (L) every two weeks to collect qualitative data about her experiences. Ethical guidelines were strictly followed to ensure participant confidentiality and consent.

4. Interviews
4.1 The Initial Interview
This interview took place at the end of the fourth academic year after the completion of the semester and aimed to diagnose the condition, and the following information was obtained: onset of anhedonia symptoms began in her third, but became more severe in her fourth academic year. (L) experienced a decrease in productivity, changes in study habits, neglecting her academic responsibilities, missing many lectures and clinical training at the hospital, she no longer felt motivated to achieve her academic goals, and no longer had the desire to do anything because she felt it had no meaning.

She lost interest in activities she used to enjoy, no longer had the desire to read new books, and lost pleasure in practicing her favorite sport which greatly affected her as she no longer had the energy to carry out her daily activities and only did some of them out of obligation. She began to feel restricted and empty with no coping strategies, and no way to return to how things were before.

4.2 The Second Interview
She was asked about her social relationships, family, and friends: She avoided social activities, no longer enjoyed being with her friends, and did not feel like communicating with them as she no longer felt emotional towards people around her.

Her short-term and long-term academic and personal goals were discussed:
She had many plans to do in the future but did not feel the desire and effort to achieve them, as she found it difficult to think about the future and plan for it.
There was no significant change in the symptoms, but her attendance rate for lectures at the university and clinical training at the hospital was better.
any specific events or circumstances that may have contributed to the onset or exacerbation of her anhedonia symptoms were inquired about:
L) mentioned that she was under severe pressure during the exams and felt anxious and fearful of failure. She was also under pressure from her parents due to their high expectations and the constant comparison of with her classmates, which reinforced her lack of confidence in her abilities. She also mentioned that she felt great frustration when she saw that her friends around her had more benefit than her from the practical clinical training in the hospital.

4.3 Intervention Procedures
Using the SHAPS (Anhedonia Severity Scale) and information collected through interviews, any changes in anhedonia symptoms were evaluated, where (L)'s academic performance was assessed by reviewing her grades and attendance records. A cognitive-behavioral therapy (CBT) approach was used to help(L).

4.4 Behavioral Activation
- One of the main components of the treatment was behavioral activation, which aims to confront withdrawal and avoidance behaviors associated with anhedonia. It also aims to identify negative thoughts, challenge them, try to change them to positive ones, and develop adaptive coping strategies. The therapist worked with (L) to create a timetable for activities that she used to find it enjoyable and meaningful, even if she doesn't currently feel motivated to engage in them. By gradually reintroducing these activities,(L) was allowed to re-experience positive emotions and regain a sense of pleasure.

(L) also learned to set achievable goals, and the therapist encouraged her to build a support network by participating in group therapy sessions with other students facing similar challenges.

(L) attended therapy sessions every two weeks, where she was

given the opportunity to discuss her experiences, challenges, and progress. During the intervention period, (L)'s progress was regularly monitored.

5. Results

5.1 During the Initial Evaluation

SHAPS results indicated a high level of anhedonia in(L), reflecting a decreased ability to experience pleasure in various activities. However, during the follow-up evaluation after six weeks of treatment, there was a significant reduction in anhedonia symptoms, as (L) reported that she began to feel more engaged during therapy sessions, where at the beginning she felt detached and uninterested in discussing her experiences, but as treatment progressed, she found herself sharing her thoughts and feelings more openly and with interest.

5.2 Gradual Return of Interest

L) noticed a gradual return of interest in activities she previously enjoyed and mentioned that some of them began to elicit positive emotions in her. While the pleasure did not fully return at first, she acknowledged that it was an important step forward in her journey toward recovery.

5.3 Opting Strategies

Through therapy, (L) learned various coping strategies to manage anhedonia and its impact on her daily life. She reported that these strategies (such as behavioral activation techniques and self-care practices) were effective in helping her overcome the challenges posed by anhedonia.

5.4 Long-Term Results

Over time, (L) began to show improvement in her academic performance, developed strategies to challenge negative thoughts as she became more aware of distorted thoughts and self-criticism that often accompany anhedonia, and with therapist guiding, she learned to challenge and reframe those thoughts. This transformation allowed her to develop a more realistic and logical mindset.

Her grades gradually improved, as she noticed that her cumulative GPA at the end of the fifth academic year increased to the equivalent of 2.75 (78%), and she regained her active participation in her classes and became fully committed to clinical training in the fifth academic year with significant scientific and practical benefit for her, like her other friends. She also developed a long-term follow-up plan to monitor the progress she has made and to deal with any potential setbacks or ongoing challenges.(L)'s progress during the year was remarkable.

6. Discussion

Anhedonia can affect university students like(L) due to various factors, which may include academic pressures, social pressures, adaptation difficulties, lack of social support, and negative thinking patterns. Identifying and understanding these underlying factors is crucial for developing effective interventions, especially since a published French study was conducted on dentistry and medicine colleges' students and

aimed to evaluate their anhedonia, confirmed the psychological characteristics of the Temporal Experience of Pleasure Scale in a large number of students, and that dentistry and medicine colleges can promote anhedonia in students [5].

L)'s case report provides valuable insights into the complex relationship between anhedonia and academic performance. Using the Snaith-Hamilton Pleasure Scale and semi-regulated interviews, the study aimed to understand the onset, development, and consequences of anhedonia symptoms in a university environment.

The evaluation using the Snaith-Hamilton Pleasure Scale revealed a significant decrease in Laila's ability to experience pleasure, which particularly affected her ability to feel pleasure from academic and social activities. The decrease in academic performance, which was characterized by a shift from very good grades (80-85%) to acceptable grades (65%), confirms the potential effects of anhedonia on motivation, engagement, and cognitive performance in the academic context. As for the temporal aspects of anhedonia, the two-week period between interviews proved crucial in capturing the dynamic nature of anhedonia. This temporal approach allowed for a precise understanding of how anhedonia symptoms evolve over time and link them to fluctuations in academic engagement. The flexibility in the interview period allowed for real-time adjustments to the interventions, enhancing the ecological validity of the study.

7. Conclusion

This case report sheds light on the importance of understanding and treating anhedonia in the academic context, emphasizing the importance of university support systems and mental health services, and promoting continuous assessment and timely interventions. The study expresses hope for(L)'s well-being and confirms the importance of early identification, comprehensive evaluation, and interventions specifically designed to address anhedonia in the university environment and prioritize students' mental health within academic institutions.

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