

The Relationship Between Bipolar Spectrum Disorder and Creativity

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Abstract. Bipolar spectrum disorder as one of the most debated and studied topics in clinical psychology has been brought to the attention of the public because of its plausible connection to creativity. Recent events of celebrities claiming their onsets of bipolar episodes reinforces the belief of the connection and it will rely on the field of clinical psychology to give the public an unbiased and cautiously experimented theory to such an issue. This paper discusses the topic by defining the variations of bipolar spectrum disorder and creativity and evaluates the presenting the current recognition of the connection between the two subjects. Later, through examining the experimental processes of the behavioral, genetic psycho-neuron, and psychoanalytic perspectives, this paper provides a comprehensive view to the readers regarding the experimental process and each approach's strengths and potential flaws. Even though the experiments prove the correlation between bipolar spectrum disorder and creativity, the underlying symptoms of bipolar can only act as a catalyst for creativity. Future studies should try to further validate and solidify the experimental results and promote the findings to the public through appropriate media.

1 Introduction

With major celebrities and creative geniuses claiming that they are suffering from bipolar and other mood conditions, the topic of connections between manic-depressive symptomatic manifestation and eminent creativity is yet again to be debated. Historically renowned figures who reportedly suffered from bipolar disorder are artists like Vincent Van Gogh, authors like F. Scott Fitzgerald and Hemingway, poets like Walt Whitman and William Yeats, and musicians like Tchaikovsky [1]. It seems that one of the common denominators of being artistically expressive is having some psychotic symptoms. Therefore, it becomes the mission of the researchers and scholars to address the public misconception by presenting more thorough and reasonable explanations of the phenomenon.

Scholars in the field of clinical psychology have long been studying artistic temperament and creativity since the Freudian era. Nowadays, the trend in psychological research is largely experimental based but also with multiple perspectives that focus on their unique aspect. Besides the shared recognition of artistic creativity, most research approaches also agree upon personality traits such as openness to experience, impulsivity, anxiety, affective illness, ambition, and non-conformity. While in the less studied subject of scientist creativity, the personality trait also includes independence and autonomy [2].

This paper presents the current clinical definitions of bipolar spectrum disorder and its associated forms and epidemiological statistic according the fifth edition of the

Diagnostic and Statistical Manual of Mental Disorders (DSM-5) defines creativity and its current relevant research, and the potential correlation between bipolar spectrum disorder and creativity. Then, the paper presents the perspective of behavioral, genetic and neuropsychological, and psychoanalysis to see their various means of establishing the correlations.

2 Defining characteristics of Bipolar Disorder and creativity

Bipolar spectrum disorder is one of the most extensively studied and researched subjects in clinical psychology, with clearly defined diagnostic criteria, symptoms checklist, and epidemiological data recorded in the DSM-5. On the other hand, creativity is a term that various studies have vaguely defined, with only a few key points coincided. Therefore, current research on establishing the correlation between the two varies depending on how they define creativity and the foundational perspective they took.

2.1 Bipolar Spectrum Disorder

Bipolar disorder (BD) comprises three conditions - bipolar I, bipolar II, and cyclothymic disorder (also known as cyclothymia). The American Psychiatric Association gives the definitions of each category: BD I is a manic-depressive disorder that exists with and without psychotic episodes; BD II consists of depressive and manic episodes that alternate and are typically less severe and do not

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inhibit functioning; Cyclothymic disorder as a cyclic disorder that causes brief episodes of hypomania and depressive episodes. The prevalence rate of 12-month and lifetime BD I disorder according to the DSM-5 were 1.5% and 2.1% with no significant difference between men and women. To be diagnosed, the patient with bipolar disorder must have experienced manic or hypomanic episodes at least once. To be considered mania, the patient must experience a significant unusual change of behaviors in the category of inflated self-esteem or grandiosity, decreased need for sleep, increased talkativeness, racing thoughts, distracted easily, increase in goal-oriented activity or psychomotor agitation, engaging in activities that hold the potential for painful consequences [3].

2.2 Creativity

Creativity, in this case, refers to the capacity to generate adaptive and innovative ideas. That is, being creative does not exclusively appeal to romanticism or the virtuosity of inventing something but is also utilitarian and practical [4]. Although the research on creativity was limited before the 2000s, extensive substantive research focused on addressing the relevant issue regarding problem-solving, insight, intelligence, and talent in clinical and cognitive psychology.

3 Current clinical view of the relationship

The field of clinical psychology has long been curious about how BD traits are associated with artistic creativity. Researchers have continuously found that BD persistently shows a high heritability, creativity, and other positive traits prevalent in the unaffected first-degree relatives and the ones with milder symptoms of BD [5]. One of the interpretations of the association between the soft manifestation of bipolar psychosis symptoms and heightened creativity is the shared biological-cognitive-personality features, including cognitive disinhibition [6]. The inherited biological-cognitive-personality features make the person more prone to artistic inspiration and associated elevated moods. Considering having a first-degree relative with BD is one of the most significant risk factors explains the phenomenon of more creative minds in BD patients.

One other prevailing hypothesis considers creativity as a type of "compensatory advantage" for people with psychosis genes. Both eminent and non-eminent artistic BD patients reported that a slight mood elevation was most conducive to their creativity. Such a mental state helps them to unlock unusual ideas and create abnormal associations and combinations. The artistic expression they produced during that period may be vastly different compared to their work produced under non-elevated moods. In contrast, a full-blown mania or psychotic symptoms may lead to overblown thoughts and loss of judgment, which are not beneficial to creative projects [7].

3.1 Behavioral Perspective

The behavioral perspective intends to establish the connection between the mind and behaviors, one of the most popular and widely accepted approaches in studying this topic. Some studies use structured clinical interviews or extensive analysis of eminent artistic groups' written biographies retrospectively to form the correlation between the disorder and their creativity. The outcomes of those studies concluded that there is no definite correlation between being artistically expressive and psychopathologically ill, but rather, highly gifted individuals are more likely to experience psychic illness [8]. Other more recent studies also bolstered the conclusion with more current data collection. Ludwig conducted a study of an extensive review of biographies from 1960 to 1990 and identified 1005 eminent artists. He concludes that there was an overrepresentation of BD and schizophrenia with psychosis symptoms and depression among the artistic group he investigated [9]. Other studies focus on the population with manifested psychopathology and use the Barron-Welsh Art Scale (BWAS) to differ creative capability. Santosa et al. found that BP patient's scores were generally higher than patients with unipolar depression and non-patients [10].

Some researchers question the validity of the prior studies because their data collections are based on biographical data and small cohorts of identified patients. Therefore, they conducted population-based studies with an enlarged database scale dedicated to establishing a stronger connection. The study collected longitudinal Swedish total population registers (a unique combination of numbers) matched with hospitalized mental illness records and refined the group with IQ and professional occupations from 1969 to 2006. The results suggest that the difference in IQ was not accountable for the association between BD and creative occupations and supports the prior theory that creativity is familiarly coupled with BD and schizoaffective symptoms [11].

3.2 Genetic and Neuropsychological Perspective

Researchers from a genetic and neuropsychology perspective may view creativity as one of the positive BD traits that transcend within generations. They consider some aspects of the BD spectrum to confer advantages, but other severe expressions may be destructive to creative accomplishment. There are also speculations that certain bipolar risk variants confer advantages as positive traits according to the inverted-U-shape curve. Some clinically unaffected alleles may be beneficial in maintaining the risk alleles in the population. The shared genetic variation between BD patients and creative groups supports this finding [1].

To study the intergenerational transmission process of bipolar genes and creativity, the researchers compared creativity in BD I parents and their BD offspring and bipolar offspring with attention-deficit/hyperactivity disorder (ADHD) with a control group formed by healthy adult parents and healthy children. The subjects were then asked to complete BWAS, and the results indicate that

adults with BD scored significantly higher on the scale, and their offspring with either BD or ADHD scored higher than healthy control children. They also found that bipolar offspring with BD group's BWAS score was negatively correlated with the duration of illness. Because of the caveat of measuring creativity, genetic research may largely rely on the BWAS scales, which is why many scholars have criticized not having a unified metric system [12]. Although the results ultimately failed to be statistically significant after adjusting the age, they still supported the original hypothesis that children with and at a high risk of developing BD have higher creativity than healthy children [13].

Neuropsychologists not only tried to explain the phenomenon with genome-wide association data from BD and schizophrenia but also categorized the potential shared clinically defined traits that may collectively form creativity. Some of the shared genetic vulnerability includes cognitive disinhibition, novelty salience attentional style, and neural hyperconnectivity. With further interactions with IQ, working memory capacity, and cognitive flexibility, they may combine with the manipulated conscious awareness from other genetic vulnerabilities that, together, form original artistic ideas [14].

3.3 Psychoanalysis Perspective

Psychoanalytic theory may seem outdated, medieval, and primitive compared to some more scientifically oriented approaches, but its deductive reasoning and philosophical processes are irreplaceable in modern psychological research. Freud uses primary and secondary processes to explain creativity. While the primary process provides flexible thoughts to make divergent possible, the secondary process provides logic and seeks meaning within the person [15]. Self-esteem is another key topic in psychoanalysis closely related to interpersonal relationships. Being excluded from a group may lead to anxiety and thus may aspire the person to be famous and to be loved. Such motivation can be interpreted as an external ego [16]. Therefore, with a particularly exuberant secondary process of creativity because of the desperate need to be protected from underlying depression, the manic-depressive temperament may lead to creativity.

The repression produced by BD is recognized to interfere with the developmental process of creativity. As one of the goals of psychoanalytic and psychodynamic therapy, gaining access and awareness of the repressed material can be quintessential to helping BD patients. They also believe that the process of exploring and regulating the repression may develop more profound artistic expression in manic-depressive patients [17].

As a theory founded by Sigmund Freud in 1910, psychobiography is still relevant and useful when analyzing the complexity and subjectivity in artistic and scientific productivity. Since the 1950s, the approach has been modified, leaning toward eclectic, methodologically sound, and shifting its focus from artistic to scientific creativity [18]. Friedrich Nietzsche, one of philosophy's most important and controversial figures, has been studied

heavily to understand his eminent creativity. Using psychobiography, scholars may view Nietzsche's manifested manic-depressive episodes as "dyadic" or "intersubjective" in his creative process. The conditions Nietzsche has been fighting against in the creative process may well likely act as a "co-player" then a "counter-player" ", eventually forming tremendous idiosyncratic thinking as a philosopher and a forerunner of psychoanalysis [19].

4 Conclusion

The behavioral experiments largely rely on existing data and BWAS to evaluate creativity which may not be objective to another region considering its western origin. Even within the region of Northern Europe, the data failed to be statistically significant. The identified BD symptoms or ways to evaluate creativity may be drastically different due to socioeconomic and regional customs. They may have developed different versions of the clinical checklist and, therefore, the symptom of BD patients may vary. Future researchers could try to include more cases and data or conduct interviews with clinicians and patients from other regions of the world to gain a more comprehensive understanding.

Neuropsychological and genetic research cannot refute the environmental influence on creative minds. It would require careful observation and symptom recording for a period for each subject. Without doing so, the research would lack a persistent understanding of the patient's condition and how their creativity would be expressed. Future studies with this approach could also consider elements such as age and gender. Although the epidemiology of BD does not differ tremendously, the difference in creativity would be a worthy subject.

It's crucial for future research on this topic to unify the standards of creativity. The current scale developed by researchers may not be comprehensive enough and interviewing each subject by clinicians is not obtainable. There will be a standardized categorical manual for creativity to be efficient. It's also important to specify whether the research focuses on scientific or artistic creativity.

This review paper concludes that there are correlations between creativity and BD because some of the BD symptoms may stimulate or aspire artists or scientists to think outside of the box. Modern psychology is capable of providing the categorical and dimensional definitions of BD symptoms and, therefore, capable of synthesizing the connection with creativity more scientifically. The public perception of creative geniuses naturally associated with mental disorders or psychotic symptoms is not objective and stereotypical. There are still no causal links to be found between BD and creativity but rather acts as a catalyze or assists the artists to break certain boundaries occasionally. The psychological approaches mentioned in this paper all have limitations that are insufficient to give a definitive conclusion. With future repetition such as using physiological monitoring or hypothesizing differently, the results would be more applicable and reliable.

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