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Review Article

Pseudologica Fantastica: Evidence-Based Research Elucidating the Pathophysiology and Presentation of Pathological Lying

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Abstract

Pseudologica fantastica is also known as pathological lying or mythomania. It can be understood as a mental disorder with a compulsive urge to lie about situations that are either big or small. The frequency of lying varies depending on the scenario in which people are exposed. Every day, a human tells an average of 1.65 lies; however, most are listed as white lies, which are occasional and considered harmless, without mischievous intent, and are often told to avoid another person's feelings or any trouble. In contrast, pathological lies are compulsive and are expressed frequently for no apparent gain or reason. Usually, the person is not daunted by the risk or guilt of being confronted.

Pathological lying is usually triggered by guilt or shame to avoid any arising or possible conflict. However, pseudologia fantastica is generally characterized by creating dramatic and bright stories to impress the surrounding people. If any new question is raised on them, they tend to make a supplemental story. This path leads the recipient to believe the liar's deceptions. Detection and confirmation of a pathological lying diagnosis is still difficult and requires in-depth modifications to the prepared assessment procedures. Delusional and other psychotic disorders may present differently if the patient has complete conviction in the unreal and eccentric stories. However, the thoughts are well-organized, and devised tales do not attain the conviction level classified as delusional. This review covers an overview of pathological lying and specific aspects of its definition, characterization, pseudo dynamics, potential diagnosis, and treatment.

Keywords: *Delusion; Impaired Reality; Mythomania; Opioids; Psychic Health; Substance Abuse*

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Abbreviations

APD: Antisocial Personality Disorder; BPD: Borderline Personality Disorder; CNS: Central Nervous System; EEG: Electroencephalogram; NPD: Narcissistic Personality Disorder; PTSD: Post-Traumatic Stress Disorder

Introduction

Historical perspective regarding *pseudologica fantastica*

Pseudologica fantastica is rare; however, it exhibits the phenomena of clinical psychiatry. Although it has been defined as a psychotic phenomenon, recognized for over a century, it remains a scantily understood concept [1]. German psychiatrist Anton Delbrück first coined the term in 1891, which expresses the behavioral characteristics of an individual telling outrageous lies, regarded as pathological lies [2]. The common name was "mythomania" in the early centuries, often interchangeably [2–5]. However, few other researchers argued over the term 'pathological lying' and stated that it is only one subtype of various types of lying [6–9]. These interactions and discussions created controversial circumstances regarding the topic; thus, clarity could not be attained. However, researchers did find striking similarities and uniformity around center-stage features, including a conspicuous inclination toward lying [10,11]. Over the period, the consensus has not reached a significant zone of understanding for defining the concept. Nevertheless, many professionals and researchers continue using the definition and concept proposed by Healy and Healy over a century ago. Healy., *et al*. (1915) described pathological lying as "falsification entirely disproportionate to any discernible [evidence] end in [this] view may be extensive and very complicated, manifesting over the years or even a lifetime, in the absence of definite insanity, feeblemindedness or epilepsy" [2].

Eminent psychiatrists have wondered if pathological liars can identify their superficial and self-created stories as false or true. The notions listed in the literature are directed toward pathological lying and reality-testing impairment. Those researchers—who supported impaired reality testing—examined the progression of pathological lying, stating that it could not be differentiated from a delusion since it has the value of an authentic experience for the liar [12,13]. The lie and tale are so strong that they ultimately win over the pathological liar, the person seems to be under the script's control, and the person's real identity seems to be lost. Meunier (1904) reported that the 'used-to-be normal' person tends to reappear only in intervals, which progress to the symptoms of systematic delirium [14].

The consciousness of the actual thinking mind becomes clouded, and lies are described as unplanned and impulsive, which tends to seize the identity of the pathological liar suddenly. Those who supported impaired reality testing revealed more elaborate lies in the pathological mind than ordinary or normative lies, readily leaving the grounding of reality [13].

Those who opposed impaired reality testing opine that the attention of a pathological liar's mind is energetically drawn to the framework of their lies, partial recognition of the falseness can be achieved, and this is per the degree of the willfulness of the liar [9]. Therefore, pseudologia fantastica is illustrated as a daydream and fantasy lie, which is communicated in the form of reality, wherein the formed lie could be self-gratitude or for pleasure and not any significant gain. It is expressed as the intermediary stage between psychic health and the occurrence of neurosis [4].

The review provides some of the major elements and components that are believed to characterize a pathological liar or, at the very least, create a public image and presentation of what it is or can be. However, it is questionable whether pathological lying is always an unconscious act or the person has control, such as lying provoked by any external reason.

Case studies

Dike., *et al*. (2005) reported a case from a courtroom where a judge suspected a defendant of suffering from pseudologia fantastica, which was depicted as storytelling, often having a matrix of fantasy and facts interwoven with each other [1]. Birch., *et al*. (2006) reported

a famous case of a 22-year-old woman who used to frequently make dramatic accusations against her neighbors or acquaintances for no apparent reason. She possessed an unusual ability to convince others to collaborate in lying so that it seemed a well-structured portrayed story with all the characters performing their parts. Her lies eventually led to several criminal charges, resulting in several prison terms ranging from months to years before being disproven [15].

Frierson., *et al*. (2017) reported the case of a mid-thirty-year-old man charged with three criminal cases, including domestic violence and malicious injury. He was monitored under a 15-day psychiatric and forensic evaluation in the hospital, showing dramatic changes. He presented symptoms of depression, apnea, tearful episodes, mood disorders, suicidal thinking, and hopelessness. The presentation was aligned with examples available in the literature—as no gains were noted from the event falsifications. The 15-day evaluation was necessary to rule out all factors, and psychosis was not the sole reason [16].

In the emergency department, psychiatrists frequently encounter deceptive behavior. In another case reported by Thom., *et al*. (2017) of a 28-year-old male who presented himself to the emergency room with abdominal pain, and tests later revealed major depressive symptoms and concussions, hepatitis C, and chronic back pain. The patient was shown to have poor academic performance and past medical history revealed multiple concussions while playing football. After graduation, he reported increased use of narcotics and a lack of employment, which increased his opioid use. With the medication, he still felt depressed and unsure of whether he would be able to maintain safety in the community [17].

Gey., *et al*. (2020) reported a 37-year-old military soldier with hypogonadism, ulcerative colitis, anxiety, depression, opioid abuse, alcohol dependence, and post-traumatic stress disorder (PTSD). The eventual patient was taken to a psychiatric department due to a self-inflicted head trauma after losing consciousness. The soldier had increased anxiety with flashbacks of military combat, which led to severe insomnia.

In this disturbed state, the patient intentionally lacerated himself by striking his arms and head against the wall until he was unconscious—contemplating suicide. Although the patient had been receiving therapy for several months, he continually misrepresented many of his life events to medical providers. Note that this misrepresentation underlines the importance of gathering collateral information from family, friends, and co-workers [18].

Discussion

Prime characteristics and manifestations in humans

Psychiatric conditions that have been associated with deception include confabulation, borderline personality disorders, factitious disorder, antisocial personality disorder, and malingering. As per Dike (2005), pathological lying is sometimes delusional; however, they may not always be associated with each other [13]. Pathological lying is different from prolific or normative lying. It has a prevalence rate of 8 – 13%, which is a small percentage of humans who express symptoms of pathological lying, causing a significant level of distress, danger, and impaired functioning.

Clinical studies support the consideration of pathological lying as a diagnosis separate from a comorbid mental/psychiatric disorder [19]. Following a century of its initial definition, there have been many cases and reports on pseudologia fantastica, and subsequent reviews [8,9,11,20] have identified the following (Table 1) key characteristics and scientifically recognized traits of a pathological liar.

Sl No	Characteristics and traits
1	Great storytellers with vivid, dramatic, fantastic, and detailed fiction
2	Lies can be convincing since they tend to portray themselves as natural performers.
3	Often tend to portray themselves as a victim or a hero
4	Repeating the same lies over the period, they tend to identify their lies as realities.
5	On confronting or discussing, they tend to speak restlessly without being specific to the question and thus act disproportionately without stating a clear objective.

Table 1: *Key characteristics and traits of a pathological liar.*

Pathological lying is distinct from normative lying since it contains three key elements: a) awareness of false statements or confirmations; b) conscious intention to deceive any person; c) preconceived goal or defined purpose (Figure 1) [21].

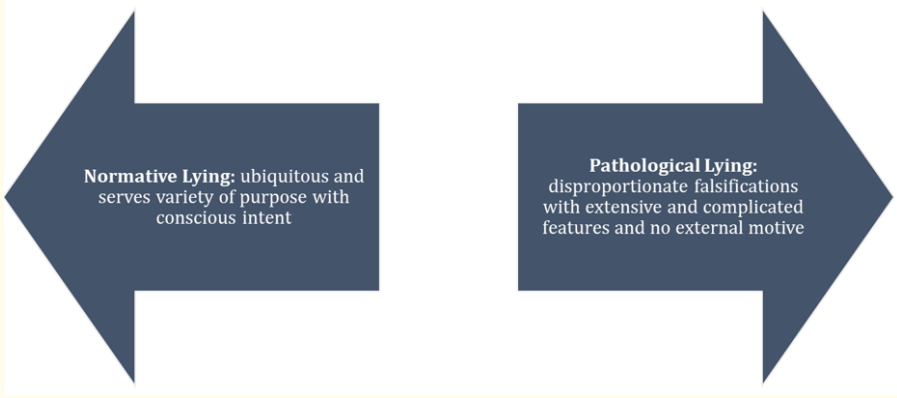

Figure 1: *The fundamental difference between normative and pathological lying.*

Pathological lying is also compared to 'pseudo lying'—symptoms primarily expressed in children with a fantasy world and dreamland. The fantasy used by children to deny reality is an essential aspect of self-development; however, if it continues to progress in adulthood, it becomes a pathological aspect. Ford., *et al*. (1988) proposed that childhood fixates on the ego of a pathological liar [22]. King., *et al*. (1988) suggested that the pseudologue of average intellect might have superior verbal abilities.

Of all pathological liars, approximately 40% have had a history of brain disorders, especially related to the central nervous system (CNS), such as epilepsy, head trauma, abnormal electroencephalogram (EEG), or infection of the CNS [11]. Pathological lying is commonly associated with a psychiatric or mental disorder. There is no clear evidence of storytelling and extreme deception to suspect a genetic component and question whether dishonesty is hereditary. Epidemiology suggests that at least 30% of the patients have had chaotic environments at home.

The occurrence is not gender-specific and has been the same in men and women [2,11]. The average onset age of pathological lying is 21 years when the level of intelligence is average or above it [23].

Pathological lying is different from 'normal' lying from a quantity and quality perspective. Quantitatively, it must be frequent, chronic, and excessive. It reaches a stage where it becomes impulsive and eventually gets out of control [2,10,11]. Regarding chronicity, some psy-

chiatrists noted the persistence from adolescence or early adulthood [3]. King and Ford (1988) reviewed 72 cases, reporting the average age of onset to be 16 years and that of discovery at 22 years [11].

Generally, pathological lying manifests more frequently with traits than episodes [2]. In describing the core characteristics of pathological lying, it is imperative to differentiate it from delusions and hallucinations. The pseudologues become so invested in their lies and alternative reality that they cannot discriminate between reality and fantasy [3,8,11].

Also, many researchers argue of the association with any significant abnormality, such as low intelligence or confabulation. They are often unable to consciously admit to their falsification. Thus, pathological lying is similar to delusions; however, distinct from pseudologia fantasica [2,11]. While some researchers found neurological defects associated with pathological lying, Healy and Healy (1915) asserted that pathological liars could not be described as feebleminded [21,24], insane, or epileptic [2]. Wiersma (1993) recorded less frequency of patients with mythomania presenting the symptoms [9].

The epidemiology of pathological lying is scant, with minimal recorded data to explain demographics, prevalence, and other parameters. Since the first case was reported almost a century ago, researchers agree on the low prevalence among the general population exhibiting any of the core characteristics of pathological lying.

To date, only Healy and Healy (1915) performed an extensive study of 1,000 juvenile offenders, of whom 104 males (15% of the total male enrolled population) and 80 females (26% of the total female enrolled population) displayed frequent lies with notorious activities. Among this count, only 8 or 10 (approximately 1% of the total enrolled population) exhibited a consistent pattern of lying [2].

King and Ford (1988) also reviewed 72 cases and included equal gender distribution in the study. They recorded a higher frequency of females with consistent lying than males, and the incidence of the first report typically occurred during adolescence. In conversing to determine their intellectual scale, patients with pathological lying symptoms demonstrated superior verbal abilities to performance abilities.

Nearly half of the enrolled population was associated with crimes such as theft, plagiarism, forgery, and swindling. About 20% of the population had a history of hospitalization secondary to psychiatric problems or treatments. Approximately 30% reported a chaotic environment at home with a parent or other family member that presented symptoms of mental disturbance [11].

Different types of pathological lying

Pathological lying is associated with the symptoms of specific personality disorders and can be further divided into subtypes (Figure 2) [8,25]:

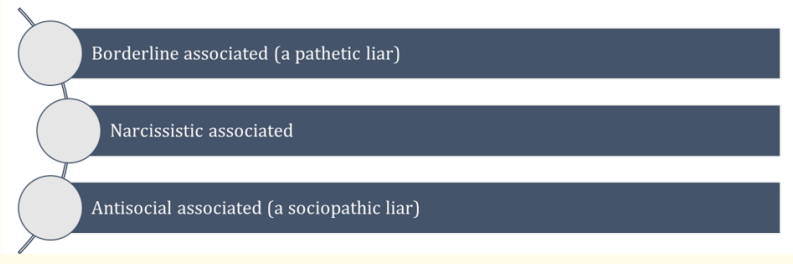

Figure 2: *Subtypes of pathological liar/lying.*

1. Borderline personality disorder (BPD) or the pathetic liar: A person with a BPD condition finds difficulty regulating their emotions and may demonstrate severe and irregular mood swings with greater instability and insecurity. They are not able to sense in any stable manner.

2. Narcissistic personality disorder (NPD) or the narcissistic liar: A person with NPD has a fantasy world of immense self-importance. They seek the continuous need for admiration and superior treatment.

3. Antisocial personality disorder (APD) or the sociopathic liar: Researchers have stated that pathological lying is often seen in people with APD, which is not accurately confirmed. Nonetheless, a person with APD often lies for personal gain and pleasure.

A person with BPD or NPD may tell fantasy lies to distort the surrounding reality and align with the emotions they feel at that time instead of illustrating the facts. These behaviors significantly impact their relationship with friends and family, thus disrupting interpersonal relationships [8,25].

Nosology

Pseudologia fantastica is not coded or listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM–5). Historically, it has been linked to factitious disorders—manifesting as the falsification of psychological or physical symptoms when no external rewards are subjected. Pseudologia fantastica has been linked with malingering, listed in DSM-5 as a V-code.

The American Psychiatric Association defined malingering is as 'the intentional production of false or grossly exaggerated physical or psychological symptoms, motivated by external incentives such as avoiding military duty, avoiding work, obtaining financial compensation, avoiding criminal prosecution, or obtaining drugs' [26]. However, malingering is generally adaptive and instrumental, whereas pseudologic tales are excessively colorful and dramatic.

Pathological lying cases are consistent with comorbid substance use disorder [27], delay in development stages [28], personality disorder, behavioral and mood disorders [8], disturbance secondary to gender issues [29], and PTSD [30].

Psychodynamics

Related reviews of various case stories reveal pseudo-self-confidence in the face of shame as a common theme [28].

Teaford., *et al*. (2002) studied a 14-year-old female who had pervasive developmental delay, becoming self-aware of lagging behind her peers in academics. She began scripting glorifying stories of surpassing her peers' intelligence and academic performance [28].

Snyder (1986) shared another story of an 18-year-old boy crafting stories about fascinating connections with drug dealers whenever asked about his inadequacy compared to his brothers [8]. These pseudologic tales can be conceptualized as constellations and manifestations owing to primitive defenses toward painful events, which are the common symptoms of any psychiatric disorder. Pseudologues tend to reject reality and actively create an alternative reality to fulfill their desires and requirements.

Pseudologia fantastica involves drastic modification in individuals' identities to relieve their distress. This dissociation or change in character could be temporary depending on the coping scenario.

Diagnosis and treatment

Pathological lying is not yet a recognized condition, and, therefore, there are no standard treatments for its cure. The current diagnostic procedure includes the suspicion of deception based on comorbid psychological and physical problems [15]. If the treating clinician

suspects a directly causative medical condition, they may proceed or suggest treatment for that condition, such as psychotherapy or medications for personality disorders.

Pathological lying is not a standalone diagnosis and may present symptoms of narcissistic personality disorder, antisocial personality disorder, and psychopathy [11]. The optimal strategy to manage pseudologues is unclear to a large extent, with controversies surrounding the condition owing to the diverse depiction of observations. The other primary reason could also be the lack of detailed clinical research and availability of clinical trials, and there are only a few case studies to note and illustrate.

Two different approaches have been opted to treat a pseudologue: a) confronting the person for depictions created by them or b) displaying disinterest in their bright tales, however, maintaining the interest in the patient. Both Teaford., *et al*. (2002) [28] and Hoyer (1959) reported success following the latter approach and a continuous increase in the frequency of pseudologic output upon confrontation [22,28].

While treating a patient with pseudologia, clinicians should consider that given the challenging scenarios and the excessive push by confrontation, the patient may evoke frustration and resentment [8], which might divert the current evaluation towards a different treatment with the same behavioral path instead of changing behavior.

Citing the literature on the factitious disorder, Hollender and Harsh (1970) observed the conversational breakdown with the patient, which led them to include a primary care physician so that a psychiatrist could avoid the role of a prosecutor [31]. Eisendrath (1989) assessed a patient with pseudologia and proposed 'inexact interpretation'—referring to incomplete interpretation, albeit partially correct, directs to dynamics and excludes confrontation with false symptoms. The underlying behavior serves a crucial psychic function that helps patients feel safe so that they can recover.

Furthermore, understanding pseudologues without confronting them directly on the heap is more likely to be a successful approach rather than an approach with a prosecutor role [32]. In the current scenario, psychotherapy is the only treatment available for pseudologia fantastica, with the participation of pharmacological interventions to improve comorbid symptoms.

Summary

Although, in 1891, Anton Delbruck included the term 'pseudologia fantastica' in medical literature by observing some patients lying abnormally and disproportionately. However, he could not classify the condition as a psychiatric disorder [33]. According to the psychopathy checklist, pathological lying is a primary factor [34]. Criminal defendants with pathological lying characteristics can present some challenges before forensic evaluators, which they can find unique to understand and evaluate [35].

Thus, any availability of collateral information is necessary to differentiate fact from fiction [16]. It may be noticed that people who exhibit the classic characteristics of pathological lying may or may not prominently show any other symptoms required to confirm the diagnosis, making it easy to understand and quote. As has been noted by some past researchers, none of the personality-related symptoms and disorders are adequately prominent to the pretense that occurs in pathological lying [2,3,9–11].

These insights highlight that pathological lying can be defended based on insane behavior. In some instances, pathological lying can be considered the basis for insanity, where deception is an integral part of any criminalized act [36]. However, such a is unlikely to be successful unless the court prepares pieces of evidence to list pathological lying as a causative factor in the category of genuine mental illness and take the necessary steps ahead [16].

Conclusion

With more studies, including epidemiological data, researchers can posit improved assessment and diagnostic measures, helping to assess the response. There is a need to spread awareness and education of this common phenomenon for mental and health care workers, and those in the legal and law enforcement professions. This heightened awareness will establish a referral relationship and prepare the interventions that might facilitate psychotherapy. Developing a supportive environment filled with emotions offering self-expression, impulsive control training, and adaptive advantages in truthfulness are needed.

Conflict of Interest Statement

The authors declare that this paper was written without any commercial or financial relationship that could be construed as a potential conflict of interest.

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Volume 11 Issue 8 August 2022