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CASE REPORT

# The Role of Recurrent Psychosocial Stressors as a Trigger for Relapse in Paranoid Schizophrenia: A Case Study

M. Djali Yusup Iskandar Muda[1], Hafid Algristian[2]*, Marintik Ilahi[3]

## ABSTRACT

**Introduction:** Schizophrenia is a chronic mental disorder that can be understood through the diathesis–stress model, in which biological vulnerability interacts with environmental stressors to trigger illness onset and relapse. Psychosocial stressors, including interpersonal conflict and failure to achieve significant life goals, are recognized as important precipitants of relapse. This case report aims to illustrate the role of recurrent psychosocial stressors in triggering relapse in a patient with paranoid schizophrenia. **Methods:** This study employed a descriptive case report design. Data were obtained through direct anamnesis, physical examination, and psychiatric status examination of a 28-year-old male patient who presented to the Psychiatric Outpatient Clinic of Jemursari Islamic Hospital, Surabaya, on October 8, 2025. The case was analyzed using the diathesis–stress model to explain the mechanism of relapse. **Results:** The patient was diagnosed with Paranoid Schizophrenia in Incomplete Remission (Axis I) and Emotionally Unstable Personality Disorder, Borderline Type (Axis II). He had longstanding vulnerabilities, including chronic family conflict since childhood and substance use beginning in adolescence. Relapse of psychotic symptoms in 2021 was precipitated by a major psychosocial stressor—failure in a highly valued career selection process. This event triggered emotional decompensation, a depressive episode, and relapse into substance use as a maladaptive coping strategy, ultimately leading to the re-emergence of paranoid delusions and auditory hallucinations. This case demonstrates that relapse represents a multifactorial process resulting from the interaction between pre-existing vulnerability and acute psychosocial stressors. **Conclusion:** Psychosocial stressors play a critical role in triggering relapse in individuals vulnerable to schizophrenia. Effective management should extend beyond pharmacotherapy to include psychosocial interventions focused on stress management and the development of adaptive coping strategies to reduce relapse risk and improve long-term outcomes.

**Keywords:** Schizophrenia; Relapse; Diathesis–Stress; Psychosocial Intervention.

1. Faculty of medicine, Universitas Nahdlatul Ulama Surabaya, Surabaya, Indonesia
2. Department of Psychiatry, Universitas Nahdlatul Ulama Surabaya, Surabaya, Indonesia
3. Dr. Radjiman Wediodiningrat Lawang Hospital, Malang, Indonesia

* ✉ email: r.hafid@unusa.ac.id

## INTRODUCTION

Schizophrenia is a severe and often disabling chronic mental illness characterized by fundamental distortions in thinking, perception, and affect that is inappropriate or blunted (Sadock, Sadock and Ruiz, 2015). Patients with schizophrenia often struggle to distinguish between reality and imagination, have difficulty responding appropriately to their social environment, and experience a decline in daily functioning. Schizophrenia affects approximately 24 million people, or 1 in 300, worldwide (World Health Organization, 2022). The 2023 Indonesian Health Survey (SKI) reported that the prevalence of schizophrenia/psychosis in Indonesia is 5.5 per 1,000 households, leading to a significant impact on productivity, quality of life, and social and economic burden for both patients and their families (Kementerian Kesehatan RI, 2018).

The modern understanding of schizophrenia's multifactorial etiology integrates genetic, neurobiological, psychological, and social factors within a comprehensive biopsychosocial approach (Sadock and Ruiz, 2015). The dominant theoretical framework for explaining this interaction is the diathesis-stress model. This model posits that individuals possess a neurobiological or genetic vulnerability (*diathesis*) to schizophrenia, but the onset or relapse of the illness is only triggered when they are exposed to environmental or psychosocial stressors (*stress*) (Corcoran et al., 2017).

A substantial body of modern research consistently confirms that stressful life events play a crucial role in triggering the first psychotic episode and subsequent relapses in vulnerable individuals (Corcoran et al., 2017). These stressors can be acute, such as job loss, or chronic, such as prolonged family conflict. Specifically, a family environment with high Expressed Emotion (EE)—characterized by criticism, hostility, and emotional over-involvement—has been shown to significantly increase the risk of relapse (Li et al., 2021).

Although this model is widely accepted, an in-depth analysis of how a specific series of stressors chronologically impacts an individual's clinical course can provide valuable insights for clinicians. This case report aims to tangibly illustrate the application of the diathesis-stress model in a patient with paranoid schizophrenia by analyzing the role of recurrent psychosocial stressors as precipitating and perpetuating factors for his symptoms.

## METHODS

### Research Type

This study utilized a case study design with a qualitative descriptive approach. This design was chosen to provide a deep and holistic overview of the patient's illness trajectory, clinical manifestations, and the factors influencing his relapse.

### Population and Sample/Informants

The research subject was a 28-year-old male diagnosed with Paranoid Schizophrenia. The participant was selected purposively based on the relevance of his case to the research objective: to analyze the interaction between vulnerability (diathesis) and environmental triggers (stressors).

### Research Location

Data were collected on October 8, 2025, at the Psychiatric Outpatient Clinic of Jemursari Islamic Hospital (RSI) Surabaya, located at Jl. Raya Jemursari No. 51-57, Surabaya, East Java. This location was chosen as it is where the patient receives clinical care, allowing the researcher to access relevant medical records.

### Instrumentation or Tools

Several instruments were used for data collection in this study:

1. Anamnesis: Conducted directly with the patient to explore his chief complaints,

history of present illness, past psychiatric history, and detailed personal history.
2. Physical Examination: Included assessment of vital signs (blood pressure, temperature, respiration, pulse, and oxygen saturation) to rule out any underlying general medical conditions.
3. Psychiatric Status Examination: A comprehensive evaluation of the patient's mental state, covering general appearance, behavior, orientation, perception, thought processes, mood and affect, and insight.
4. Auxiliary Psychiatric Assessments: Utilized structured questionnaires, namely The Brief COPE to assess coping strategies and the Perceived Stress Scale (PSS) to measure the patient's perceived stress level.

### Data Collection Procedures

Data were gathered through a direct interview with the patient on October 8, 2025, when he presented for a consultation. The process included structured and unstructured clinical interviews, a physical examination, and a comprehensive psychiatric status examination. Subsequently, the patient was asked to complete The Brief COPE and PSS questionnaires. All collected data were documented in detail for analysis.

### Data Analysis

The collected data were analyzed descriptively. A multi-axial diagnosis was established based on the criteria from the Indonesian Classification and Diagnosis of Mental Disorders (PPDGJ-III) and the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Further analysis focused on applying the diathesis-stress model framework to interpret the interaction between vulnerability factors (diathesis) and environmental triggers (stressors) in the patient's relapse mechanism.

### Ethical Approval

Written informed consent was obtained from the patient prior to the clinical interview and examination for this case report. All identifying information has been anonymized to ensure patient confidentiality. Formal ethical committee approval was not required for this single case report in accordance with institutional policy.

## CASE

### Case Presentation

Mr. M, a 28-year-old male, presented himself at the Psychiatric Outpatient Clinic on October 8, 2025, with complaints of confusion and fear. The patient was well-groomed, cooperative, and exhibited a flat affect.

These complaints began in the context of a history of drug and alcohol use. His substance use started in the 10th grade, triggered by peer influence and family problems (his parents divorced when he was in the 4th grade). Substances he had used included methamphetamine, marijuana, psychedelic mushrooms, cough syrup, and various pharmacy pills. He achieved total abstinence in 2019 following rehabilitation at a mental hospital. He is also a heavy smoker (approximately 20 cigarettes per day) and feels restless if he does not smoke.

The first paranoid symptoms appeared in 2016. At that time, while intoxicated, he believed a coconut ice vendor was going to attack him with a machete and thought he was going to be poisoned. He was taken to a mental hospital by his older brother, where he experienced more severe persecutory delusions, such as believing he would be given a lethal injection. His paranoid symptoms improved with treatment and subsided in 2018. However, the symptoms re-emerged in early 2025, where he felt fearful of being attacked upon seeing people carrying machetes, although he is now better able to control himself.

The patient also had a history of a major depressive episode in 2021 after failing the selection processes for the Civil Servant

Candidacy (CPNS) and the Military Officer Program (Bintara-PK), which were his aspirations. He felt devastated, received no family support, cried for two weeks, and directed his anger towards his mother and sister, even resorting to physical violence against his mother. During this period, he relapsed on alcohol and tried "gorilla tobacco" (a synthetic cannabinoid). He also had suicidal ideations. Consequently, he was readmitted to the mental hospital and treated for over two weeks.

Auditory hallucinations emerged in 2021 while he was staying at an Islamic boarding school. He felt he could hear whispers or the inner thoughts of others from a distance (believing he had "telepathy"), although he was aware that this was not real. This symptom persists to this day, typically occurring upon waking, but it does not significantly interfere with his daily activities.

**Personal History**

The patient is the youngest of four siblings from a religious family. Since childhood, the patient frequently witnessed conflicts between their parents, which culminated in their divorce in 2006. Following the divorce, the patient has resided with their mother and older siblings. In the patient's perspective, the father figure was perceived as kind and supportive. The patient's father passed away in 2010. In contrast, the patient's relationship with their mother and siblings tends to be conflict-ridden, often arising from minor issues, such as being instructed to pray (sholat). This disharmonious relationship is attributed to the patient's feeling of never having received adequate support from their family. For instance, in 2021, when the patient failed the Civil Servant (CPNS) and Non-Commissioned Officer (Bintara-PK) selection examinations, they were severely distressed, feeling unsupported by their family in achieving their aspirations.

The patient has completed a Bachelor of Law degree (S1 Hukum) and is currently enrolled in the 9th semester of a Master's program in Notary Studies (S2 Kenotariatan), having previously taken a 3-semester leave of absence. Their employment history is unstable, characterized by frequent job changes (e.g., sales, internship at a notary office) before eventually interning as a lawyer for two years. However, having not yet secured any clients, the patient currently fills their spare time by working as an online motorcycle taxi driver (ojek online). The patient is unmarried.

**Physical Examination**

The patient's general condition was good, with full consciousness. Vital signs were as follows: Blood pressure 108/79 mmHg; Pulse 77 bpm; Respiration 18x/minute; Temperature 36.5 °C; Oxygen saturation 98%.

The patient's general condition is good, with full consciousness. Vital signs: Blood pressure 108/79 mmHg; Pulse 77x/minute; Respiration 18x/minute; Temperature 36.5 °C; Oxygen saturation 98%. On general appearance, the patient appeared consistent with their age, neatly dressed in a plain white long-sleeved shirt, black trousers, and shoes. Stature was not overly tall, nutritional status was good, and the patient carried a black bag. The patient appeared confused but was cooperative during the examination. Eye contact was positive; verbal communication was relevant and fluent. Consciousness was clear. Orientation to time, place, and person was good. Immediate, short-term, and long-term memory were adequate. The patient also exhibited auditory hallucinations and optical illusions. The patient's thought process included: a) Form: non-realistic; b) Stream: adequate, slow; c) Content: persecutory delusions. The patient's mood was euthymic (good), while their affect was flat with occasional laughter, which was noted as appropriate (congruent). Volition for daily activities, social interaction, and work was good. Psychomotor activity appeared normal. The patient's insight was level 6, indicating

awareness of their illness and its cause, and willingness to seek treatment.

Ancillary psychiatric examinations performed included The Brief Cope questionnaire and the Perceived Stress Scale (PSS). The Brief Cope score was 70, indicating adaptive coping. However, the patient's coping mechanism was mixed. Since the onset of the illness, the patient's coping has been impulsive (maladaptive), characterized by being easily emotionally provoked, consuming illicit drugs and alcohol, and stealing. Recently, however, the coping mechanism has become more adaptive, characterized by surrender to God (Tawakkal) and acceptance of their current condition. The patient's PSS score was 18, indicating a moderate level of perceived stress.

Based on the anamnesis and psychiatric examination, the multi-axial diagnosis is as follows: Axis I: F20.04 Paranoid Schizophrenia in Incomplete Remission; Axis II: F60.31 Emotionally Unstable Personality Disorder, Borderline Type; Axis III: Z03.2 No diagnosis (no somatic diagnosis); Axis IV: Problems with primary support group; Axis V: Current GAF scale 61-70, and highest GAF scale in the past year 51-60.

## DISCUSSSION

### Clinical Symptoms

The diagnosis of Paranoid Schizophrenia with Incomplete Remission (F20.04) in Mr. M was established based on the Indonesian Classification and Diagnosis Guidelines for Mental Disorders (PPDGJ-III). The patient predominantly exhibited positive symptoms, namely persecutory delusions and auditory hallucinations. He experienced persistent persecutory delusions, including beliefs of being attacked or poisoned, which are core psychotic features that significantly affected his emotional state and behavior (American Psychiatric Association, 2022).

The patient also reported auditory hallucinations, described as hearing whispers or the perceived thoughts of others ("telepathy"). Hallucinations of a commenting or dialoguing nature are considered Schneider's first-rank symptoms and are strongly suggestive of schizophrenia (Tandon, 2021). Although the patient retained insight into the unreality of these experiences, their persistence indicated ongoing perceptual disturbance. Thought process abnormalities, including non-realistic thought form and slowed thought flow, suggested mild thought disorganization (Sadock & Ruiz, 2017)

During the initial psychotic episode and early relapse phase, the patient demonstrated negative symptoms such as social withdrawal, reduced motivation, and decreased quality of life. While these symptoms have partially improved, functional recovery remains incomplete, as reflected by disrupted academic progress and occupational instability.

Cognitive impairment, a core feature of schizophrenia affecting functional outcomes, was also evident. Mr. M showed deficits in attention and thought processing speed, which may be associated with long-term substance use and chronic stress exposure, potentially mediated by prolonged hypercortisolemia.

### The Diathesis–Stress Model in Schizophrenia

The diathesis–stress model is a central conceptual framework explaining the development of schizophrenia through the interaction between an underlying vulnerability (diathesis) and exposure to environmental stressors (stress). This model posits a cumulative effect, whereby individuals with high vulnerability may develop symptoms following relatively minor stressors, while those with lower vulnerability require more severe or prolonged stress exposure. This interaction has been conceptualized using the "vessel" analogy, in which diathesis determines stress tolerance capacity and symptoms emerge when

cumulative stress exceeds this threshold (Broome et al., 2018).

***The Concept of Diathesis (Vulnerability)***

Diathesis refers to an individual's innate biological or psychological susceptibility to mental disorders. In schizophrenia, vulnerability is predominantly neurobiological and genetic. Genetic factors play a major role, as having a first-degree relative with schizophrenia increases the risk up to tenfold, reflecting the cumulative impact of multiple genetic variants (Owen et al., 2016). Perinatal complications, including maternal infection, pre-eclampsia, and low birth weight, have also been consistently associated with increased schizophrenia risk due to their effects on neurodevelopment (Cannon et al., 2020). Additionally, neurodevelopmental disturbances involving neuronal migration, synaptogenesis, and synaptic pruning during adolescence may result in vulnerable brain circuitry that becomes clinically manifest in early adulthood (Jauhar et al., 2022).

In Mr. M, the primary diathesis is suspected to be neurobiological, underlying the diagnosis of Paranoid Schizophrenia (Axis I), despite the absence of a family history of psychosis. This vulnerability was likely compounded by long-standing psychological stress exposure since childhood, contributing to emotional dysregulation and the diagnosis of Emotionally Unstable Personality Disorder, Borderline Type (Axis II).

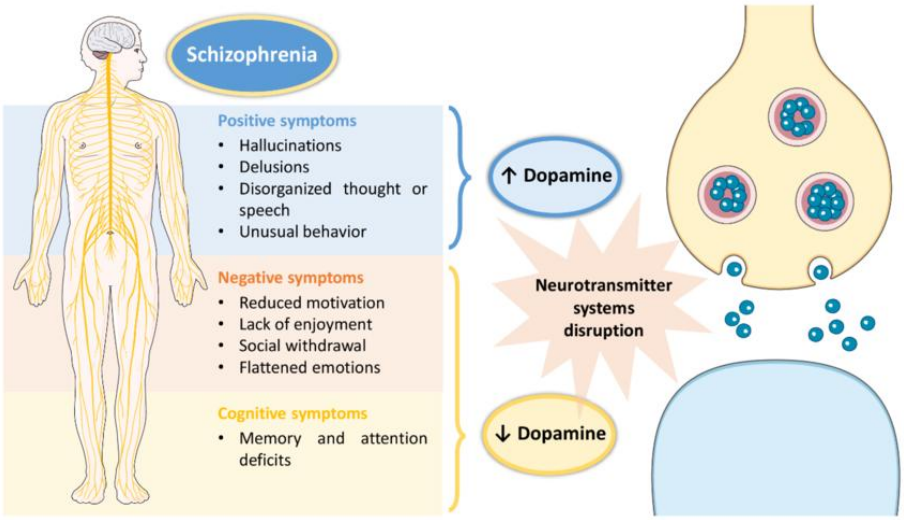



**Figure 1.** Clinical symptoms and brief mechanism of schizophrenia (Pires et al., 2022)

***The Concept of Stress (Triggers)***

Stress refers to environmental or psychological factors that challenge an individual's adaptive capacity. Psychosocial stressors are key components of the diathesis–stress model and act as catalysts that convert latent vulnerability into overt clinical symptoms. Extensive evidence demonstrates that stressful life events play a crucial role in triggering both first psychotic episodes and relapses in vulnerable individuals (Corcoran et al., 2017).

In this patient, stressors can be categorized into acute and chronic types. Acute stressors are sudden, high-intensity events of short duration, such as interpersonal conflict and failure in the civil servant selection (CPNS) process. In individuals with emotional instability, such conflicts may be perceived as particularly stressful and can lead to rapid psychological decompensation (Corcoran et al., 2017). In Mr. M, failure in the CPNS selection activated the underlying vulnerability and was

temporally associated with the emergence of auditory hallucinations.

Chronic stressors are persistent conditions that continuously deplete psychological resources and increase susceptibility to acute stressors. In this case, chronic stressors included long-standing family conflict, lack of emotional support, and parental divorce. Such environments are often characterized by high Expressed Emotion (EE), which has been shown to significantly increase relapse risk in schizophrenia. Meta-analytic evidence indicates that patients returning to high-EE family environments have nearly a threefold higher risk of relapse compared to those in low-EE settings (Li et al., 2021). These experiences likely contributed to insecure attachment patterns and emotional dysregulation characteristic of Borderline Personality Disorder (Axis II). Additionally, a history of long-term substance use constituted a chronic biological stressor, further exacerbating vulnerability and lowering the threshold for psychotic symptom emergence. Adolescent exposure to psychoactive substances, particularly cannabis, has been identified as an independent risk factor for psychosis through its effects on dopaminergic dysregulation (Di Forti et al., 2015).

**The Role of Diathesis–Stress in the Mechanism of Schizophrenia Relapse**

The relapse episode experienced by Mr. M in 2021 represents a classic manifestation of the diathesis–stress interaction. His vulnerability was multifactorial, consisting of an established neurobiological predisposition to schizophrenia, compounded by emotional instability related to borderline personality disorder. Previous psychotic episodes and long-term substance use likely contributed to neural sensitization, thereby lowering the threshold for relapse. In addition, prolonged antipsychotic exposure may induce dopaminergic adaptations, such as increased $D_2$ receptor number or sensitivity, which can predispose individuals to relapse when medication is reduced, changed, or discontinued through exaggerated dopaminergic responses.

The primary stressors precipitating relapse were the patient's failures in the civil servant (CPNS) and military (Bintara-PK) selection processes. For the patient, these events represented a collapse of long-held aspirations and were compounded by limited family support, resulting in marked psychological distress. This stress exposure activated neurobiological responses centered on the hypothalamic–pituitary–adrenal (HPA) axis. Both acute and chronic stressors can induce HPA axis hyperactivity, leading to elevated cortisol levels and disruption of dopaminergic regulation.

Elevated cortisol contributes to relapse through several mechanisms. First, stress-related glucocorticoid elevation increases dopamine synthesis and release in the striatum, particularly within the mesolimbic pathway, thereby facilitating the emergence of positive psychotic symptoms (Figure 1). Second, prolonged hypercortisolemia may exert neurotoxic effects, especially on the hippocampus, a key region for memory and stress regulation, which may contribute to cognitive deficits observed in this patient alongside the effects of long-term substance use (Belvederi et al., 2016).

Dopaminergic imbalance in schizophrenia involves multiple neural pathways. Hyperactivity in the mesolimbic pathway, mediated by increased dopamine release or heightened $D_2$ receptor sensitivity, underlies positive symptoms such as hallucinations and delusions, and is the primary target of antipsychotic treatment. In contrast, dopamine hypoactivity in the mesocortical pathway contributes to negative and cognitive symptoms, including apathy, anhedonia, and executive dysfunction. Dopamine blockade in the nigrostriatal pathway may result in extrapyramidal side effects, while disruption of dopaminergic

inhibition in the tuberoinfundibular pathway can lead to hyperprolactinemia and associated endocrine disturbances. Collectively, these mechanisms illustrate that schizophrenia relapse reflects not only mesolimbic dopamine excess but also broader dopaminergic dysregulation across multiple pathways, accounting for both clinical symptoms and treatment-related effects (Figure 2).

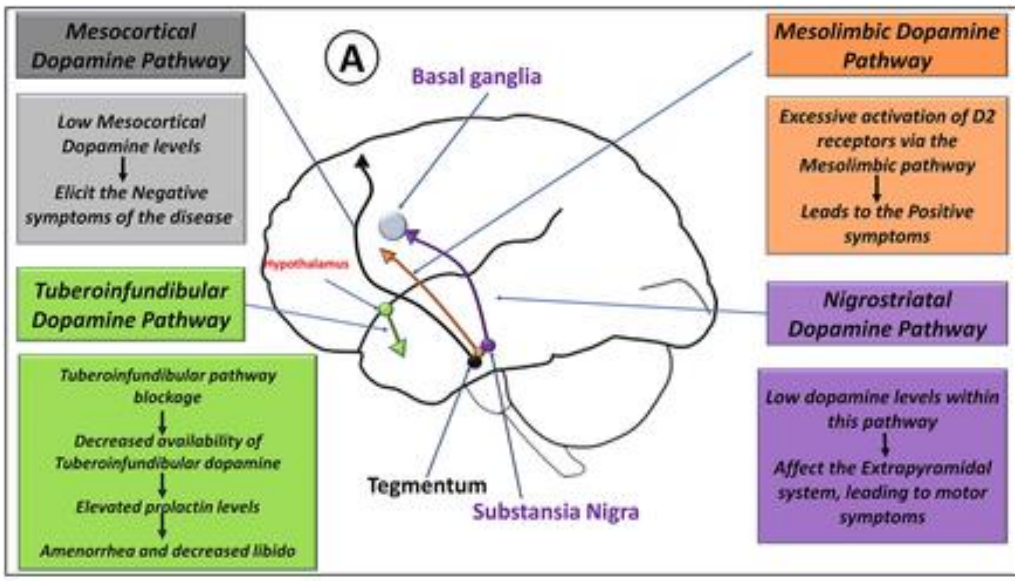



**Figure 2.** Pathophysiology of schizophrenia according to the dopamine hypothesis (Malik et al., 2023).

**Holistic Management of the Case**

Contemporary schizophrenia management emphasizes a holistic, personalized, and recovery-oriented approach that integrates pharmacological and psychosocial interventions to optimize both clinical and functional outcomes. This approach aims not only to reduce symptom severity but also to enhance quality of life, social functioning, and community participation (Galderisi et al., 2021).

**Pharmacotherapy**

Pharmacotherapy remains the cornerstone of schizophrenia treatment, particularly during acute phases. Second-generation antipsychotics (SGAs) are recommended as first-line agents due to their effectiveness in managing positive symptoms and their relatively lower risk of extrapyramidal side effects compared to first-generation antipsychotics (Keepers et al., 2020). Treatment should prioritize the lowest effective dose to minimize metabolic and other adverse effects. In cases of treatment-resistant schizophrenia, defined by inadequate response to at least two antipsychotic trials, clozapine remains the gold standard owing to its superior efficacy (Warnez & Al-Uzri, 2019).

**Psychosocial Interventions**

Evidence-based psychosocial interventions are essential adjuncts to pharmacotherapy and play a critical role in long-term recovery. In Mr. M's case, integrated psychosocial management is particularly important.

Cognitive Behavioral Therapy for Psychosis (CBTp) can help the patient develop coping strategies for persistent positive symptoms. Specifically, CBTp may address paranoid delusions by encouraging reality testing and alternative interpretations, as well as reduce distress associated with auditory hallucinations by fostering a more adaptive relationship with these experiences (Jauhar et al., 2022).

Psychoeducation and family interventions are strongly associated with reduced relapse risk. Although Mr. M's primary stressors stem from earlier family adversity, psychoeducation for his current support system remains essential to promote a low Expressed Emotion (EE) environment. Such interventions enhance early relapse recognition, improve communication, and support collaborative problem-solving, thereby serving as protective factors against future stressors (Li et al., 2021).

Psychosocial and vocational rehabilitation aims to restore social and occupational functioning. Social Skills Training can assist Mr. M in managing interpersonal difficulties related to paranoid ideation and borderline personality traits. In addition, the Individual Placement and Support (IPS) model may facilitate completion of his postgraduate studies in Notary Law and support his transition toward employment aligned with his educational background, thereby improving self-esteem and reducing financial stress (Killackey & Elkins, 2020).

Overall, the integration of pharmacological treatment with tailored psychosocial interventions enables symptom stabilization while promoting functional recovery and long-term resilience.

## CONCLUSION

This case report highlights the pivotal role of recurrent psychosocial stressors in precipitating relapse in a patient with paranoid schizophrenia. Failure to achieve significant life goals functioned as a major stressor, triggering emotional and behavioral dysregulation, including depressive symptoms and relapse into substance use, which ultimately led to the re-emergence of psychotic symptoms. This clinical course provides a clear illustration of the diathesis–stress model, demonstrating how underlying vulnerability interacts with environmental stressors to produce relapse. Consequently, schizophrenia management should not rely solely on pharmacotherapy. An integrated and comprehensive approach that incorporates psychosocial interventions—such as stress management, adaptive coping skills, and family support—is essential to reduce relapse risk and improve long-term clinical and functional outcomes.

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## CONFLICT OF INTEREST

The authors declare that there is no potential conflict of interest related to the research, writing, and/or publication of this article.

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