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# Dual Diagnosis: An Integrated Approach to Treatment: Evidence-based Clinical Practice Guidelines

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## Abstract

Dual diagnosis can be defined as the simultaneous or sequential existence of an addictive disorder and another mental disorder throughout the life cycle. It is a category not recognized within the main reference manuals for psychiatric diagnosis, which makes it a clinical entity of enormous psychiatric, family and social complexity. This paper offers an analysis of the concept, etiopathology of dual diagnosis based on a scientific literature review. It also shows in a synthesized manner the main therapeutic guidelines for the comprehensive approach to this and its various comorbid disorders (alcohol addiction, substance abuse, anxiety and depression, psychotic disorders or eating disorders).

**Keywords:** Dual diagnosis; Comorbid disorders; Co-occurring disorders; Therapeutic alternatives

## Introduction

Research in neurosciences, as recognized by the National Institute of Mental Health in the United States, (NIMH), has established that all mental illness is a brain disease [1]. For its part, the National Institute of Drug Abuse (NIDA) of the same country has indicated that any addiction is undoubtedly a brain disease, and has definitively rejected that it is a voluntary failure of character [2]. Thus, the relationship between substance use and mental disorders has been known for a long time in clinical practice: smoking and schizophrenia or alcoholism and other pathologies appear together in a habitual manner [3], correctly indicates that the relationship between alcohol and psychopathology in general was a reason for reflection for many.

From the woman who drank in her house secretly to "improve her dysphoria", to the shy boy in the club who needs three glasses to start a conversation with a girl. These two simple and frequent examples are complicated when dependence (a concept linked to all drugs except hallucinogens) is linked to genetic predisposition or stress. The set of factors to be considered is so broad that the first affirmation we can make is that we are facing a clinical situation of immense variability and complexity.

Dual pathology has been defined as the coexistence of a substance use disorder along with another mental disorder. Given the high prevalence of this situation of comorbidity, the term is reserved for disorders due to the abuse of dependence upon alcohol and/or illegal toxins that occur in a comorbid manner with serious psychiatric disorders, especially in the psychotic and/or affective sphere. The importance of the comorbidity of substance use disorders with other psychiatric disorders has been clearly evidenced in different studies due to its influence on clinical symptoms, evolution and costs.

Thus, dual diagnosis has been associated with an increase in the number of psychiatric admissions, violence, suicidal behavior, increased health spending, greater medical comorbidity and poor adherence to treatment. In addition, in any psychiatric disorder, addiction is associated with worsening of symptoms, non-compliance with treatment, suicidal ideation, and increased risk of violence, legal problems, unemployment, indigence, and diseases such as HIV and hepatitis C [4-6].

Due to this frequent association between substance use disorders and other mental disorders, the use of terms such as dual diagnosis, dual disorder, mentally ill chemical abusers, comorbid disorder, or co-occurring disorders has become popular [7]. Pérez et al. [8] also mention the concept of cross-association, although this is much less used in scientific literature. In the Ibero-American context, Szerman et al. have proposed the term "dual diagnosis" to refer to the coexistence of at least one addictive disorder, with at least one other mental disorder [9-11].

This category, non-existent within the psychiatric diagnosis references such as the DSM-V and the CIE-10, refers to subjects who present a mental disorder and a substance abuse disorder at the same time, "constituting a great tailor's drawer where ambiguity reigns and consensus is scarce" [12].

## Objectives

The objectives of this research are:

- Perform an analysis of the concept and etiopathology of dual diagnosis or comorbid disorders based on a literature review.
- Offer approximate data on the prevalence of the disorder.

c) Show in a summarized manner the main therapeutic guidelines for a comprehensive approach to dual diagnosis.

## Methodology

The sources used are mainly bibliographic. First, we proceeded to briefly outline the points to consider in this work. Subsequently, a review of the literature on each topic of interest was carried out, through searches of specialized databases (Table 1). Finally, the most relevant bibliography has been selected according to criteria of relevance, adequacy and quality of the content. The instruments used for its systematic ordering and emptying have been bibliographic records and reading cards.

The importance of bibliographic research should not be disregarded, even in a field as experimental as Health Science. Following, it would be wholly illogical for every individual who set out to study a problem to do so while ignoring the accumulated knowledge. However, in addition to this primary reasoning of common sense and enquiry, there are others equally relevant to the researcher:

**Table 1:** Bibliographic search procedure (To the databases we must add the catalog of the University Library of Huelva).

Name	Type	Keywords
Dialnet	Multidisciplinary	Dual diagnosis
CSIC	Multidisciplinary	Dual diagnosis
Google Scholar	Multidisciplinary	Dual diagnosis
Psicodoc	Specialized	Dual diagnosis
Scientific Online	Electronic Library	Specialized
Pubmed	Specialized	Dual diagnosis

From the reading of what has already been written, the researcher can focus his or her topic of interest by formulating specific objectives, problems or hypotheses, can situate his or her study within certain theoretical frameworks that will allow him or her to interpret his or her data adequately and obtain information about the other components of the research process.

Not knowing that information can lead the researcher to follow paths that are known to be unproductive, to invest efforts in verifying something that has already been thoroughly researched or to affirm freely the originality of a study, when in reality there is no such innovation. An inadequate documentation can lead the researcher to undertake studies that are scarcely relevant for the theoretical and practical development of the discipline, not current, isolated, and difficult to interpret and integrate into the existing "corpus" of knowledge; invalid instruments may be used, etc. [13].

## Discussion

### Description and diagnostic criteria

Dual diagnosis can be defined as the simultaneous or sequential existence throughout the life cycle of an addictive disorder and another mental disorder [14]. The evidence currently available allows us to affirm that "the knowledge of the dual pathology can inform more about the brain than the study of other, isolated or combined, mental disorders" [15].

As we have already outlined in the introduction, there is no diagnostic criterion that can permit a rapid detection of the disorder. As a consequence, many patients are underdiagnosed in dual pathology, something that is fueled by poor coordination between mental health and drug dependence centers. In the case of dual pathology, the connection of both areas is essential in order to offer to the patient an adequate and holistic treatment [15-18].

Most of the articles describe a high comorbidity between disorders due to the use of substances and psychiatric diseases in the general population, according to the studies that we have been able to compile, especially in the case of patients with schizophrenia who are the most likely to suffer from dual diagnosis [3,13,17-22]. Patients with dual diagnosis had an earlier onset of psychiatric problems [20]. Despite the large number of studies conducted in this regard, the diagnosis of dual disease is not easy, and different circumstances can influence it, which López and Baena [23] summarize in: the tendency to conceal or deny drug use by of the subject and/or his relatives, the training of the therapist, little clarity in theoretical conceptions, distorted information about the patient's clinical trajectory due to the effects of the drug, modification of the psychiatric symptoms due to the consumption of substances, etc.

### Prevalence and etiology

The probability of presenting dual diagnosis in patients with a mental illness is 25% to 50%, in the case of patients with schizophrenia this can reach 50% since they are the most prone to toxic consumption [11,19,24]. It has been stated that, at present, "dual pathology is what is expected and not an exception" [15].

The majority of patients with mental illness usually hide their addiction. In the case of schizophrenia, there is a 70-80% chance of suffering from dual diagnosis, while of patients with bipolar disorder; approximately 60% will suffer dual diagnosis. More than 70% of patients with severe personality disorders will also present it and patients with anxiety and depression have about a 30% chance of suffering duality [17].

The etiology is not clear. There are several etiopathogenic hypotheses about dual pathology that we try to synthesize below [3,11,23-25].

a) Model of substance use secondary to a psychiatric disorder: drugs are used to improve the situation or the sensation that the disease produces in the individual.

b) Model of secondary psychiatric alteration to the consumption of substances: after toxic consumption, the psychiatric disorder is induced.

c) Model of independence: both disorders can coexist independently.

d) Model of common factors of vulnerability: there are common factors of vulnerability in the pathogenesis of mental disorder and disorder due to the use of substances as genetic or environmental components.

e) Bidirectional model: based on the fact that each of the disorders can increase the vulnerability of the other.

f) Model of socialization: the consumption of toxins opens certain doors to social roles, groups and identities.

The most predominant mental pathology in dual diagnosis is schizophrenia, followed by psychosis-schizophreniform, major depressive disorder, bipolar disorder and personality disorder [20,17]. The substances most consumed among Patients with dual pathology are nicotine, alcohol, cannabis, cocaine, opiates and others, although the most common is the consumption of various substances [3,20,26,27].

### Diagnosis and therapeutic recommendations

According to Torrijos and Palomino [16] there are different diagnostic tools for patients with dual pathology and alcohol addiction, such as screening instruments (AUDIT, CAGE), self-administered questionnaires for the detection of psychiatric comorbidity (PDSQ or structured clinical interviews (PRISM, CIDI, MINI, DIGS).

The integral psychotherapeutic approach of both pathologies is essential. Following Ferrer and Burches [28] and Torrijos and Palomino [16], positing a series of priority objectives for the intervention is recommended:

To set out an individualized therapeutic program with realistic short and long term objectives.

1. Establish and maintain the therapeutic alliance.
2. Encourage pharmacological compliance and therapeutic adherence.
3. Achieve the stabilization of the mental disorder.
4. Favor the reduction of consumption or abstinence.
5. Work on the disease awareness of both disorders.
6. Prevent relapses.
7. Provide information and psycho-educational tools to the patient and his or her family, providing information about both disorders and therapeutic alternatives.
8. Improve the interpersonal and social functioning of the patient, promoting the care of the disease and an independent life within the community.
9. Rehabilitation of psychosocial disabilities secondary to the disease.

The therapeutic treatment recommendations are listed in the following **Table 2**.

**Table 2:** Therapeutic recommendations for dual pathology according to comorbid disorders

ADHD		Firstly the treatment of SUD should be done and secondly the treatment of ADHD. In some cases both disorders could be treated at the same time
Alcohol addiction	Detoxification	BZD in decreasing doses until finalizing, being recommendable those of prolonged half-life (minor risk of addiction) such as diazepam or clorazepate, except in the elderly or patients with hepatic insufficiency, in which lorazepam, which does not have hepatic metabolism, should be used. Always with limited time due to special risk of abuse. In respiratory failure, tiapride will be used. Anticonvulsants in decreasing doses. Vitamin B complex and folic acid. Recommendation: Try to avoid chloremethiazole on account of excessive sedation and risk of dependence.
	Withdrawal	Alcohol interdictors: disulfiram (relative contraindication: heart disease, liver failure, acute renal failure, pregnancy and decompensated psychotic disorders) and calcium cyanamide (relative contraindication in heart disease and pregnancy). Naltrexone: opiate antagonist to reduce drinking desire and loss of control at the beginning of the intake. Nalmefene: opioid antagonist for the reduction of alcohol consumption. Acamprosate: reduction of the desire to drink and loss of control at the beginning of the intake. Anticonvulsants to reduce desire to drink and reduce craving.
Depression		Serotonin reuptake inhibitors (SSRIs): fluoxetine, sertraline, escitalopram, etc. Dual antidepressants: Norepinephrine and serotonin reuptake inhibitors (SNRIs): venlafaxine and duloxetine. Noradrenaline and dopamine reuptake inhibitors (NRTI): bupropion. Tricyclic antidepressants: effective but with many side effects and risks of overdose. Recommendation: Do not use MOAIs.
Bipolar disorder		Anticonvulsants such as valproate (with hepatic monitoring due to hepatotoxicity) or oxcarbazepine. Atypical antipsychotics. Recommendation: avoid lithium due to potential toxicity and the increased risk of suicide.
Anxiety disorder		Anticonvulsants preferably those with fundamental action in the GABA system. Recommendation: Avoid BZDs due to the risk of abuse.
Psychotic disorders		Atypical antipsychotics due to their lower capacity to produce extrapyramidal effects, anticraving effect and reduction of the risk of impulsive behaviors. Long-term antipsychotics if there is low adherence.
Substance abuse disorders		Anticonvulsants (topiramate and oxcarbazepine) to reduce craving and impulsive behavior.
Eating disorders		Fluoxetine decreases self-induced vomiting. Topiramate decreases vomiting and binge eating.

Brief, intervention-type approaches are very suitable to be carried out within the framework of Primary Care without forgetting that, frequently, they require a multidisciplinary approach of health, psychological, emotional and social aspects. In daily care, the professional can meet patients refuse to be referred to a psychiatrist, with whom a more continuous follow-

up will have to be tried, provided that the patient's psychopathological conditions do not indicate the need to make an involuntary admission (as would be the case of schizophrenics who are drinking at a time of decompensation or in cases of serious suicidal risk).

## Conclusion

The therapeutic approaches with greater empirical validity are framed within the cognitive-behavioral orientation. They can be applied both individually and in groups, since the therapeutic efficacy of both modalities of intervention is similar (it should be taken into account that group therapy is less expensive).

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