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Schizoaffective disorder in homeless patients: A systematic review

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Abstract

Background: Schizoaffective psychosis is a severe and chronic psychiatric disorder defined by the presence of mood symptoms, like mania and/or depression and schizophrenia, such as hallucinations and/or delusions.
Aims: We aim to find out whether there is a correlation between schizoaffective psychosis and being homeless.
Method: To do so, a literature search was carried out in the PubMed platform in April 2022, using the keywords 'schizoaffective' and 'homeless'.
Results: In this review, 28 articles from this search were included. Intrinsic characteristics, rates of psychiatric readmission, prediction of homelessness, medication noncompliance, and substance use were explored, as they were the main themes of the results.
Conclusions: The homeless population suffers from great diagnostic variability and the diagnosis schizoaffective psychosis is still evolving contributing to such diagnostic and treatment difficulties. Their frequent visits to the healthcare services, especially emergency room leads to consequent interaction with multiple healthcare professionals, resulting in a myriad of diagnoses, with clinical remission and therapeutic goals not being attained. More studies are necessary for a better evaluation of this super difficult population.

Keywords
Schizoaffective, homeless, psychosis

Introduction

The schizoaffective disorder

The first description and characterization of schizoaffective psychosis was made in 1933. Jacob Kasanin described a group of nine cases where he found a blending between schizophrenic and affective symptoms. He described the psychosis as marked by a sudden onset in a setting of emotional turmoil with a distortion of the outside world alongside the presence of false sensory impressions. The psychosis lasted a few weeks or months and was followed by recovery. He noted that a history of a previous attack was usually present; the patients were in their 20s or 30s and in good physical health. Kasanin (1933) called it the acute schizoaffective psychosis. He associated the diagnosis with better premorbid functioning, less severe symptomatology and overall, less severe symptomatology. However, this psychosis had many more similarities to the reactive psychoses of Scandinavian psychiatry, to *bouffée délirante* of French psychiatry, or to schizophrenia-like emotion psychoses of German psychiatry (Marneros, 2003a, 2003b).

The ninth edition of the World Health Organization's (WHO, 1972) International Classification of Diseases (ICD-9), defined schizoaffective disorder as being a subtype of schizophrenia (coded as 295.7). It was considered a psychosis of mixed and cyclic nature (schizophrenic and affective). Full autonomy as an independent disorder came with the 10th Edition of the ICD (WHO, 1992). It was described as a set of episodic disorders in which both affective and schizophrenic symptoms were prominent, but which did not justify a diagnosis of either schizophrenia or depressive or manic episodes. The ailment gained a code of its own (F25) and was subtyped into the manic, depressive, and mixed types. The ICD-11 (WHO, 2018), is the most recent classification and only changed the code given to schizoaffective disorder (6A21).

The American Psychiatric Association's (APA, 1952, 1968) Diagnostic and Statistical Manual of Mental

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Disorders (DSM) is the recognized authority for psychiatric diagnosis, taxonomy, and treatment options in North America. In the first and second editions, published in 1952 and 1968, respectively, the term schizoaffective was used to define a subtype of schizophrenia. In the DSM-III, the term schizoaffective was separated from schizophrenia and retained without specific diagnostic criteria under the category of 'psychotic disorder not otherwise classified'. It indicated that the diagnosis schizoaffective disorder should be made whenever the clinician was unable to make a differential diagnosis between schizophrenia and affective disorder (APA, 1980). The DSM-III-TR introduced the first operationalized diagnostic criteria for schizoaffective disorder, which required the persistence of psychotic symptoms in the absence of significant affective illness for at least 2 weeks (APA, 1987; Wilson et al., 2014). In DSM-IV and DSM-IV-TR the disorder has been retained as a separate diagnostic entity with the diagnostic criteria remaining virtually unchanged (APA, 1994, 2000, 2013). The DSM-5 and the DSM-5-TR defines schizoaffective disorder as a combination of psychotic symptoms, and mood disorder symptoms such as mania and/or depression. The diagnostic criteria are as follows: An uninterrupted period of illness during which there is a major mood episode (major depressive or manic) concurrent with the first criteria of schizophrenia: delusions or hallucinations for two or more weeks, in the absence of a major mood episode (depressive or manic), during the lifetime duration of the illness. The disturbance is not attributable to the effects of a substance (drug or medication) or another medical condition. Additionally, the DSM-5-TR suggests further specification in different categories regarding subtype, course, and severity (APA, 2022).

The present definitions of schizoaffective disorder given can be considered insufficient to define the group, and certainly not definitive (Marneros, 2003a, 2003b). The main problem with the ICD and DSM classifications is the statically transverse nature attributed to the schizoaffective disorder, but longitudinal findings have suggested two courses of schizoaffective disorders beyond the ICD-11 or DSM-5 definitions: the concurrent type, which is characterized by the coincidence of schizophrenia and bipolar episodes; and the sequential type, which is characterized by the longitudinal change from schizophrenia to bipolar episodes and/or vice versa. Indeed, the research data published by Marneros and colleagues that followed patients with schizoaffective disorder for decades, suggests that patients with schizoaffective disorder have polymorphous episodes (Marneros et al., 1991a, 1991b, 2003a, 2003b). Schizoaffective disorders seem to be very unstable, having, during longitudinal course, schizoaffective episodes, but also pure mood episodes reminiscent of classic bipolar disorder and pure psychotic episodes, similar to those considered typical in schizophrenia. Therefore, there were authors classifying the schizoaffective disorder as part of the schizophrenia spectrum, while others believed it was part of the bipolar spectrum. More recently, a third position has been assumed by some clinicians and researchers, who look at schizoaffective psychosis and its related disorders, as more of an independent spectrum of its own, rather than a group of individual and easily differentiable entities. This spectrum would include a range of disorders with emotional and/or psychotic features that are not part of the bipolar, but also not part of the schizophrenia spectra. That spectrum would include entities such as borderline personality, cycloid psychosis, and schizoaffective disorder. The schizoaffective spectrum would be, therefore, somewhere in between the bipolar spectrum and the schizophrenia spectrum (Gama Marques & Ouakinin, 2021). Table 1 presents a resume for the epistemological evolution of the schizoaffective disorder.

The homeless

The attempt to classify and distinguish types of homelessness is no novelty. Leach (1979) classified two types of homelessness: intrinsic, homeless due to mental or physical disability; and extrinsic, homeless due to situational factors.

Arce and Vergare (1984) subdivided them into chronically homeless: predominantly older, and mentally ill people; episodically homeless: younger people who alternate between housing and institutional care and life on the streets; and transiently homeless: people without an identified major mental illness that became homeless due to an acute situational.

Those who become homeless are commonly exposed to severe psychological stress, and approximately one third of homeless people live with severe mental illness (Tessler & Dennis, 1989). This is particularly true in high-income countries. On the other hand, people living in middle-income and low-income countries experience homeless not only due to mental illness and substance abuse (Vázquez et al., 2019), but also due to poverty, eviction, war, civil unrest, and climate change. In low-income and middle-income countries, lone, single, male, rural workers typically flock to the cities to work and send remittances home (Tipple & Speak, 2009).

According to the United Nations Survey from 2005, an estimated 100 million people were homeless worldwide and 1 billion were housed inappropriately (Koothari, 2005). Also in 2005, the European Typology of Homelessness and House Exclusion (ETHOS) was created by the *Fédération Européenne d'Associations Nationales Travaillant avec les Sans-Abri* (FEANTSA, 2005, 2017). It was developed as a transnational framework definition for policy and practice purposes. The goal was not to harmonize the national definitions of homelessness in Europe, but rather to facilitate communication, improve understanding, and measure homelessness. According to the ETHOS there are four main

Table 1. Epistemological evolution of the schizoaffective disorder.

Author (year)	Schizoaffective disorder definition
Kasanin (1933)	Psychosis in emotional turmoil with false sensory impressions. Lasted from weeks to months. Good outcome.
Marneros (2003a, 2003b)	Polymorphous nature: episodes of different types. Longitude is given more importance: the diagnostic value of the sequential Schizoaffective symptomatology is equal to that of the concurrent symptomatology.
WHO (2018) ICD-11	Episodic disorder in which the diagnostic requirements of schizophrenia and a manic, mixed, or severe depressive episode are met within the same episode of illness, either simultaneously or within a few days of each other. Psychomotor disturbances, including catatonia, may be present. Symptoms must have persisted for at least 1 month. The symptoms are not a manifestation of another medical condition and are not due to the effect of a substance or medication on the central nervous system, including withdrawal. A diagnosis of schizoaffective disorder should be made only when the symptom criteria of schizophrenia and of a moderate or severe mood episode are fulfilled simultaneously or within a few days of each other.
APA (2022) DSM-5-TR	An uninterrupted duration of illness during which there is a major mood episode (manic or depressive) in addition to the first criteria for schizophrenia. Hallucinations and delusions for two or more weeks in the absence of a major mood episode (manic or depressive) during the entire lifetime duration of the illness. Symptoms that meet the criteria for a major mood episode are present for most of the total duration of both the active and residual portions of the illness. The disturbance is not the result of the effects of a substance or another underlying medical condition.

Note. APA = American Psychiatry Association; DSM-5-TR = Diagnostic and Statistical Manual of Mental Disorders Fifth Edition Revised Text; WHO = World Health Organization; ICD = international Classification of Diseases.

categories included in the homelessness definition: the roofless, the houseless, those with insecure housing and those with inadequate housing. Table 2 presents the categories of homelessness according to the ETHOS (FEANTSA, 2017).

The schizoaffective disorder in the homeless

The present review was inspired by the Bellevue Homeless Psychiatric Unit work, where North American researchers found out that admitted patients were sub-diagnosed with schizoaffective disorder. Out of 377 patients, only 5% at admission were already diagnosed with schizoaffective disorder, whereas at discharge this number rose more than five-fold, to a staggering 28%. At that time, authors suggested that further studies were needed for a better understanding of schizoaffective disorder among the homeless population (Nardacci et al., 1993). In more recent European studies, of 500 homeless people, the prevalence of schizoaffective disorder was 11% (Monteiro Fernandes et al., 2021), and the homeless with schizoaffective disorder had a statistically significant longer follow-ups, a higher median of psychiatric hospitalizations, and a higher median duration of total psychiatric hospitalizations (Ayano et al., 2019). Therefore, following the scarce existence of literature regarding the topic (Fazel et al., 2008), the authors propose to do a review aiming to study the relation between schizoaffective disorder and homelessness.

Methods

Research pertaining to schizoaffective disorder, specifically in homeless patients is virtually non-existent. No restrictions were imposed in regard to the type of study, intervention, and outcomes. Most articles cited, and their results derive from studies where patients with schizoaffective disorder and schizophrenia were grouped together. Only English articles were considered. The search was carried out with the terms 'homeless' and 'schizoaffective disorder' on PubMed (search details: (homeless*[Title/Abstract]) AND (schizoaffective [Title/Abstract]). On the 12th of April 2022, 31 articles showed up using the above-mentioned search words. Out of the 31 articles, 3 of them were excluded because they were irrelevant or had little to do with the review goal. Figure 1 presents the selection of articles for this review.

Results

Characteristics of schizoaffective disorder patients living homeless

Ries and Comtois (1997) studied the psychiatric disorder severity and treatment services in dually diagnosed severely mentally ill outpatients. In this study dual diagnosis was considered whenever a patient had both a mental disorder and a drug or alcohol problem. Illness severity

Table 2. Categories of homelessness.

Conceptual category	Operational category	Living situation
Roofless	People living rough	Public or external space
	People in emergency accommodation	Overnight shelters
Houseless	People in accommodation for the homeless	Homeless hostels
		Women's shelters
		Temporary accommodation
		Transitional accommodation
		Refugee accommodation
	People living in institutions	Health care institutions
		Penal institutions
Inadequate housing	People living in non-conventional dwellings	Mobile homes
		Non-conventional buildings
		Temporary structures
Insecure housing	Homeless people living temporarily in conventional housing with family and friends	Conventional housing, but not the usual place of residence

Source. Adapted from ETHOS (FEANTSA, 2017).
Note. ETHOS = European Typology of Homelessness and House Exclusion; FEANTSA = Fédération Européenne d'Associations Nationales Travaillant avec les Sans-Abri.
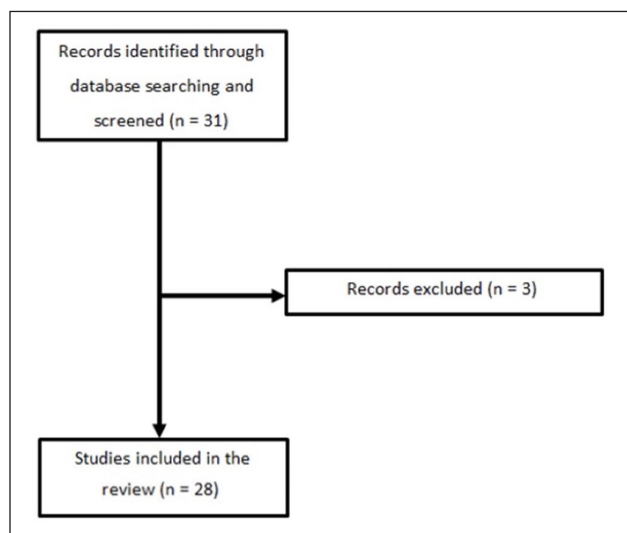

Figure 1. Selection of articles for the review regarding schizoaffective disorder in the homeless.

was assessed using the Psychiatric Symptom Assessment Scale (PSAS; Bigelow & Berthot, 1989). Furthermore, drug use intensity as well as dysfunction intensity was scaled via questionnaires, added to the Psychiatric Symptom Assessment Scale, thus forming the Total Severity Index (TSI). Patients with higher severity of illness were more likely to be male, to have schizoaffective disorder or schizophrenia as a diagnosis, to be more non-compliant with treatment, to be homeless, to have been psychiatrically hospitalized in the last 6 months, to be in the protective payee program, to be in the pre phase level of treatment, receiving twice as much case management services, more day treatment, and significantly more total

outpatient services (17.8 vs. 11.7 appointments/month, $p < .01$). Participants with a high TSI received twice the number of appointments (20.7 vs. 12.3) per month. A higher TSI was related to schizoaffective disorder or schizophrenia being in a lower phase of treatment. They went further by comparing patients with a schizoaffective disorder or schizophrenia diagnosis to those without this diagnosis.

Homelessness is famous for motivating many visits to the emergency department (Padgett et al., 1995). A retrospective review of 1,285 patients who visited the emergency room more than once in a period of 6 years was carried out in 2011. Patients with six or more visits were compared to patients with between two to five visits (317 and 968 patients, respectively). The study found out that the former group was significantly more likely to be homeless, have a substance use disorder and to have more diagnostic variability. A total of 177 patients were found to have diagnostic variability between schizophrenia, schizoaffective disorder, and bipolar disorder, suggesting a diagnosis of schizoaffective disorder. In the univariate analysis, three sociodemographic characteristics were significantly associated with being a frequent visitor: younger age ($p = .015$), single marital status ($p < .001$), and homelessness ($p < .001$; Boyer et al., 2011).

Psychiatric readmission in schizoaffective homeless patients

A retrospective study (Lorine et al., 2015) followed 207 patients that had been hospitalized due to acute psychiatric illnesses, being that 50% of them had schizoaffective disorder or schizophrenia diagnosis. Of the 207 patients

included in the study 47 (24%) were homeless. They were then followed consecutively to analyze readmission patterns. Three groups were created. Group 1 (readmitted within 15 days), group 2 (readmitted within 3–6 months), and group 3 (not readmitted for at least 12 months post-discharge). The study found that 68% of the total number of patients readmitted just after 15 days of discharge had schizoaffective disorder or schizophrenia diagnosis. In group 2, schizoaffective disorder or schizophrenia accounted for half of the patients admitted between 3 and 6 months. In group 3 it accounted for 27%. When it comes to homelessness, 36% of the patients in group 1 had no living arrangements, 23% were admitted between 3 and 6 months, and 13% of those who managed not to be readmitted in the period of 12 months. The authors went even further by calculating the Odds Ratio (OR) between homelessness and having schizoaffective disorder or schizophrenia, and how this led to either readmission at 15 days or no readmission (group 3). They determined that given a diagnosis of schizoaffective disorder or schizophrenia the chances of being in group 1 rather than group 3 increased 17.8 times. For homelessness it increased 29.4 times. Therefore, a diagnosis of schizoaffective disorder or schizophrenia in the homeless was found to be a significant risk factor for early readmission.

Prediction of homelessness in schizoaffective patients

In a study of 1999 (Rosca et al., 2006), 263 patients with schizophrenia or schizoaffective disorder were evaluated at discharge and 3 months later. Homelessness during this period was reported by 20 patients (7.6%). Drug use disorder, total score of above 40 in the Brief Psychiatric Rating Scale (BPRS; Thompson et al., 1994) and scores under 43 in the Global Assessment Scores (GAF; Endicott et al., 1976) all led to increased likelihood of experiencing homelessness. Therefore, the risk of becoming homeless following hospital discharge seems to be increased in patients with schizoaffective disorder or schizophrenia (El Hayek et al., 2022).

Medication noncompliance in schizoaffective disorder homeless patients

Medication non-compliance poses one of the most difficult challenges in managing major psychiatric disorders. Olfson et al. (2000) studied a population of 213 adults with either schizophrenia or schizoaffective disorder, to whom oral antipsychotics were prescribed. Then, 3 months later, all patients were re-evaluated to assess medication compliance. A 19.2% were found to be non-compliant (Olfson et al., 2000). These patients were at increased risk of homelessness, symptom exacerbation, emergency room visits, and rehospitalization. Compared with the compliant group,

the non-compliant group was significantly more likely to have a history of medication noncompliance, substance abuse or dependence, and difficulty recognizing their own symptoms. Patients who became medication noncompliant were significantly less likely to have formed a good therapeutic alliance during hospitalization as measured by inpatient staff reports and were more likely to have family members who refused to become involved in their treatment. Within 72 hours before hospital discharge, patients completed a structured assessment spanning clinical symptoms, substance use disorders, insight into illness, and aspects of their medication management. At that time, structured assessments were also conducted with the clinical staff to assess the therapeutic alliance, family involvement in treatment, and medication management. Insight into illness was assessed with two probes. Positive responses were followed with an item to determine whether the patient believed he or she had schizoaffective disorder or schizophrenia. Therapeutic alliance was measured with the 6-item Active Engagement Scale (AES) completed by inpatient clinicians at the time of discharge. Family involvement was evaluated by asking staff whether patients had any family members, whether family members visited the patient in the hospital, whether they agreed or refused to become involved during the admission, whether they met with staff, and whether they received family therapy. Noncompliance was not taking antipsychotics for 1 week or more. Missing or stopping antipsychotic medication was strongly associated with several untoward outcomes, including homelessness, symptom exacerbation, and noncompliance with outpatient treatment, emergency room visits, and rehospitalization. Substance use disorders emerged as the strongest predictor of medication noncompliance. Patients whose families refused to participate in treatment were at high risk for stopping their medications. To sum-up, patients with schizoaffective disorder or schizophrenia and comorbid substance use disorders, a history of medication noncompliance, a poor alliance with inpatient staff, difficulty recognizing their own symptoms, and families who refuse to become involved in treatment are at increased risk of stopping their medications after hospital discharge (Olfson et al., 2000).

Substance use in schizoaffective disorder homeless patients

A study analyzed the 3-year outcomes of 152 patients with schizophrenia or schizoaffective disorder and concomitant substance use (dual diagnosis). The 3-year outcomes for patients with dual-diagnosis receiving integrated dual disorder treatments were clearly positive for a large proportion. Despite severe and prolonged disability, many of these individuals were able to achieve control of both disorders, to reduce episodes of hospitalization and homelessness, to achieve success in some

aspects of community functioning, and to attain what they perceived as a better quality of life. Overall, the data showed that nearly all participants were rapidly engaged in mental health services and that homelessness was reduced over time as patients increased their usage of out-patient services (Lieberman & Bowers, 1990).

A study compared 608 patients with a diagnosis of schizoaffective disorder or schizophrenia treated on hospital units with integrated dual diagnosis treatment. Patients with no history of substance abuse were then compared, using *t*-tests, chi-square tests, and analysis of variance, to those who had a substance abuse disorder. Those who did have a substance abuse problem stayed 30% shorter than those who didn't. Additionally, they also showed greater symptomatic improvement and no increase in 18-month readmission rates. On admission, dually diagnosed patients were more likely to be homeless, younger, male, and a greater danger to self and others. On discharge, they were on average less psychotic. A possible hypothesis suggested by these results is that, although substance use amplifies psychotic symptoms, when patients are admitted and stop abusing substances, they stabilize faster (Ries et al., 2000).

A study tracked 43,724 patients from three ethnicities, all with either schizophrenia or schizoaffective disorder diagnosed. The main goal was to find out whether there were variations between ethnicities (Caucasian, Black, and Latino) pertaining to substance abuse in patients with schizoaffective disorder or schizophrenia. Homeless patients with schizoaffective disorder or schizophrenia were more than two times likely to have a substance abuse disorder. Those living with someone had half the chance to abuse drugs in comparison to those who lived alone. To sum up, homelessness seems to be more associated with drug abuse regardless of ethnicity (Montross et al., 2005). Substance abuse is often a source of problems for housing stability. In a study of 75 outpatients from rural and urban settings, with schizoaffective disorder or schizophrenia who were followed for 1 year, 10.7% had schizoaffective disorder (eight patients). Living arrangements in the past 6 months were scored on a 5 points scale from highly supportive (1) to highly stressful (5). Points 4 and 5 were considered unstable housing. Only 4 had point 5 while 15 had 4. Nineteen subjects had unstable housing (25.3%). Housing problems were mostly related to alcohol abuse and medication noncompliance which led to tensions between the patients and landlords or relatives. Both rural and urban patients appeared similarly in psychosocial problems such as alcohol and medication noncompliance. Findings suggested that alcohol abuse led to housing instability and not the other way around, all subjects indicated that they developed an alcohol problem before they were met with housing instability; the case managers reported that the patients' landlords and families indicated displease with behaviors related to alcohol, consequently jeopardizing housing arrangements. To prove this even further, patients with remitting alcohol use disorders were compared to those with active disorders and found little housing instability. The findings indicated that the schizophrenic and schizoaffective patients who have housing instability problems have more psychosocial issues, have less support, and exhibit dangerous behaviors such as hospitalization, alcohol abuse, and therapeutic noncompliance. All these factors summed up together contribute to the rise in homelessness. Institutionalization and homelessness can be avoided if housing options are available, desirably alcohol-free, to increase the likelihood of success in maintaining constant housing (Xie et al., 2005).

Pharmacogenetic testing in schizoaffective disorder homeless patients

A recent case report (Gama Marques, 2019b) in a homeless patient with schizoaffective disorder used the power of pharmacogenetics. The patient had already experienced 85 admissions in 25 years, taken a combination of benzodiazepines, antidepressants, mood stabilizers and antipsychotics, and undergone electroconvulsive therapy. By using Neuropharmagen® (Espadaler et al., 2017), a higher probability of positive response to treatment with haloperidol (favorable NEF3 (NEuroFilament-medium 3) gene polymorphism) and lithium (favorable polymorphism to CACNG2 (CAlcium voltage-gated Channel auxiliary subunit Gamma 2) were found, while there appeared to be a normal pattern response to both clonazepam and clozapine. The patient had been treated many times with some drugs that were not the best option, as he presented fast metabolism of olanzapine (unfavorable polymorphism in CYP1A2 (a member of the cytochrome P450 superfamily), carbamazepine (unfavorable polymorphism in EPHX1 (microsomal Epoxide Hydrolase 1)), and lorazepam (unfavorable polymorphism in Uridine 5′-diphosphate-Glucuronosyl Transferase 2B15 (UGT2B15)). After getting these results, his medication was changed and total remission of symptoms was achieved in 4 weeks, and oral haloperidol was then substituted by a monthly long-acting injectable formulation of haloperidol decanoate 300 mg, in order to guarantee maximum therapeutic adherence. Finally, after a quarter of century years of erratic wandering between the urban homeless life and the psychiatric asylum environment, the patient got transferred to a rural charity community residence, where he has been without further psychiatric readmissions.

Discussion

Limitations of studies are an important part of scientific research. The greatest limitation of this work was the fact that patients with schizophrenia and schizoaffective disorder were often grouped together in the articles cited. This

makes the drawing of conclusions and results difficult because the sample is not pure. Also, some works included in this systematic review did not state clearly whether organic causes for psychosis had been excluded, as we did in a particular case report of ours (Gama Marques, 2022b). Secondary psychosis is very common in clinical practice and often undiagnosed (Gama Marques, 2019a, 2020). Many imitators affecting the central nervous system can mimic schizophrenia or schizoaffective disorder (Gama Marques, 2019a, 2020). Therefore, all causes of what was previously so-called organic psychosis should always be discarded before assuming the diagnosis of primary or idiopathic psychosis (Gama Marques, 2021a, 2022c). Clinicians should be aware of schizophrenia as the great imitated in clinical neuroscience (Gama Marques & Bento, 2020c). The ICD-11 and DSM-5-TR are clear on stating that the disturbance must not be attributable to the effects of a medical condition or substance use (drug or medication) and we believe that use of substances among patients with schizoffective disorder could be especially troublesome (Morrens et al., 2011) and even worse in homeless patients that live with very high comorbidity (Gama Marques, 2022a; Gama Marques & Bento, 2020). Homeless patients suffer not only from mental disease, but also from various medical organic conditions (Gama Marques & Bento, 2020) and social ailment phenomenon such as mortification, as inpatients in hospitals or shelterization, as outpatients in the community shelters (Gama Marques, 2022a). Among the homeless population, patients with schizoaffective disorder, undergoing psychiatric treatment, are particularly difficult to follow.

Another important limitation of the present review is intrinsically related with the low quantity and low quality of the published articles. Unfortunately, it was not possible to fulfill the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; Page et al., 2020). And it was also very difficult to follow the instructions for the making of scoping reviews, as recommended by the Joanna Briggs Institute (JBI; Peters et al., 2020). The protocol for the present review was also not registered nor published, unfortunately. Therefore, other authors interested in the relation between schizoaffective disorder and homelessness shall prepare in the future, enhanced protocols for better reviews than the one that is present here. Nevertheless, this is the first one ever made, at least, to our limited knowledge of scientific literature.

Compliance with outpatient visits and medication is still a challenge, as homeless people with schizoaffective disorder must contend with competing priorities, such as securing food (Luder et al., 1989). This frequently takes precedence over healthcare. They may also avoid care due to a lack of trust of the healthcare system and previous experiences of discrimination from providers.

Substance abuse and medication noncompliance remain the foes of psychiatric improvement. These two-factors as contributors to housing instability and psychiatric stability remain one of the most difficult challenges to mental healthcare workers (Carnot & Gama Marques, 2018). Healthcare-patient relationship bonds remain key in dealing with discharged mental patients. A good relation can increase the likelihood that patients take their medication and don't miss appointments, increasing therapeutic success and diminishing the probability of a decompensation (Frank & Gunderson, 1990; Olfson et al., 2000). Medication noncompliance places patients with schizoaffective disorder at risk of homelessness, and interruptions in the continuity of outpatient care. Last but not least, pharmacogenetics. Pharmacogenetics has been anecdotally used in patients with schizoaffective disorder living homeless. No one can deny its importance in guiding clinician's choice of antipsychotic treatment for less iatrogenic and better theranostic. Its cost, however, remains an obstacle to daily clinical use. One can also entertain the possibility of investing in pharmacogenetics testing in these small yet costly populations. These are patients that utilize many expensive resources. Likely, with pharmacogenetics testing (Gama Marques, 2022b; Huang et al., 2016), medication plans could be tailored and optimal from the start, which can save money in the long run.

Conclusion

Schizoaffective disorder is still evolving in the way we define it. Even though this evolution contributes to greater diagnostic variability, with unclear and polarizing criteria, steps are being taken and research is being carried out to standardize the way we diagnose and treat the disorder. Healthcare professionals struggle with unclear instructions in the diagnostic criteria. This increases the difficulty of the already hard diagnosis. The homeless population with schizoaffective disorder, undergoing psychiatric treatment, is a particularly difficult population to follow. Compliance with outpatient visits and medication is still a challenge. Homeless people with schizoaffective disorder must contend with competing priorities, such as securing food and shelter. This frequently takes precedence over healthcare. They may also avoid care due to a lack of trust of the healthcare system and previous experiences of discrimination from providers. Thus, when combining a difficult diagnosis with a super-difficult patient population (Gama Marques, 2021b), the result is what we found in the literature. Patients who are sub-diagnosed and therefore, psychiatrically unstable, experiencing frequent psychiatric readmission, the revolving door phenomenon (Botha et al., 2010; Haywood et al., 1995). This will not only cut costs in the long run, since psychiatric admissions are known to be lengthy, but also improve the quality of life of this downtrodden population. More research regarding schizoaffective disorder among the homeless is of paramount importance. This is real fourth

world population (Raps & Kemelman, 1994), deserving the health care of a new speciality: Marontology (Gama Marques & Bento, 2020b, Gama Marques, 2021b).

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