

Review Article

Older Adults with First-Onset Schizophrenia: An Under-Recognized and Under-Served Patient Population

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Abstract

Schizophrenia is typically understood to be a disorder with onset in early adulthood, but nearly a quarter of patients are estimated to develop schizophrenia after age 40. Late-onset schizophrenia (patients with onset after age 40) and very-late onset schizophrenia (patients with onset after age 60) are historically an under-recognized and under-served population. Reasons for this are manifold, and may include barriers such as inconsistent terminology used to describe these patients, challenges with diagnosing, and lack of resources and research for these patients. To overcome these barriers, the DSM should include these subsets and provide clear diagnostic criteria. Incorporating these subsets into the learning objectives of medical school and residency programs would also promote further education and thus recognition of these patients. Finally, allocating funds towards resources and research in first-onset diagnosis of schizophrenia in adults over 40 would optimize treatment and improve understanding of this vulnerable patient population.

Keywords: Schizophrenia; Psychosis; Late-onset; Very-late-onset; Late-life; Elderly

Abbreviations

ICD: International Classification of Disease; DSM: Diagnostic and Statistical Manual; EOS: Early-Onset Schizophrenia; LOS: Late-Onset Schizophrenia; VLOS: Very-Late Onset Schizophrenia; (V) LOS: Both Late-Onset Schizophrenia and Very-Late Onset Schizophrenia.

Introduction

Schizophrenia is a debilitating mental health disorder characterized by prominent psychosis and functional decline. While it is classically understood to be a disorder with onset in early adulthood, nearly a quarter of patients are estimated to develop schizophrenia after age 40 [1]. Although similar to younger-onset cases, older-onset schizophrenia is associated with a predominance in women, better premorbid functioning, hallucinations of all sensory modalities (as opposed to just auditory), and deprivation syndromes such as hearing and visual loss (especially among patients over age 60) [2-5]. Information on other risk factors and clinical presentation characteristics may be limited, as these patients are said to be poorly understood and under-recognized [6]. Since the number of older adults with first-onset schizophrenia is expected to increase as the population ages, healthcare workers will need to prepare accordingly by enhancing their awareness of this entity so that effective treatments can be implemented [7,8]. Over the years, barriers such as inconsistent terminology, diagnostic ambiguity and limited research and resources have resulted in making this subset of schizophrenia historically under-served. This paper will address these barriers in detail and propose approaches for improvement that would aid healthcare workers in caring for these patients.

Historical overview of schizophrenia terminology

Schizophrenia onset in older adults is not a newly discovered phenomenon; in fact, it was clinically recognized as early as the

mid-20th century [6,9]. Unfortunately, wording and labels used to describe schizophrenia have shifted throughout the years, especially with regards to different age groups, thereby creating a climate of ambiguity as well as a lack of recognition of its prevalence in older adults [10,11]. To expand on this, the following section will provide a brief historical overview of schizophrenia terminology and how it has evolved. When schizophrenia was first described in 1893 by Emil Kraepelin, he used the term “dementia praecox,” to denote an illness that affected predominantly young adults, thus giving rise to a misconception that persists to this day [12]. However, later in his career, Kraepelin conceded that onset was not limited to youth, and that his initial choice of nomenclature was inaccurate [13]. Furthermore, the Swiss psychiatrist, Manfred Bleuler, who is arguably considered the “founding father” of schizophrenia onset in older adults, coined the term “late-onset schizophrenia” in 1943. This came about after thoroughly studying over 100 patients whose onset occurred at age 40 or older. His patients presented similarly to those of Kraepelin, but were less likely to exhibit negative symptoms such as affective blunting and formal thought disorders, and tended to have a more benign course of illness [1,9]. In 1952, English psychiatrists replaced the term “late-onset schizophrenia” with “paraphrenia,” which was later incorporated into the ICD-9 [5,14]. According to medical historians, this change created great confusion, as the term “paraphrenia” was originally used by Kraepelin to designate an illness distinct from schizophrenia [5,10,13]. Consequently, the change in the ICD-9 perpetuated the false idea that schizophrenia does not develop in older adults. In 1980, the DSM-III furthered this misconception by including “onset prior to age 45” as a diagnostic criterion for schizophrenia [15]. Although this criterion was removed in the revised version of the DSM-III (DSM-III-R), the confusion and debate persisted [6,11,16]. Clarity arose at the turn of the century, when Howard et al. of the International Late-Onset Schizophrenia

Group (ILOGS) published a consensus report outlining three major classifications of schizophrenia based on age group: Early-Onset Schizophrenia (EOS) was defined as onset prior to 40 years of age; Late-Onset Schizophrenia (LOS) with onset after age 40, and Very-Late Onset Schizophrenia (VLOS) with onset after age 60.5 By establishing clear nomenclature and age cut-offs, the ILOGS consensus represented a pivotal step in the recognition of schizophrenia onset in older patients. However, the categories of EOS, LOS, and VLOS have yet to be incorporated into the DSM or ICD. In order to optimize the diagnosis of first-onset schizophrenia in older age, inclusion of the EOS, LOS, and VLOS categories into diagnostic manuals would be an important step. One way to accomplish such inclusion would be *via* proposals to the American Psychiatric Association for revisions to the DSM, which can be submitted by any member of the public. In helping to spread awareness of the older-age subtypes among the large audience of DSM readers, a longstanding pattern of inconsistent terminology may finally reach resolution.

Diagnostic ambiguity

Despite the consensus reached in 2000 regarding the three subtypes of schizophrenia, the validity of these classifications remains in dispute, likely perpetuating the lack of recognition and misdiagnosis of older patients.¹⁰ Further, due to overlap in clinical presentations, it can be confusing for clinicians to differentiate between schizophrenia and other types of psychoses, such as those that occur as a result of dementia. The following section will provide evidence in favour of the diagnostic validity for LOS and VLOS (collectively referred to as “(V) LOS”) and will discuss their differential diagnoses. Many researchers remain skeptical about the legitimacy of (V) LOS diagnoses, arguing that they are merely prodromes of dementia [6,17-19]. While the literature shows higher rates of dementia among these patients compared to individuals with EOS and healthy controls, research on cognitive functioning in (V) LOS patients, as well as studies on brain imaging and biomarkers, suggest that schizophrenia onset at a later age is distinct from dementia and does not incur a causative effect [5,20-23]. Compared to patients with dementia, both LOS and VLOS patients exhibit overall superior cognitive functioning and less cognitive decline. Areas of cognitive deficits, when present, are different from those of dementia patients. The literature suggests that VLOS patients have poorer attention skills compared to patients with Alzheimer’s Disease (AD), but superior memory and learning functions [24]. In addition, the cognitive changes that take place in both LOS and VLOS groups have been shown to resemble those of EOS, reinforcing the notion that these are subsets of the same illness [24-26]. On a similar note, brain imaging studies of patients with (V) LOS reveal comparable microstructural changes to those seen in patients with EOS [5]. In contrast to AD brain imaging, these studies did not find significant limbic tauopathy or amyloid deposition in patients with either LOS or VLOS, and pyramidal cell numbers in the hippocampus were preserved [27,28]. Supporting this, a study measuring concentrations of biomarkers (tau and beta-amyloid) in the Cerebrospinal Fluid (CSF) of elderly patients with late-onset psychosis found that none of the patients with VLOS had a CSF profile typical of AD [22]. In addition to recognizing the validity of LOS and VLOS diagnoses, it is important to be able to differentiate these subsets of schizophrenia from psychoses due to other illnesses. Hallucinations and delusions

can arise in the elderly for a number of reasons, including mood disorders, sensory deficits, polypharmacy, substance misuse, medical disorders, dementia, etc., [29]. One particular clinical challenge commonly discussed in the literature is recognizing the difference between (V) LOS and dementia. Neurocognitive testing using the MoCA or the MMSE may be helpful, as patients with LOS and VLOS tend to score higher than patients with dementia. However, this is not useful for patients who have concomitant dementia and (V) LOS, or for patients in whom Lewy Body Dementia is suspected [23,25]. An accurate diagnosis, guided by a full physical exam, history (with collateral), and review of medications is critical for every patient with psychosis to make the necessary differentiation and provide effective treatment [11]. To facilitate this process, clearer diagnostic guidelines should be established, perhaps in the DSM. In addition, to further support recognition of these patients, incorporating LOS and VLOS into the learning objectives for medical schools and residency programs would be invaluable.

Limited Research and Services

Due to the age cut-offs in the DSM-III, North American research prior to 1987 excluded patients who developed schizophrenia later in life, which has resulted in fewer overall studies on the subject to this day [30]. Some progress has been made, as the nomenclature established by Howard et al. generated interest in the research community. However, a search on Pubmed and CINAHL using terms such as “late-onset schizophrenia” and “very-late onset schizophrenia” reveals few results compared to those of “early-onset schizophrenia” [6]. Currently, there is no evidence-based randomized clinical trial on which to base treatment guidelines for older patients who develop schizophrenia [31]. Without sufficient research, knowledge of these subtypes will remain limited.

Lack of available services is another key barrier to properly caring for (V) LOS patients. Early intervention programs have been invaluable in the treatment of schizophrenia in youth, improving recovery rates and simultaneously reducing relapses, suicides, and overall costs [32,33]. However, most programs in Canada, the US, and the UK have age cut-offs at 35, as they are specifically designed to meet the needs of EOS patients (who have likely not yet achieved adult roles such as establishing a career or starting a family), and are therefore not necessarily appropriate for (V) LOS patients [34]. Creating early intervention programs specifically designed for older-onset schizophrenia patients is a solution worth exploring. Extending research and services to include more patients with (V) LOS is an obvious solution to overcoming the barrier of insufficiency in these areas. Unfortunately, the lack of these resources is only one aspect of the problem. In studies where early-onset programs were made available to older patients, only a small proportion actually accessed them [34]. In addition, when these patients do participate in research studies, they are often lost to follow-up [35]. Reasons for the lack of participation are unclear, but social isolation may play a role, as this is known to be common among (V) LOS patients prior to diagnosis, and the experience of delusions may lead individuals to withdraw even further. [19,36]. With respect to VLOS patients, it is notable that the stigma of mental illness remains prevalent among the elderly, perhaps preventing individuals from acknowledging their mental illness and accessing available services. There is even

evidence to suggest that physicians themselves may contribute to this stigma by holding negative attitudes and stereotypes of older adults with schizophrenia [37]. One solution to combating social isolation would be to allocate funds towards intervention programs, such as home or telephone visits, which have been shown to be effective in community-dwelling seniors [38]. With regards to the stigma of mental health in the elderly, awareness and education are important first steps to normalizing the issue, which can be achieved through educating oneself, one's colleagues and one's elderly patients [39,40]. These efforts, along with expanding research and services to include older adults may ensure better care for these patients.

Conclusion

Older adults with first-onset schizophrenia have historically been overlooked. This paper discussed three main barriers that have contributed to the lack of understanding, under-recognition and under-service of this patient population. Difficulties with inconsistent terminology and definitions over the years, diagnostic challenges, as well as limited services and research for this patient group constitute these barriers. Terminology can become more standardized by incorporating the different subsets of schizophrenia into the DSM. The obstacles to obtaining a diagnosis can be overcome by establishing clear diagnostic guidelines for these patients. Finally, more services for early intervention, with opportunities to participate in research, as well as targeted efforts to help these patients and healthcare providers overcome the stigma of mental health would all be beneficial. As the population ages, the number of patients with LOS and especially VLOS is expected to significantly increase. Therefore, recognizing these illnesses and properly caring for such patients will be an essential skill for every clinician who works with adult patients. Substantial education, research, and innovative ideas are required in order to overcome the barriers discussed above, and more analyses are needed to identify others. With these efforts, healthcare providers can provide better service to this vulnerable patient population.

References

- Harris MJ, Jeste DV. Late-Onset Schizophrenia: an overview. *Schizophr Bull.* 1988; 14: 39-55.
- Castle DJ, Murray RM. The neurodevelopmental basis of sex differences in schizophrenia. *Psychol Med.* 1991; 21: 565-575.
- Kay DWK, Roth M. Environmental and hereditary factors in the schizophrenias of old age ("late paraphrenia") and their bearing on the general problem of causation in schizophrenia. *J Ment Sci.* 1961; 107: 649-686.
- Pearlson GD, Kreger L, Rabins PV, Chase GA, Cohen B, Wirth JB, et al. A chart review study of late-onset and early-onset schizophrenia. *Am J Psychiatry.* 1989; 146: 1568-1574.
- Howard R, Rabins PV, Seeman MV, Jeste DV. Late-onset schizophrenia and very-late-onset schizophrenia-like psychosis: an international consensus. *Am J Psychiatry.* 2000; 157: 172-178.
- Collier E, Sorrell JM. Schizophrenia in older adults. *J Psychosoc Nurs Ment Health Serv.* 2011; 49: 17-21.
- Cohen CI, Vahia I, Reyes P, Diwan S, Bankole AO, Palekar N, et al. Focus on geriatric psychiatry: schizophrenia in later life: clinical symptoms and social well-being. *Psychiat Serv.* 2008; 59: 232-234.
- Yeon BK, Hong N. Late-onset psychosis. *Psychiatry Investig.* 2007; 4: 9-12.
- Bleuler M. Die spatschizophrenen krankheitsbilder. *Fortschritte der Neurologie und Psychiatrie.* 1943; 15: 259-290.
- Dias-Amaral A, Peixoto MJ, Silva A, Coelho R. Late-onset schizophrenia: from Manfred Bleuler to the present. *Int J Clin Neurosci Ment Heal.* 2018; 5: 4.
- Lubman DI, Castle DJ. Late-onset schizophrenia: make the right diagnosis when psychosis emerges after age 60. *Curr Psychiatr.* 2002; 1: 35-44.
- Kraepelin E. *Psychiatrie: Ein Lehrbuch für Studierende und Aerzte.* 4 Auflage. Leipzig: Barth. 1893.
- Kraepelin E. *Dementia Praecox and Paraphrenia.* Edinburgh: ES Livingstone. 1919.
- Roth M, Morrissey JD. Problems in the diagnosis and classification of mental disorder in old age; with a study of case material. *J Ment Sci.* 1952; 98: 66-80.
- American Psychiatric Association. *DSM-III: Diagnostic and Statistical Manual of Mental Disorder.* 3rd ed. Washington, DC: American Psychiatric Publishing. 1980.
- American Psychiatric Association. *DSM-III-R: Diagnostic and Statistical Manual of Mental Disorder.* 3rd ed., revised. Washington, DC: American Psychiatric Publishing. 1987.
- Brodsky H, Sachdev P, Koschera A, Monk D, Cullen B. Long-term outcome of late-onset schizophrenia: 5-year follow-up study. *Br J Psychiatry.* 2003; 183: 213-219.
- Kwak YT, Yang Y, Koo M. Late-Onset Psychosis; is it real? *Dement Neurocogn Disord.* 2015; 14: 1-11.
- Cort E, Meehan J, Reeves S, Howard R. Very late-onset schizophrenia-like psychosis: a clinical update. *J Psychosoc Nurs Ment Health. Serv.* 2018; 56: 37-47.
- Hendrie HC, Tu W, Tabbey R, Purnell CE, Ambuehl RJ, Callahan CM. Health outcomes and cost of care among older adults with schizophrenia: a 10-year study using medical records across the continuum of care. *Am J Geria.* 2014; 22: 427-436.
- Kørner A, Lopez AG, Lauritzen L, Andersen PK, Kessing LV. Acute and transient psychosis in old age and the subsequent risk of dementia: a nationwide register-based study. *Geriatr Gerontol Int.* 2009; 9: 62-68.
- Seppala TT, Louhija UM, Appelberg B, Herukka SK, Juva K. Comparison between clinical diagnosis and CSF biomarkers of Alzheimer's disease in elderly patients with late onset psychosis: Helsinki Old Age Psychosis Study (HOPS). *Am J Geriatr Psychiatry.* 2014; 22: 908-916.
- Van Assche L, Morrens M, Luyten P, Van de Ven L, Vandenbulcke M. The neuropsychology and neurobiology of late-onset schizophrenia and very-late-onset schizophrenia-like psychosis: a critical review. *Neurosci Biobehav Rev.* 2017; 83: 604-621.
- Hanssen M, van der Werf M, Verkaaik M, Arts B, Myin-Germeys I, van Os J, et al. Comparative study of clinical and neuropsychological characteristics between early-, late and very-late-onset schizophrenia-spectrum disorders. *Am J Geriatr Psychiatry.* 2015; 23: 852-862.
- Suen YN, Wong SMY, Hui CLM, Chan SKW, Lee EHM, Chang WC, et al. Late-onset psychosis and very-late-onset-schizophrenia-like-psychosis: an updated systematic review. *Int Rev Psychiatry.* 2019; 31: 523-542.
- Palmer BW, Bondi MW, Twamley EW, Thal L, Golshan S, Jeste DV. Are late-onset schizophrenia spectrum disorders neurodegenerative conditions? Annual rates of change on two dementia measures. *J Neuropsychiatry Clin Neurosci.* 2003; 15: 45-52.
- Casanova MF. Preservation of hippocampal pyramidal cells in paraphrenia. *Schizophr Res.* 2003; 62: 141-146.
- Bozikas VP, Kovari E, Bouras C, Karavatos A. Neurofibrillary tangles in elderly patients with late onset schizophrenia. *Neurosci Lett.* 2002; 324: 109-112.
- Cohen CI, Meesters PD, Zhao J. New perspectives on schizophrenia in later life: implications for treatment, policy, and research. *Lancet Psychiatr.* 2015; 2: 340-350.
- Palmer BW, Heaton SC, Jeste DV. Older patients with schizophrenia: challenges in the coming decades. *Psychiat Serv.* 1999; 50: 1178-1183.

31. Essali A, Ali G. Antipsychotic drug treatment for elderly people with late-onset schizophrenia. *Cochrane Database Syst Rev.* 2012; 2012: CD004162.
32. Greenfield P, Joshi S, Christian S, Lekkos P, Gregorowicz A, Fisher HL, et al. First episode psychosis in the over 35 s: is there a role for early intervention? *Early Interv Psychiatry.* 2018; 12: 348-354.
33. Selvendra A, Baetens D, Trauer T, Petrakis M, Castle D. First episode psychosis in an adult area mental health service-a closer look at early and late-onset first episode psychosis. *Australas Psychiatry.* 2014; 22: 235-241.
34. Anderson KK, Norman R, MacDougall AG, Edwards J, Palaniyappan L, Lau C, et al. Disparities in access to early psychosis intervention services: comparison of service users and nonusers in health administrative data. *Can J Psychiatry.* 2018; 63: 395-403.
35. Lam CCSF, Reeves SJ, Stewart R, Howard R. Service and treatment engagement of people with very late-onset schizophrenia-like psychosis. *Trans Korean Inst Electr Eng.* 2016; 40: 185-186.
36. Almeida OP, Howard RJ, Levy R, David AS. Psychotic states arising in late life (late paraphrenia): the role of risk factors. *Br J Psychiatry.* 1995; 166: 215-228.
37. Jones SM, Vahia IV, Cohen CI, Hindi A, Nurhussein M. A pilot study to assess attitudes, behaviors, and inter-office communication by psychiatrists and primary care providers in the care of older adults with schizophrenia. *Int J Geriatr Psychiatry.* 2009; 24: 254-260.
38. Dickens AP, Richards SH, Greaves CJ, Campbell JL. Interventions targeting social isolation in older people: a systematic review. *BMC Public Health.* 2011; 11: 647.
39. Knaak S, Modgill G, Patten SB. Key ingredients of anti-stigma programs for health care providers: a data synthesis of evaluative studies. *Can J Psychiatry.* 2014; 59: S19-S26.
40. Ross CA, Goldner EM. Stigma, negative attitudes and discrimination towards mental illness within the nursing profession: a review of the literature. *J Psychiatr Ment Heal Nurs.* 2009; 16: 558-567.