

Psychosocial Mechanisms and Multilevel Barriers to Access Mental Health Services among Older People Living with HIV: A Narrative Review

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Abstract

Background: The widespread availability of antiretroviral therapy (ART) has transformed HIV into a manageable chronic condition, producing a rapidly aging population of people living with HIV (PLWH). Older PLWH experience a disproportionately high burden of depression, anxiety, trauma-related disorders, and cognitive impairment, arising from complex interactions among biological, psychosocial, and structural determinants.

Aim: This narrative review synthesizes evidence on mechanisms underlying mental health disorders in older PLWH and examines multilevel barriers to mental health service access across diverse resource settings.

Methods: A narrative review of peer-reviewed literature was conducted using PubMed (MEDLINE). Studies addressing mental health outcomes, biological and psychosocial mechanisms, stigma, social determinants, and healthcare access among older PLWH from both high-resource and low- and middle-income settings were included. Findings were thematically synthesized within a biopsychosocial and social-ecological framework.

Results: Mental health disorders among older PLWH are shaped by interrelated biological pathways (neuroinflammation, accelerated aging, neuroendocrine dysregulation) and psychosocial mechanisms (loneliness, accumulated trauma, chronic stress, intersecting stigmas) that form self-reinforcing cycles. Barriers to care operate at structural, organizational, provider, and individual levels. Promising approaches include integrated care models, holistic geriatric programs, telehealth, task-shifting, and peer-based interventions.

Conclusions: Mental health disorders in older PLWH require coordinated, age-responsive care. Strengthening services necessitates integrated delivery, trauma-informed and culturally sensitive interventions, enhanced provider training, and structural reforms to reduce fragmentation and stigma. (TCM-GMJ May 2026; 11 (1): P35-P39)

Keywords: HIV, Mental health, Aging, Biopsychosocial model, Health system integration

Introduction

The widespread availability of antiretroviral therapy (ART) has fundamentally altered the demographic trajectory of HIV, enabling people living with HIV (PLWH) to achieve near-normal life expectancy [1]. In the United States, PLWH aged 50 or older rose from 17% of the HIV-positive population in 2001 to over 50% by 2019, with projections suggesting that more than 70% will be aged 50 or older by 2030 in high-income countries [2, 3]. Comparable demographic shifts are increasingly observed in low- and middle-income countries (LMICs) as ART access expands [1].

Aging with HIV confers distinct clinical challenges. Older PLWH exhibit accelerated biological aging with earlier

onset of cardiovascular disease, metabolic disorders, neurocognitive impairment, and frailty [4]. Mental health disorders—including depression, anxiety, post-traumatic stress disorder (PTSD), and substance use disorders—are substantially more prevalent among older PLWH than in age-matched HIV-negative populations, with recent meta-analyses indicating clinically significant depressive symptoms in 40–60% of older PLWH [5]. Recent meta-analyses indicate that 40–60% of older PLWH experience clinically significant depressive symptoms, significantly higher than rates reported in the general older population [6].

Despite the scale of this burden, older PLWH face significant, multilevel barriers to mental health care, compounded by intersecting stigmas and adverse social determinants [7]. This narrative review synthesizes evidence on psychosocial mechanisms underpinning mental health disorders in this population, examines the role of stigma in help-seeking, and identifies barriers and facilitators to service access across resource settings.

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Methods

A narrative review was conducted using PubMed (MEDLINE), combining terms related to HIV, aging, depression, anxiety, trauma, cognitive impairment, stigma, loneliness, healthcare access, and service integration. Eligible sources included peer-reviewed quantitative studies, qualitative studies, systematic reviews, and meta-analyses published in English. Both high-resource and LMICs settings were considered. Evidence was organized thematically across three domains: (1) biological mechanisms, (2) psychosocial mechanisms, and (3) multilevel barriers and facilitators to mental health service access. Findings were interpreted using a biopsychosocial framework integrated with the Social-Ecological Model [8].

Results and discussion

Mental health disorders among older PLWH emerge from complex, synergistic interactions among biological, psychosocial, and structural determinants. These mechanisms create self-reinforcing cycles in which psychological dysfunction exacerbates physiological pathology, which in turn worsens mental health outcomes. Figure 1 illustrates these interconnected pathways.

Biological Mechanisms

Several interrelated biological pathways contribute to mental health disorders in aging PLWH, though the overall evidence base derives predominantly from mechanistic rather than large prospective studies. First, neuroinflammation and neural injury arise from HIV's neurotropism and chronic central nervous system persistence, together with cytokine-mediated inflammation (IL-6, TNF- α), microglial activation, and reduced monoaminergic neurotransmission—collectively promoting oxidative stress, synaptic disruption, and neuronal loss that manifest as mood disorders, cognitive decline, and other neuropsychiatric sequelae [9]. Second, accelerated aging pathways—including epigenetic alterations, telomere attrition, mitochondrial dysfunction, and senescent cell accumulation—impair neuronal function, promote neuroinflammation, and increase vulnerability to psychological stress [10]. Third, neuroendocrine and microbial dysregulation, encompassing hypothalamic-pituitary-adrenal (HPA) axis dysfunction, autonomic nervous system disruption, and microbiome-gut-brain axis alterations, affects mood and stress resilience through modulation of tryptophan catabolism and oxytocin signaling [11].

Psychosocial Mechanisms

Psychosocial stressors are highly prevalent among PLWH and are associated with depression, anxiety, and diminished psychosocial well-being [12]. These factors are particularly salient for older PLWH given the compounding effects of aging and chronic HIV infection.

Loneliness and Social Isolation

Social isolation—an objective deficit in social connections—and loneliness—the subjective experience of inadequate social relationships—are conceptually distinct yet co-occurring phenomena [13]. Nearly half of older PLWH report significant social isolation or frequent loneliness [14]. Older PLWH experience both phenomena at elevated rates, as almost half of them report significant social

isolation and frequent loneliness [15]. Recent evidence indicates loneliness and social isolation are strongly linked to negative mental health outcomes, including depression, anxiety, cognitive decline, systemic inflammation, lower ART adherence, higher viral loads, faster disease progression, and lower quality of life [12, 13, 16–18].

The consequences of loneliness and social isolation for older PLWH are profound and multidimensional. Behaviorally, older PLWH experiencing loneliness and social isolation are less likely to engage in health-promoting behaviors, such as medication adherence and regular medical care [19, 20]. Conversely, they are more likely to engage in health-compromising behaviors, including excessive alcohol consumption, smoking, and substance use, often as maladaptive coping mechanisms [21]. Psychologically, loneliness influences cognitive and emotional processes in self-perpetuating ways. Individuals experiencing loneliness may perceive social interactions as rejecting or threatening, which paradoxically promotes social withdrawal and reinforces expectations of rejection [22]. These processes create vicious cycles in which loneliness perpetuates behaviors that further increase social isolation.

Stigma

Stigma represents a fundamental social process in which certain attributes are devalued, leading to discrimination, social exclusion, and reduced life opportunities [23]. Older PLWH experience multiple multiple, intersecting stigmas, including HIV-related stigma, mental illness stigma, and ageism [15]. According to Goffman's classic theory of stigma, these experiences can be categorized as enacted stigma (actual experiences of discrimination), anticipated stigma (expectations of discrimination), and internalized stigma (internalization of negative beliefs about oneself) [24]. Each form of stigma exerts profound effects on the health and well-being of older PLWH.

Stigma also profoundly influences social relationships and support networks. Concealment of HIV status to manage stigma limits access to HIV-specific support and fosters social isolation. Fear of rejection can prompt withdrawal from social situations and avoidance of relationships. Enacted stigma, including rejection by family, friends, or the broader community, disrupts social networks and eliminates sources of support [25, 26]. These social pathway effects link stigma to loneliness and social isolation, which in turn impact mental and physical health through mechanisms described above.

Psychologically, internalized stigma undermines self-esteem, increases shame, and contributes to depression and anxiety [27]. Anticipated stigma creates chronic stress through hypervigilance in situations where potential disclosure is possible and expectations of rejection. This chronic stress activates the hypothalamic-pituitary-adrenal (HPA) axis and sympathetic nervous system, resulting in elevated cortisol, increased inflammation, and heightened cardiovascular reactivity [28].

Behaviorally, stigma affects healthcare utilization via multiple pathways. Internalized stigma diminishes perceived need for care and treatment-seeking self-efficacy, as individuals may feel undeserving of care or believe their

problems are insurmountable [29]. Anticipated stigma can lead to avoidance of healthcare settings where disclosure might occur or discrimination might be experienced. Enacted stigma, including prior experiences of discrimination from providers, fosters mistrust in the healthcare system and deters future care-seeking [30].

Chronic Stress and Accumulated Trauma

Many older PLWH, particularly long-term survivors from the early epidemic era, carry substantial unresolved grief from the loss of partners, friends, and community networks to AIDS-related illness [31]. This accumulated bereavement has been characterized as “survivor syndrome,” encompassing survivor guilt, disrupted identity, loss of meaning, and chronic grief, experiences that often resurface in later life as depression, anxiety, PTSD, and complicated grief [32]. Concurrently, the chronic stress of managing a stigmatized, life-threatening illness over decades contributes to elevated allostatic load, cumulative physiological burden arising from sustained stress-response activation [33]. These psychosocial stressors interact synergistically with biological mechanisms: chronic stress activates inflammatory pathways via the HPA axis and autonomic nervous system, while loneliness and social isolation upregulate pro-inflammatory gene expression (the conserved transcriptional response to adversity, CTRA pattern), providing a molecular link between social experience and biological inflammation [34]. Conversely, biological inflammation impairs motivation, hedonic capacity, and cognition, reinforcing psychosocial vulnerabilities, together constituting the self-perpetuating biopsychosocial cycles characteristic of depression in this population.

Barriers and Facilitators to Mental and Social Health Services

Structural and Systemic Barriers

Structural and system barriers for older PLWH to access mental health services include scheduling/availability, transportation, cost, lack of provider competency, and fragmented healthcare systems [35]. In high-resource settings, scheduling, travel time, and transportation have been consistently identified as primary barriers among older HIV-positive populations, alongside extrinsic barriers (cost), attitudinal factors, comorbid conditions, and minority-specific determinants [7]. In LMICs, the evidence base is more limited; key barriers include the absence of integrated services, limited geriatric HIV expertise, and delayed management of noncommunicable comorbidities [36].

Provider-Level Barriers

Insufficient provider competency in geriatric mental health and workforce shortages are documented across both resource settings. Evidence comes from multiple sources with varying specificity [37]. Qualitative evidence from sub-Saharan Africa has revealed that clinic staff feel ill-equipped to conduct mental health screening and lack standardized processes [38]. In Latin America, providers

have acknowledged minimal prior training in mental health care and even less preparation for managing age-specific mental health challenges in older PLWH. In the Asia-Pacific region, severe workforce shortages persist, with 2.5–10 mental health workers per 100,000 population compared with approximately 50 in Europe [39].

Individual and Interpersonal Barriers

Individual barriers, including negative attitudes toward mental health care, internalized stigma, and low perceived need, interact with interpersonal barriers such as social isolation, provider incompetency, and intersectional discrimination [7]. The convergence of HIV-related stigma and ageism creates compounded barriers to service access, with fear of disclosure delaying treatment and perceived provider discrimination deterring care-seeking [15, 40]. In LMICs, competing survival priorities and limited age-friendly facilities further constrain help-seeking among older PLWH.

Facilitators and Promising Approaches

Key facilitators include prior positive mental health service experiences, higher socioeconomic status, and availability of integrated care [41]. Integrated HIV and mental health service models, encompassing single-facility integration, multi-facility networks, and case manager-coordinated care, reduce access barriers by improving coordination across the complex care landscapes that older PLWH typically navigate [42]. Holistic models that address physical, psychosocial, and spiritual dimensions of well-being represent a complementary approach; programs offering comprehensive specialist referrals, care navigation, and multidisciplinary teams tailored to older PLWH have demonstrated improved patient satisfaction and health outcomes [36]. These integrated and holistic frameworks are well-suited to addressing the multimorbidity and polypharmacy prevalent in this population, mitigating the adverse consequences of care fragmentation [36].

Conclusion

Mental health disorders among older PLWH arise from complex, interdependent biological and psychosocial pathways reinforced by adverse structural determinants. Depression, anxiety, cognitive impairment, and frailty are not isolated comorbidities but products of chronic neuroinflammation, accumulated trauma, stigma, social isolation, and care fragmentation operating synergistically across the life course.

Addressing this burden requires moving beyond siloed clinical approaches toward multilevel, integrated strategies. Health systems must adopt trauma-informed, stigma-responsive, and geriatric-competent care models, supported by expanded provider training, telehealth infrastructure, task-shifting in resource-limited settings, and structural reforms that reduce care fragmentation. As the global population of older PLWH continues to grow, deliberate system-level adaptation is essential to prevent widening mental health disparities despite advances in HIV treatment.

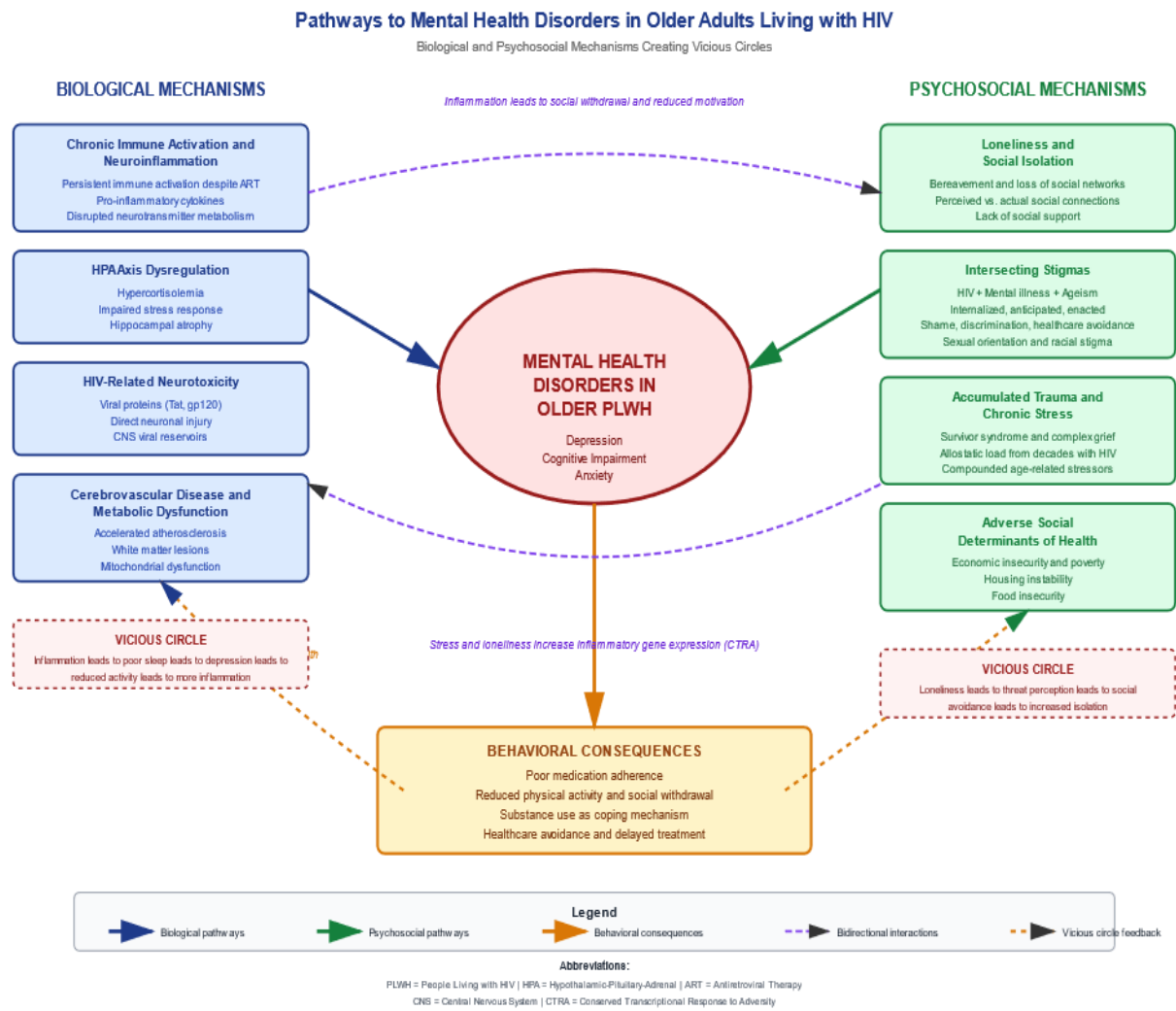


Figure 1: This diagram illustrates the complex, interconnected pathways leading to mental health disorders in older people living with HIV.

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