



# Effect of Peer Support Groups on ART Adherence Among Young Adults With HIV: A Narrative Review

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## ABSTRACT

Young adults living with HIV (YALHIV) face multifaceted challenges that significantly impede adherence to antiretroviral therapy (ART), including stigma, mental health issues, developmental transitions, and insufficient youth-centered support systems. As a response to these barriers, peer support groups have emerged as a promising, community-driven intervention strategy. These groups, often facilitated by trained peers with lived HIV experience, offer emotional, informational, and practical support tailored to the unique psychosocial needs of this age group. The effectiveness of peer support is grounded in social learning theory, emphasizing observational learning, self-efficacy, and the power of relatable role models in promoting sustained health behavior. Various peer support models ranging from in-person group sessions to digital platforms have demonstrated improvements in ART adherence, clinic retention, and psychological well-being. Despite documented success, challenges such as program attrition, variability in implementation quality, and integration into formal healthcare systems persist. This narrative review, developed through thematic synthesis of published evidence, critically evaluated the role of peer support groups in enhancing ART adherence among YALHIV. Emphasis is placed on the mechanisms of action, diversity of peer-led approaches, and strategies for sustainable integration into routine HIV care. Strengthening and scaling peer support interventions may hold transformative potential for youth-centered HIV care globally.

**KEYWORDS:** Peer Support Groups, ART Adherence, Young Adults with HIV, HIV Care, Social Learning Theory.

## INTRODUCTION

Antiretroviral therapy (ART) has revolutionized the management of HIV, transforming it from a life-threatening infection to a manageable chronic condition [1-3]. Sustained adherence to ART is pivotal in achieving viral suppression, reducing morbidity and mortality, and preventing HIV transmission. However, maintaining optimal adherence remains a significant challenge, particularly among young adults living with HIV (YALHIV), who often encounter unique developmental, psychosocial, and structural barriers [4, 5]. This demographic typically includes individuals aged 15 to 24 years, a group with disproportionately high rates of new infections and lower adherence and retention in HIV care compared to older adults. Young adults face a myriad of challenges that impede ART adherence, including stigma, mental health disorders, inadequate social support, denial of diagnosis, and transitions in care [6, 7]. These factors collectively compromise adherence behaviors and increase the risk of virologic failure. Peer support interventions have emerged as a promising, community-driven strategy to bolster ART adherence. Peer support groups facilitated by trained individuals living with HIV who share similar lived experiences aim to provide emotional, informational, and instrumental support. These groups foster a sense of belonging, reduce isolation, and normalize the experience of living with HIV. The rationale for peer support as a behavioral intervention is grounded in social learning theory and the principle that individuals are more likely to adopt and maintain health-promoting behaviors when modeled by relative peers. Among YALHIV, the shared experience and age-appropriate communication within peer groups can enhance motivation, reduce stigma, and increase confidence in managing ART regimens. This review explores the current landscape of peer support interventions and evaluates their effectiveness in improving ART adherence among young adults with HIV. Emphasis is placed on the

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mechanisms through which peer support influences adherence behaviors, the diversity of peer-led models, and the implications for integrating such interventions into standard HIV care.

### **Understanding the Adherence Crisis Among Young Adults with HIV**

ART adherence is critical for effective HIV management, requiring individuals to maintain over 95% adherence to prevent drug resistance and ensure viral suppression [8, 9]. Yet, young adults are particularly vulnerable to suboptimal adherence. Cognitive development during late adolescence and early adulthood may influence decision-making, risk perception, and health behavior patterns. Additionally, psychosocial transitions such as leaving home, starting higher education, employment, or managing relationships often disrupt adherence routines. Stigma remains a persistent barrier. Internalized HIV stigma among young people may lead to secrecy, reluctance to disclose their status, and fear of being seen taking medication [10, 11]. This further isolates them from potential support networks. Mental health disorders, especially depression and anxiety are also highly prevalent in this population and are closely linked with poor ART adherence. Moreover, healthcare system challenges, such as inflexible clinic schedules, judgmental healthcare providers, and lack of youth-centered services, further deter young adults from consistently engaging in care. Addressing this adherence crisis requires interventions tailored to the psychosocial realities of young adults. Traditional didactic approaches to adherence counseling often fail to resonate with youth. In contrast, peer support leverages shared experience and cultural resonance, making it uniquely positioned to address barriers to ART adherence within this group [12].

### **Conceptual Framework and Mechanisms of Peer Support**

Peer support in HIV care encompasses a range of interactions aimed at emotional reinforcement, health education, and practical assistance [13]. The theoretical underpinning of peer support draws from Bandura's Social Cognitive Theory, which emphasizes observational learning and self-efficacy [14, 15]. Through modeling of behavior, reinforcement of norms, and vicarious learning, peer-led groups offer a platform for health-enhancing behavioral change. There are several mechanisms through which peer support influences ART adherence:

- i. **Emotional support:** Peer groups provide a safe environment for sharing fears, frustrations, and successes. This emotional exchange can alleviate stress and depression, both of which are detrimental to adherence.
- ii. **Social identity formation:** Engaging with peers who are also living with HIV helps young adults form a positive identity, reducing feelings of shame and enhancing self-acceptance.
- iii. **Motivational reinforcement:** Seeing peers successfully manage their treatment can enhance confidence and motivation to adhere to ART.
- iv. **Practical information sharing:** Peer mentors often share strategies for integrating medication into daily life, dealing with side effects, or navigating healthcare systems.

These multifaceted benefits create a supportive ecosystem that nurtures adherence and empowers young adults to take charge of their health.

### **Models and Modalities of Peer Support Interventions**

Peer support interventions vary widely in their structure, delivery format, and intensity. Common models include:

- i. **Peer-led support groups:** These are in-person or virtual group sessions facilitated by trained peers who lead discussions on ART adherence, coping strategies, and life skills. Group dynamics enhance the feeling of community and collective resilience [16].
- ii. **One-on-one peer mentoring:** This model pairs young adults with peer mentors who provide individualized support through phone calls, text messages, or face-to-face interactions.
- iii. **Community-based outreach:** Peer navigators conduct home visits or community outreach to offer ART adherence support and accompany youth to clinic appointments.
- iv. **Digital platforms:** With the rise of mobile technology, digital peer support has gained traction. Platforms such as WhatsApp or Facebook groups allow ongoing, real-time interaction between peers and can overcome geographic and logistical barriers [17].

These modalities can be tailored based on context, resources, and population needs. Successful programs emphasize comprehensive peer training, confidentiality, and integration with clinical services to ensure continuity of care.

### **Evidence of Effectiveness in Improving ART Adherence**

Several studies and program evaluations underscore the efficacy of peer support in enhancing ART adherence among YALHIV. In various low- and middle-income countries, particularly in sub-Saharan Africa, peer support groups have demonstrated improvements in medication pickup rates, retention in care, and viral suppression [18]. In randomized controlled trials, peer-led interventions have been associated with significant increases in self-reported adherence and clinic attendance [19]. For instance, peer mentor programs where adolescents met regularly with slightly older peers living with HIV showed marked improvements in medication adherence and psychosocial outcomes, including reduced depression and increased ART knowledge. Qualitative studies provide additional insight into the lived experiences of youth participating in peer groups. Many reports increased self-confidence,

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reduced loneliness, and better coping skills. The relational nature of these groups builds trust, allowing members to ask questions they might avoid in clinical settings. However, challenges remain. The effectiveness of peer support is influenced by the quality of peer training, group facilitation skills, and participant engagement. High attrition rates and logistical barriers (e.g., transport, safety) can limit participation, particularly in in-person settings. Moreover, while peer support appears promising, isolating its direct impact from other concurrent interventions remains complex.

### Integration into HIV Care and Future Directions

To maximize the benefits of peer support, integration into formal HIV care frameworks is essential. Successful integration requires collaboration between healthcare providers, community organizations, and young people living with HIV. Training for peer supporters must include counseling skills, adherence knowledge, confidentiality ethics, and mental health first aid [20]. Supervision and compensation are also crucial to sustaining peer involvement and avoiding burnout. Healthcare systems should recognize peer supporters as essential members of the HIV care team. Incorporating peer support into youth-friendly clinics, linking it with mental health services, and embedding it into electronic adherence monitoring systems can enhance its impact [21]. Furthermore, digital peer support interventions should be explored more rigorously, particularly in urban centers with widespread smartphone access. Research gaps persist in understanding the long-term effects of peer support on adherence and virological outcomes. More robust randomized controlled trials are needed, along with implementation research to guide scalability and cost-effectiveness assessments. Additionally, gender dynamics, disclosure challenges, and intersecting vulnerabilities such as LGBTQ+ identity must be considered when designing peer support interventions.

Engaging young adults in the co-creation of peer support programs ensures relevance and fosters ownership. Such participatory approaches align with human-centered design principles and may enhance program fidelity and sustainability.

### CONCLUSION

Peer support groups represent a powerful, community-centered approach to addressing ART adherence challenges among young adults living with HIV. By fostering emotional connection, enhancing knowledge, and promoting behavior modeling, these interventions address the psychosocial barriers that often undermine medication adherence in this vulnerable population. Evidence suggests that peer support can significantly improve adherence, retention in care, and overall wellbeing. Nevertheless, peer support should not be viewed as a standalone solution but rather as a complementary strategy integrated within broader HIV care frameworks. Effective implementation requires structured peer training, adequate supervision, and systemic support from healthcare institutions. Digital innovations also present new opportunities to expand the reach and scalability of peer-based interventions. As the global HIV response increasingly emphasizes youth-specific programming, peer support offers a culturally resonant and adaptable model for strengthening ART adherence. Future research must continue to elucidate the mechanisms of impact, optimize delivery models, and ensure that interventions remain youth-driven and inclusive. Ultimately, empowering young adults through peer engagement is not only an adherence strategy, but also an affirmation of agency, resilience, and the transformative power of shared experience.

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