

**"ADHERENCE TO ANTIRETROVIRAL THERAPY IN HIV-  
POSITIVE CHILDREN AND ADOLESCENTS: CHALLENGES AND  
STRATEGIES FOR IMPROVEMENT"**

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**Relevance:**

HIV remains a significant global health challenge, particularly among vulnerable populations such as children. Despite advancements in antiretroviral therapy (ART), adherence among children and adolescents is suboptimal, leading to treatment failure and the risk of viral resistance. Addressing barriers to adherence is essential to improving clinical outcomes and ensuring long-term success in managing pediatric HIV.

**Introduction:**

Adherence to ART, defined as taking at least 95% of prescribed medications, is critical for viral suppression and preventing drug resistance. However, children face unique challenges related to adherence, including age-specific and psychosocial factors. This study investigates the influence of gender and age on ART adherence among HIV-positive children in Uzbekistan.

**Materials and Methods:** This observational cross-sectional study included 695 HIV-positive children aged 0–18 years, receiving care at a specialized clinic affiliated with the Republican AIDS Center. Data were collected through patient surveys and medical record analysis from 2021 to 2024. Inclusion criteria were a confirmed HIV diagnosis, ART treatment for at least six months, and complete medical records. The study analyzed ART adherence levels (categorized as high, moderate, or low) in relation to gender, age, and socio-demographic factors. Descriptive statistics, correlation analysis, and logistic regression were performed using SPSS v.25.

**Results:**

The study revealed that 59.1% of children achieved high adherence, 25.2% had moderate adherence, and 15.7% exhibited low adherence. Gender was not found to significantly affect adherence levels, consistent with findings from similar studies. However, older adolescents (15–18 years) faced greater adherence challenges compared to younger children. This trend reflects age-related psychosocial factors,

including a desire for independence and concerns about stigma, despite healthcare system efforts to provide support.

**Conclusion:**

The findings highlight the need for targeted interventions addressing age-specific challenges, particularly for older adolescents. Strategies such as educational programs, psychosocial support, and confidentiality measures are critical to improving ART adherence and preventing treatment failure in pediatric populations.