Antiretroviral Therapy Adherence: Testing a Social Context Model Among Black Men Who Use Illicit Drugs

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*Individuals living with HIV who receive treatment and optimal care live longer and healthier lives. The purpose of this study was to develop a theoretical model to understand the effects of social context factors (individual, interpersonal, and social capital) that influence antiretroviral therapy (ART) adherence among a sample of HIV-infected Black men who use illicit drugs (*N = *160). Ecosocial theory and social epidemiology provided the theoretical framework for this study. Multiple regression techniques and path analysis were used to test the model for these subjects. Homelessness among the subjects significantly affected adherence to ART. Tolerability of ART was observed to have a greater indirect effect on ART adherence than a direct effect. A positive state of mind and current illicit drug use indirectly affected ART adherence; however, significance was not achieved. Implications for the use of this theoretical model to guide research, clinical practice, and policy as part of a human rights approach to HIV disease is articulated.*

(Journal of the Association of Nurses in AIDS Care, 22, *100-127*)

Key words: *causal modeling, ecosocial theory, HIV, path analysis, social epidemiology*

In many parts of the world, persons living with HIV (PLWH) who receive treatment and "optimal care" are living longer and healthier lives (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2008a). This is true for most individuals living in developed countries and is beginning to be true for some who are living in developing countries as well (UNAIDS, 2008a). However, the ability to access the resources and services required to achieve longer life is not enjoyed by all PLWH. Achieving a longer life for all individuals is a challenge for developed as well as for developing countries. For many vulnerable PLWH, social contexts are constructed, whereby they are marginalized and shut out from the opportunities that are enjoyed by other members of a civil society (Burris et al., 2004; Franks, Muennig, Lubetkin, & Jia, 2006; Halkitis, Kutnick, & Slater, 2005; Halkitis, Parsons, Wolitski, & Remien, 2003; Lane et al., 2004; Szreter & Woolcock, 2004).

Social context (ecosocial) challenges have resulted in a call for a human rights-based approach to manage HIV disease (UNAIDS, 2008b). Such approaches taken for the management of HIV disease will require intersectoral cooperation and collaboration between affected individuals, their communities, and policy-makers at local, national, and international levels. Antiretroviral therapy (ART) adherence

"Step into my parlor said the spider to the fly."
—Mary Howitt (1829)

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JOURNAL OF THE ASSOCIATION OF NURSES IN AIDS CARE, Vol. 22, No. 2, March/April 2011, 100-127
doi:10.1016/j.jana.2010.07.008

is an essential aspect of HIV disease management that highlights the relevance of a human rights-based approach to managing HIV. The ease with which viral resistance develops, even with brief or intermittent nonadherence, and yields adverse treatment outcomes (Chesney, 2006; Chesney, Farmer, Leandre, Malow, & Starace, 2003), has necessitated the implementation of effective clinical intervention at the individual level and sound policy at the population level (Halkitis et al., 2005). As compared with ART, treatment options for other chronic disease states are more accommodating with respect to variability in adherence patterns (Chesney et al., 2003). Devising strategies to study the complex interactions across ecosocial levels (individual, interpersonal, and social context) of influence may offer insights into ways to enhance existing strategies or develop new ones for facilitating individual ART adherence and to optimize the beneficial effect of these drugs in the individual and the population (Lima et al., 2008; Montaner et al., 2006).

The purpose of this study was to develop a theoretical model to understand the effects of ecosocial context factors (individual, interpersonal, and social capital) that influence ART adherence among HIV-infected Black men who use illicit drugs. To develop the theoretical model for this study, a review of previously published data and a social epidemiologic risk assessment of the social environment within which these men reside were conducted. The influence of social context is geographically widespread with local and global implications; however, this study focused only on a specific vulnerable population of illicit drug users residing in the southeastern United States.

The terminology used to describe ethnic and/or racial groups that are discussed in this article reflects those that have been used in the scientific literature. The usage of the term "Black" is based on a broad category that includes individuals from Africa, people residing in the Caribbean basin, and others who self-identify as Black. The term "African American" is used as a more specific term to identify individuals who were born in the United States or its territories, or those who were born abroad to parents who are citizens of the United States and self-identify as African American. The idea behind using these terms is to clarify that different experiences might occur among some of the members of these groups in the United States which might not reflect the overall experiences felt by all the members of these groups.

Ecosocial Theory and the Social Epidemiology of HIV

Ecosocial theory and social epidemiology have provided the theoretical underpinnings and methodology for understanding the complex social phenomenon of ART adherence among Black men who use illicit drugs. Ecosocial theory stems from the contemporary epidemiology canon that multiple factors contribute toward the spread of disease within a population (Krieger, 1994). However, ecosocial theory views the causative effects as occurring across social levels simultaneously and with observable effects at multiple levels. This perspective is in contrast to other epidemiologic approaches that view cause and effect relationships on the basis of proximity of the agent to the individual, with factors termed as proximal (downstream) and distal (upstream; Krieger, 2008). A proximal–distal explanatory approach may contribute toward perceptions that individuals are unable or unwilling to engage in health promoting behaviors (biomedical individualism) and also that social context has a lesser overall effect as compared with individual behavior and accountability (decontextualized "lifestyle" analyses). A proximal–distal approach is insufficient in the case of health because it does not consider the fact that individual behavior, social context, and social relations, which influence health and disease, occur simultaneously (Krieger, 2008). The causative agent of HIV yields illness at the individual level. At the population level, HIV has amplified effects within specific populations (e.g., illicit drug users), such as those affected by poverty, food insecurity, inadequate health care access, and those engaged in high-risk behaviors that contribute toward the spread of the disease. HIV disease and ART adherence among illicit drug-users provide a means by which ecosocial theory and the methods of social epidemiology are empirically tested.