Psychosocial Predictors of Medication Adherence among Persons Living with HIV

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Background: Since the introduction of highly active antiretroviral therapy (HAART), many have learned to live with HIV as a chronic illness. Adherence to medical regimens is extremely important for HIV patients. Purpose: To examine the extent to which medication adherence among HIV patients is related to social and psychological variables. Method: Data were gathered among 127 HIV patients (aged from 18–65 years) recruited at their quarterly consultation at Metz Hospital (France). Subjects completed a self-report adherence to medication scale, the Illness Perception Questionnaire (IPQ), the Beliefs about Medicine Questionnaire (BMQ), a French Value System Scale, a treatment satisfaction scale, and sociodemographic measures. Results: Analyses revealed significant associations between adherence and patients' beliefs about treatment, satisfaction with treatment, confidence in the physician, some values (“other people,” “god and children”), and duration of treatment and illness. Conclusion: The data suggest that patients’ beliefs about treatment are formed to a certain degree in the patients’ relationship with the physician. Furthermore, adherence seems to be related to personal values.

Key words: medication adherence, HIV infection, values, believes, self regulatory model

The efficacy of highly active antiretroviral therapy (HAART) offers the possibility of dramatic clinical improvement and prolonged life for persons infected with the human immunodeficiency virus-, or HIV (Karon, Fleming, Steketee, & De Cock, 2001; Murphy et al., 2001). Of the many factors that influence treatment success (e.g., disease stage, antiretroviral treatment history, and presence of resistant strains of HIV), adherence to antiretroviral medications seems crucial in determining the success or failure of antiretroviral therapy (Chesney et al., 2000b; Perno et al., 2002; Van Vaerenbergh et al., 2002). Even occasional nonadherence to HAART, Paterson et al. (2000) reported that virologic failure occurred in 72% of individuals with less than 95% adherence but in only 22% of individuals with 95% or greater adherence.

Although it is widely recognized that adherence to HAART is vital to treatment success, adherence is often poor (Bangsberg et al., 2000; Lucas, Chaisson, & Moore, 1999; Liu et al., 2001; Nieuwkerk et al., 2001; Paterson et al., 2000). There are many potential reasons for poor adherence. The HAART regimen can be complex, often involving three or more medications, up to eight daily pills, and dietary restrictions. Many individuals experience immediate and long-term side effects including fatigue, nausea, diarrhea, insomnia, abnormal fat accumulation, taste alterations, and peripheral neuropathy (Ammassari et al., 2001; Chesney et al., 2000a). All these factors, combined with the long-term nature of the course of treatment, may result in poor adherence among seropositive individuals.

While there is growing consensus that multicomponent intervention approaches are more effective in enhancing adherence (Haynes, 2002; Roter et al., 1998; Wright, 2000), the mechanisms by which the interventions enhance adherence need clarification.

That situation led Reynolds (2003) to propose a model for antiretroviral (ARV) medication adherence, using Leventhal’s self-regulation theory (Diefenbach & Leventhal, 1996; Leventhal et al., 1997) and supporting theoretical and empirical work (e.g., Alonzo & Reynolds, 1995; Reynolds & Alonzo, 2000). Leventhal’s theory brings a patient-centered understanding to the dynamic factors involved in adherence.
This theory suggests that people seek to understand their illness by developing a working model or representation of what the illness is, its causes, its effects, how long it will last, and whether it can be cured or controlled. Representations are elaborated through the person’s idiosyncratic symptom and illness episodes and information obtained through social and cultural channels. These representations do not necessarily conform to scientific views, but they have been found to guide health behaviors (Reynolds, 2003).

In this view, people are thought to be motivated to minimize their health-related risks and act to reduce health threats in ways consistent with their perceptions of them. This model suggests that adherence to ARV medications will be influenced by whether adherence makes sense to the patient, given his or her particular illness representation. It can be readily seen that several factors that have been identified as particularly important to ARV adherence (e.g., illness experiences, interactions with others, cognitive function) may involve the individual’s HIV illness representation.

Illness representations are not the only representations that people form. They may also form representations of treatments. It has been suggested that decisions about taking medication are likely to be informed by beliefs about the medicines as well as beliefs about the illness they are intended to treat or prevent (Horne, 1997). This principle is recognized in a recent report from the Royal Pharmaceutical Society of Great Britain, which has identified the role of medication beliefs in treatment adherence as a priority for future research (Marinker, 1997; Royal Pharmaceutical Society of Great Britain, 1997). Moreover, necessity beliefs and concerns have been shown to relate to adherence in a range of chronic illness (Horne et al., 2004).

The patient-provider relationship has been identified as another important factor influencing adherence to treatment (Roberts, 2002). Aspects of the patient-provider relationship including trust, consistency, and continued interaction have been identified as being particularly important (Baken et al., 2000; Ickovics & Meisler, 1997; Singh et al., 1996). Further, patient adherence to medications has been enhanced when providers give clear explanations and provide full disclosure of potential adverse events, and when they offer encouragement, reassurance, and support (Davis et al., 1997). This pathway is the main subject of the study reported here. In this study, we want to test whether confidence in physician predicts medication adherence directly, and may also predict it indirectly, through patients’ beliefs about treatment.

Another class of variable that appears relevant to the problem of adherence is values. Many authors have demonstrated the link between values and behaviors (Rokeach, 1973; Schwartz, 1992; Fischer & Tarquinio, 2002). Indeed, values are often considered as representing the underpinnings of behavior. In this view, people create a system of personal values from their experiences with their physical and social environment, their culture, and so on, and they then proceed to act from this system of values. To put it differently, people decide what is important for them and act accordingly. For instance, we wanted to show how values like “spirituality” influence medication adherence. Although the effect of spirituality on medication adherence per se is undocumented, persons diagnosed with life-threatening illness such as cancer and HIV/AIDS have reported high levels of spirituality (Connor, Wicker, & Germino, 1990; Jenkins, 1995; Zinnbauer et al., 1997), which have been highly correlated with psychological adaptation and good health outcomes (Kacorzowski, 1989; Simoni, Kerwin, & Martone, 2002).

Other recent authors focused on models of adherence with HAART. The most important factors seem to be social support and positive provider interactions (Simoni et al., 2006; Johnson et al., 2006b; Ironson et al., 2005) and also adherence information (regimen, side effects, beliefs about treatment; Starace et al., 2006; Johnson et al., 2006a).

In the present study, we examined how values, confidence in one’s physician, and patients’ beliefs about their treatment relate to medication adherence. We chose these factors from the self-regulatory model of antiretroviral adherence (Reynolds, 2003). We used structural equation modelling in a diverse sample of HIV-positive men and women to test whether confidence in one’s physician was an important factor for patients’ beliefs about treatment and for their medication adherence. Moreover, we wanted to analyse the contribution of some values (importance of others, spirituality) to medication adherence.

Method

Data for these analyses came from a cross-sectional study that investigated the relations of psychosocial variables to medication adherence among HIV-positive men and women. Data were collected during 2001.

Participants

HIV-positive adult men and women between the ages of 18 and 65 years who were currently prescribed HAART were eligible for inclusion in this study. No patient refused to participate in this study. Participants were recruited from the Regional Hospital Centre in Metz (France) during their quarterly consultation. Initially, 175 patients responded to recruitment efforts and were screened for the study. After a preliminary introduction to the study, 48 did not meet eligibility criteria. Patients were included if they had been prescribed some medicines for regular use in the treatment of their illness for at least two months prior to the study.