Outcomes of a Comprehensive Youth Program for HIV-infected Adolescents in Thailand

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We developed an intervention program for HIV-infected Thai adolescents with two group sessions and two individual sessions, focusing on four strategies: health knowledge, coping skills, sexual risk reduction, and life goals. An audio computer-assisted self-interview (ACASI) was administered to assess knowledge, attitudes, and practices (KAP) regarding antiretroviral therapy management, reproductive health, and HIV-associated risk behavior. The program was implemented in two HIV clinics; 165 (84%) adolescents (intervention group) participated in the program; 32 (16%) completed the ACASI without participating in the group or individual sessions (nonintervention group). The median age was 14 years, and 56% were female. Baseline KAP scores of the intervention and nonintervention groups were similar. Two months after the intervention, knowledge and attitude scores increased ($p < .01$) in the intervention group, and the increase was sustained at 6 months. KAP scores did not change from baseline in the nonintervention group at 6 or 12 months after enrollment.

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With the successful scale-up of antiretroviral therapy (ART), perinatally HIV-infected children are surviving and reaching adolescence. These adolescents are at risk for mental health, cognitive, and adaptive difficulties. Studies in the United States have described sexual risk behaviors, including early onset of sexual intercourse and sex without condoms, as well as substance use problems in perinatally HIV-infected adolescents (Bauermeister, Elkington, Brackis-Cott, Dolezal, & Mellins, 2009; Brogly et al., 2007; Elkington, Bauermeister, Brackis-Cott, Dolezal, & Mellins, 2009; Ezeanolue, Wodi, Patel, Dieudonne, & Oleske, 2006; Murphy et al., 2001; Wiener, Battles, & Wood, 2007). A study in Uganda reported that sexually active HIV-infected adolescents in Kampala were less likely to use condoms and oral contraception than uninfected adolescents, and this had significant implications for pregnancy and HIV transmission (Beyeza-Kashesya et al., 2011). In a cohort of sexually active HIV-infected adolescents in Thailand, 47% reported sex with a partner who was uninfected or of unknown HIV status in the previous 30 days; 30% reported having unprotected intercourse (Naar-King et al., 2008).

Many studies have suggested poor virologic response in HIV-infected youth as a result of poor adherence (Mellins, Brackis-Cott, Dolezal, & Abrams, 2004; Rongkavilit et al., 2007; Van Dyke et al., 2002; Wiener, Riekert, Ryder, & Wood, 2004; Williams et al., 2006). Many perinatally HIV-infected adolescents were infected with drug-resistant viruses, requiring more complicated ART regimens that created additional adherence challenges. As these adolescents became sexually active, transmission of drug-resistant viruses was possible. A recent study in the United States found that 42% of sexually active HIV-infected adolescents had viral loads of more than 5,000 copies/mL, and a quarter of them had resistance to three antiretroviral drug classes (Tassiopoulos et al., 2013).

Prevention with positive studies with adults have shown that interventions were more effective if they were integrated with treatment services in routine care settings (Centers for Disease Control and Prevention [CDC], 2003; Crepaz et al., 2006). A multidisciplinary care team at two large public tertiary care hospitals in Bangkok developed a clinic-based intervention program called the "Happy Teen Program" for HIV-infected adolescents who knew their HIV status. The program aimed to improve knowledge and attitudes in order to improve ART adherence and reduce behavioral risks. Our report describes the Happy Teen Program and the impact of the program on knowledge, attitude, practices, and self-esteem in HIV-infected adolescents participating in the program.

Method

The Intervention Program

The Happy Teen Program was developed with support from the Thailand Ministry of Public Health–U.S. Centers for Disease Control and Prevention Collaboration by a multidisciplinary group of health care providers at two large tertiary public hospitals in Bangkok: Queen Sirikit National Institute of Child Health and Siriraj Hospital. The process of program development included a literature review, focus group discussions with HIV-infected adolescents and caretakers, and several multidisciplinary team meetings to plan intervention activities and content. After pilot testing and internal training, the program was implemented.

The program was based on four main strategies (Table 1), which were delivered in two group sessions and two individual sessions. Strategy 1 focused on health knowledge (i.e., knowledge about HIV and general health). Strategy 2 developed coping skills (i.e., self-esteem and stress management). Strategy 3 aimed to reduce sexual risk (i.e., by focusing on reproductive health, sex, and sexual risk). And Strategy 4 promoted positive life goals (i.e., by focusing on life skills, high-risk behaviors, and life responsibilities). The first group session included health knowledge and coping skills content and the second group session included sexual risk reduction and life goals content. Group sessions were followed by individual sessions tailored to the needs of each adolescent to discuss follow-up issues and concerns. The sessions were scheduled to take place on the day of routine clinic visits.