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EVALUATING THE ACCEPTABILITY AND FEASIBILITY OF PROJECT ACCEPT: AN INTERVENTION FOR YOUTH NEWLY DIAGNOSED WITH HIV

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Abstract

Given the potential for negative psychosocial and medical outcomes following an HIV diagnosis, Project ACCEPT, a 12-session behavioral intervention, was developed and pilot-tested for youth (aged 16–24) newly diagnosed with HIV. Fifty participants recently diagnosed with HIV were enrolled from 4 sites selected through the Adolescent Medicine Trials Network (ATN). The majority of participants identified as African American (78%). Feasibility and acceptability data demonstrated high rates of participation and high levels of satisfaction with the intervention program from both participants and staff. Exploratory outcome data demonstrated improved levels of HIV knowledge that were sustained over time (Cohen's effect [d] $d = .52$) and improvements in peer ($d = .35$) and formal ($d = .20$) social support immediately postintervention. Gender differences emerged over time in the areas of depressive symptoms, family social support, self-efficacy for sexual discussion, and personalized stigma. Project ACCEPT appears to be an acceptable and feasible intervention to implement in clinical settings for youth newly diagnosed with HIV.

In the United States, it is estimated that at least 14% of all new HIV/AIDS diagnoses are among people under 25 years of age, and the vast majority of these infections occur through sexual activity (Centers for Disease Control and Prevention [CDC], 2008). In 2006 a total of 5,396 young people received a diagnosis of HIV/AIDS (CDC, 2008). Additionally, because of the long delay in developing symptoms associated with HIV infection, many of the young adults in the 25–29-age groups were probably infected during adolescence or young adulthood. The ratio of male to female adolescents/young adults with an HIV diagnosis increases with age. In 2007, females accounted for 31% of adolescents aged 13–19 who were diagnosed with HIV, compared with 23% of young adults aged 20–24 (CDC, 2008).

In 2006 African Americans experienced the highest rates of AIDS and HIV/AIDS diagnoses and the highest rate for living with AIDS and HIV/AIDS, when compared with other ethnic groups. Rates among African American youth were three to five times higher than those

among Hispanics, the population that had the second highest rates (CDC, 2008). African Americans accounted for 72% of HIV/AIDS diagnoses among 13–19-year-olds, and 61% of diagnoses among 20–24-year-olds (CDC, 2008). From 2001 to 2006, male-to-male sex was the largest HIV transmission category in United States and the only one associated with an increasing number of HIV/AIDS diagnoses (CDC, 2008). Of all age groups of men who have sex with men (MSM), HIV/AIDS increased most among young MSM (YMSM) aged 13–24. Among YMSM aged 13–24, young African American MSM had the most dramatic increase in diagnoses—from 938 cases in 2001 to 1811 cases in 2006—an increase of 93% (CDC, 2008).

These epidemiological data demonstrate that despite multiple prevention efforts aimed at thwarting the spread of HIV, significant numbers of adolescents and young adults are still becoming infected with HIV on a consistent basis. Once these youth receive their HIV diagnosis, they must contend with adjusting to the news that they are now living with a chronic health condition that requires long-term medical management. Unlike adolescents living with other chronic health conditions like asthma or diabetes, those living with HIV also must contend with high levels of social stigma that may result in discrimination and oppression as well as negative societal messages that place blame on them for the acquisition of their disease (Greene and Banjeree, 2006; Rao, Ketwaletswe, Hosek, Martinez, & Rodquez, 2007).

One common result of receiving an HIV diagnosis among adolescents is the experience of negative affective states, such as depression and anxiety (Hosek, Harper, & Domanico, 2000). This psychological distress not only results in decreased quality of life and impaired social functioning but has also been associated with increased participation in sexual and substance use risk behaviors (Murphy, Durako et al., 2001) as well as decreased adherence to antiretroviral therapies (Hosek, Harper, & Domanico, 2005; Murphy, Wilson, Durako, Muenz, & Belzer, 2001) among adolescents living with HIV. Given the stigma associated with HIV, many of these youth are apprehensive about disclosing their HIV status to parents, friends, and sexual partners (Hosek, Harper, & Robinson, 2002). In addition to the lack of social support associated with not disclosing to family/close friends, fear of the negative impact of disclosure has also been associated with poorer adherence to medical regimens (Pugatch, Bennett, & Patterson, 2002). For example, Rao and colleagues (2007) found that discrimination by family and friends lead HIV-infected youth to skip doses of medication.

Given the potential for negative psychosocial and medical outcomes among newly diagnosed adolescents living with HIV, interventions are needed to assist these youth in adjusting to their disease status. This article presents acceptability and feasibility as well as exploratory outcome data from an evaluation of a newly developed intervention designed to improve psychosocial adjustment to an HIV diagnosis among adolescents and young adults.

THE PROJECT ACCEPT INTERVENTION

The intervention Project ACCEPT (Adolescents Coping, Connecting, Empowering, and Protecting Together), was developed based on qualitative data gathered during a prior study conducted within the Adolescent Medicine Trials Network for HIV/AIDS Interventions—ATN 055. The research agenda of the Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN), primarily supported by the National Institute of Child Health and Human Development with additional funding coming from the National Institute of Mental Health and the National Institute on Drug Abuse, encompasses primary, secondary, and tertiary prevention among HIV-infected and HIV at-risk preadolescents, adolescents, and young adults up to 25 years of age. In ATN 055, focus groups and individual interviews

were conducted with medical and mental health providers, as well as case managers, regarding the intervention needs of youth (aged 16–24) newly diagnosed with HIV. Focus groups were then conducted with HIV-positive youth from 3 ATN sites (Chicago, IL; Bronx, NY; San Juan, PR) in order to identify the challenges, strengths, and needed areas of support/assistance associated with receiving an HIV diagnosis. These data were used to guide the development of an intervention manual (Hosek, Harper, Lemos, Martinez, & ATN, 2008).

The Project ACCEPT intervention is based on the disability-stress-coping model (Wallander & Varni, 1995) and incorporates skills-building activities guided by social cognitive theory (Bandura, 1986). The ACCEPT intervention comprises a combination of individual and group sessions, which allows for more intensive individualized attention as well as group support. Youth first participate in two individual sessions, followed by nine group sessions, and end with one additional individual session. The individual modules were designed to build rapport, prepare the participants for the groups, and address any salient psychological needs of the participants. The group modules were designed to be highly interactive and delivered across nine 2-hour sessions (see Table 1). Project ACCEPT incorporates a variety of techniques including role plays, group discussion and other creative skills-building activities guided by social cognitive theory (Bandura, 1986). Each session was cofacilitated by an interventionist with a mental health background and a peer facilitator (age ranges 18–26) living with HIV.

FIDELITY AND MONITORING INTERVENTION ACTIVITIES

All intervention sessions were digitally recorded. A structured coding system was developed in which the coder listened to the audiotapes to ensure fidelity and record the amount of time taken by each activity in the manual. The tapes were also reviewed to provide ongoing feedback to the interventionist and the peer facilitators. Discussions with the intervention facilitators and interventionists were held during biweekly supervision conference calls. The facilitator logs kept by interventionists were reviewed by research team prior to biweekly calls to discuss potential barriers to intervention fidelity. The conference calls between protocol team and intervention staff allowed for (a) supervision, (b) continued bonding between staff across sites, and (c) allowed for staff to problem-solve issues related to the intervention manual, intervention implementation or participant concerns.

METHODS

STUDY POPULATION

In order to be eligible for the study, potential participants had to be between the ages of 16–24 and have a documented HIV diagnosis within the past 15 months. A total of 50 participants (28 male, 22 female; mean age = 19.24) diagnosed with HIV (mean time since diagnosis = 8.36 months; range 1–15) were enrolled into the study from 4 selected ATN sites (Bronx, NY; Chicago, IL; Memphis, TN, & Miami, FL). The majority of the participants identified as African American (78%) and/or Hispanic origin (20%), thus reflecting the demographics of the clinic populations. Table 2 describes the youth at the baseline assessment. Of the males, 97% identified as gay or bisexual, whereas only 5% of females identified as bisexual. The majority of youth were currently in school (60%) and 48% had at least a high school diploma or GED.

PROCEDURES

Using standard procedures for enrolling youth at ATN sites, potential participants were contacted by study coordinators at each site, either during regular clinic visits or by phone, and informed about the study. If the potential participant was interested, the participant was

be given an appointment to meet with the Study Coordinator at the ATN site to confirm eligibility, obtain informed consent, and collect contact information. All intervention sessions took place at the collaborating ATN sites in a private space. Transportation and meals were provided to participants at every session. The participants were separated into male and female groups with gender-matched interventionist and peer facilitators.

All assessments were done using ACASI (audio computer-assisted self-interview). Each participant completed the baseline ACASI first and then the first individual session. The study coordinator then scheduled a time for the participant to complete the second individual session. After the second individual session was completed, the participant joined the group and participated in nine sessions. After the group sessions concluded, each participant was scheduled for the third individual session. Following the third individual session, the participants completed the immediate postintervention ACASI. Participants then returned to the site three months later to complete the third and final ACASI. Following each assessment and/or intervention session, participants were debriefed and monetary incentives were provided as determined by each site's institutional review board.

MEASURES

Descriptive information demographic included gender, age, ethnicity, date of HIV diagnosis, experience with HIV medications, and most recent biological markers (CD4 and viral load).

Process evaluation measures included the following: (a) Session Evaluation Form (SEF; Harper, Contreras, Banji, & Pedraza, 2003), a brief 13-item questionnaire given to participants at the end of each session; (b) Client Satisfaction Questionnaire-8 (CSQ-8; Larsen, Attkinson, Hargreaves, & Nguyen, 1979), an 8-item questionnaire used at the completion of the intervention to assess the participant's overall satisfaction with the intervention; (c) facilitator logs that interventionists completed at the end of each session to document which elements of the intervention were delivered, and to record unique issues that arise; (d) in-depth interviews with the interventionists following the completion of the intervention that focused on the overall program as well as content-specific issues; and (e) focus groups with youth participants after the 3-month follow-up assessment to explore the participants' experiences with the intervention and its organizational structure as well as the structure and format of the sessions and the methods of information dissemination.

Exploratory outcome evaluation measures included the following (Cronbach's alphas listed are from this sample): (a) HIV/AIDS Knowledge Questionnaire (DiClemente, 1994), a 16-item scale measuring basic HIV knowledge ($\alpha = .57$); (b) Center for Epidemiological Studies - Depression Scale (CES-D; Radloff, 1977), a 20-item scale measuring depressive symptomatology ($\alpha = .90$); (c) Disclosure Self-Efficacy (Parsons et al., 2005), a 6-item scale measuring participants' perceived ability to disclose their HIV status to sexual partners in different situations ($\alpha = .94$); (d) HIV Stigma Scale (Berger, Ferrans, & Lashley, 2001), a 40-item scale measuring perceived stigma ($\alpha = .95$); (e) Self-Efficacy for Sexual Discussion (Lux & Petosa, 1994), a 8-item scale measuring self-efficacy of adolescents to engage in sexual discussions with partners ($\alpha = .65$); (f) Social Support for Adolescents Scale (Seidman et al., 1995), a 24-item scale measuring social support among youth with three subscales (Peer Support [$\alpha = .85$], Family Support [$\alpha = .82$] and formal support [$\alpha = .83$]); (g) A-COPE: Adolescent Coping Orientation for Problem Experiences (Patterson & McCubbin, 1987), a 54-item scale that measures coping patterns in response to tension and stress ($\alpha = .89$), and (h) Rosenberg Self-Esteem Scale (Rosenberg, 1965), a 10-item scale measuring global self-esteem ($\alpha = .86$).

DATA ANALYSIS

Process Data—Three process data sources (SEF, CSQ, & facilitator logs) were summarized and triangulated to determine the problems and successes of each intervention session. Descriptive statistics were also used to determine average ratings for items on the SEF and the CSQ. Participant focus groups and the interventionist qualitative interviews were audiotaped and reviewed. A coding structure was developed that addressed the successes, challenges and barriers to progress towards intervention goals. Development of concepts and themes, as well as the implications for the intervention, were documented.

Outcome Data—Prior to analyzing quantitative data from each exploratory outcome evaluation measure, sample demographic characteristics were derived, including mean participant age and distributions across gender, race/ethnicity, sexual orientation, and educational level. Means and standard deviations were also calculated for population-specific variables, such as pregnancy frequencies, medication compliance, AIDS diagnosis status, and CD4 counts, as relevant to each participant. These data are presented in Table 2.

Prior to the analysis of quantitative data, raw obtained responses to the outcome measures were reviewed for any anomalies or missing values. Where appropriate, missing values were imputed based on average scores on each measure or its appropriate subscales, with a minimum 80% data integrity threshold for imputation. For instances where an individual participant's valid response rate to any particular measure did not meet or exceed 80%, all responses for this individual on this scale were excluded from further analysis. Following this, calculations of descriptive statistics for each outcome measure were performed, including the calculation of means and standard deviations, potential and observed ranges (to detect potential range restriction), and internal consistency estimates of obtained scores using Cronbach's alpha. Finally, to assess for potential impact of the study interventions, effect size estimates were calculated for changes in outcome variables between baseline and postintervention as well as between baseline and the 3-month follow-up. These data are presented in Table 3.

RESULTS

PROCESS EVALUATION RESULTS

The Feasibility of Project ACCEPT—In total, 97 individuals were approached for this study. Of these, 21 did not meet the eligibility criteria due to the following: 10 were past the defined newly diagnosed period, 3 were older than 24, 1 was perinatally infected and 7 were turned away because the site's slots were full. Twenty-four participants refused to participate in the study owing to following: 11 reported confidentiality and group participation concerns, 5 had scheduling conflicts with the group session time, 2 were planning to relocate, 1 was unable to obtain parental consent, and 5 other participants did not state reasons. All participants completed the baseline assessment while 92% of participants completed both the immediate postintervention and 3-month postintervention assessments. A total of three participants were prematurely discontinued during the course of the study (2 lost to follow-up and 1 withdrew consent).

Overall, an overwhelming majority of participants attended both the individual (100% for Sessions I and II, 86% for Session III) and group sessions (84% attended > 6 group sessions). However, only 30% of participants attended all 9 group sessions. During the participant focus groups, many participants reported that nine group sessions should be the minimum and many suggested having even more sessions or ongoing weekly sessions. Participants felt that attendance was important but that it should not be mandatory because of different social, economic or family events that could hinder attendance. At the same

time, youth recognized that attendance was highly related to the social bonding that occurred during the groups. Staff felt that the mandatory attendance component was important for youth because it addressed issues of compliance, structure, and responsibility.

Although each of the sessions was scheduled for a 120-minute time slot, sessions ranged from 62 to 185 minutes and varied by site, topic, and number of activities per session. For some sites, sessions consistently ran over the allotted time. These sites tended to cover all materials in the manual and youth were particularly engaged during these sessions. Data from the audiotapes, facilitator logs, and postintervention groups confirmed that certain group sessions contained extensive didactic/lecture activities and that youth were given minimal time for group interaction.

Acceptability of Project ACCEPT—The process evaluation data indicated high levels of satisfaction with the intervention program. Participant’s mean ratings on the CSQ-8 (presented in Table 3) indicate that participants were satisfied with the program, that it met their needs, and that they would recommend this program to others. The global scores from the SEF indicated high ratings for each of the sessions. Additionally, anonymous comments on the SEF were positive regarding the relevance of the session content and activities (e.g., “Most useful for me was the condom usage because I learned something new”; “Most useful for me was the group activity with picking a person you have not told it was good practice for when I do tell my mom”). Comments regarding changes to the session were more geared at logistic changes (e.g., “the air conditioning” or “The chairs are too uncomfortable”) than any content or activity changes. In the postintervention focus groups, youth reported that the sessions were (a) educational, (b) instructional, and (c) fun. As one female participant from the Bronx site stated, “You always got something out of it. There was always love and understanding and that no matter what you’re going through ... You’re not alone.” Additionally, participants stated that they felt that the topics were relevant to their lives as youth newly diagnosed with HIV. As one male participant from Chicago stated, “I’ve learned how to accept myself as an HIV-positive young adult. My counselors were caring, smart, informative men. I learned how to disclose [status] with those I could trust and how to put on a condom. Most importantly, [I learned] ways to make myself feel better during this hard time of coping with HIV.” Overall, the staff members also reported a high level of satisfaction with the intervention. Staff members expressed interest and need for continued implementation of the project at their respective sites.

Focus group participants from both youth and staff focus groups felt that the individual sessions were unique and essential for youth newly diagnosed with HIV because they (a) help ease some of the anxiety surrounding group participation, (b) address immediate HIV concerns in a confidential setting, and (c) establish rapport with the peer facilitator and the interventionist prior to the group sessions. This rapport was particularly important because it motivated some youth to come to the group sessions despite previous hesitation.

QUALITATIVE OUTCOME EVALUATION RESULTS

In the postintervention focus groups, youth discussed the process of learning to accept their HIV diagnosis as one of the greatest benefits of the intervention. Participants described the process of acceptance and changes in their self-perception of living with HIV through the course of the intervention. One common aspect of acceptance that youth focused on was the ability to say the word “HIV” and refer to themselves as “a person living with HIV.” For some youth, this acceptance process made them “feel better,” eased disclosure with those they considered trustworthy, helped them open up about their experiences, and ultimately become more optimistic about their lives. A female participant from Chicago reported, “I learned how to accept it more ... How to tell people about it and I learned more about it

[HIV].” Similarly, a male participant from the Bronx stated, “To me it’s coming to terms with everything that has happened to me since I found out. It’s a way for me to connect with other people who have also encountered the same problem that I have.”

The social bonding during the intervention sessions was another beneficial outcome for participants. First, youth reported reduced feelings of isolation that are commonly associated with receiving an HIV diagnosis. Second, youth felt that the group interaction relieved some of their emotional stress by allowing them to role-play in a safe setting and learn from each other’s experiences. A female participant from the Bronx stated, “This was an excellent group. I enjoyed myself and I hate that it is over because I was getting to know different girls that have HIV just like I do. It became much easier for me to handle that I have HIV. It was hard at first for all of us but we got through it together. It felt really good to get it off my chest that I have HIV.” Finally, participants enjoyed the group cohesion exercises during the initial group session because it eased them into the group and allowed them to get to know each other before discussing sensitive topics. A male participant from Miami reported, “I left here every time feeling better . . . knowing they’re not going to judge me.” During the focus groups, youth reported exchanging phone numbers and developing close friendships with other participants. Many youth discussed social activities that had been organized with other participants after the intervention was completed, which helped the participants maintain the social bond that was built during the intervention.

EXPLORATORY QUANTITATIVE OUTCOME EVALUATION RESULTS

Table 3 presents the means, standard deviations, and effect sizes of each variable for the entire sample as well as by gender. Effect size estimates were calculated with Cohen’s (1988) d using a pooled standard deviation, given unequal sample sizes across time intervals. In general, outcomes were in the expected direction, with some differences between genders. HIV knowledge increased across both time periods for the overall sample, with an effect size of .52 at the 3-month follow-up. Depressive symptoms also improved for male participants, with the largest decrease occurring directly following the intervention. However, female depressive symptoms did not demonstrate an improvement ($d = .03$ and .20, at postintervention and 3-month follow-up, respectively). Self-efficacy for disclosure of HIV status demonstrated a small improvement for the entire sample, with the largest effect occurring postintervention ($d = .12$). Self-efficacy related to sexual discussions improved across both time periods for women, but demonstrated a slight decrease at the 3-month follow-up for male participants. Two measures of perceived stigma also exhibited differing results across genders, with men reporting improvements in personalized stigma and negative self-image across both time periods and women reporting increased personalized stigma and negative self-image at the 3-month follow-up.

Three forms of social support were also measured, with varying results based on the source of support. Both men and women reported consistent improvement in peer and formal social support across both time periods. However, the overall sample reported lowered perceptions of family social support during the same intervals. Two forms of coping were assessed—proactive and avoidant—with varying results. Proactive coping showed slight improvement for women postintervention but did not demonstrate improvement for the overall sample when assessed at the 3-month follow-up. Use of avoidant coping also showed some gender difference, with decreases in the use of this negative coping style for women at the 3-month follow-up and men showing persistent reliance on this coping style across both time periods. Finally, self-esteem did not demonstrate consistent improvement, with only women showing a small improvement as measured at the 3-month follow-up.

DISCUSSION

The quantitative data demonstrated that for both males and females, the intervention improved their level of knowledge regarding HIV transmission and the HIV disease process. Having more accurate and in-depth knowledge about HIV and the impact that it has on a person's body is a critical first step in understanding and accepting one's diagnosis. Such knowledge also may assist in helping these youth to actively participate in more health-promoting behaviors, because they will have a better understanding of the both the benefits of self-care and the consequences of engaging in health risk behaviors.

One of the most powerful influences of the intervention, according to qualitative data from youth and clinic staff members, was that it assisted youth in learning to accept their HIV diagnosis. This acceptance was demonstrated in different ways, with the most common being the youths' ability to say the word "HIV" and refer to themselves as "a person living with HIV." Such acceptance may have multiple health-promoting effects, because in order for youth to be engaged in medical care and take the necessary actions needed for health maintenance (e.g., medication, diet, etc.), they must first accept that they are living with a virus that has potentially health threatening effects. Self-acceptance of their HIV status also may have positive psychosocial benefits for these youth, because in order to disclose one's status to loved ones and gain support from such individuals, she or he must first come to terms with the diagnosis. This potential connection between acceptance and disclosure is supported by the quantitative finding that self-efficacy for disclosure of HIV status demonstrated a small improvement for the entire sample. In addition, acceptance may also decrease participation in negative health behaviors such as substance use, which may be used as a way to "forget" about their status.

Another strong finding from the qualitative data was that the intervention helped youth to socially connect with other youth living with HIV, both during the intervention sessions and outside of the group meetings, through youth-initiated social activities. These increased social interactions with similar youth helped to reduce feelings of isolation and offered youth the ability to create valuable social networks of other youth living with HIV. The quantitative data on social support was less straightforward than the qualitative data, as it was revealed that both men and women reported consistent improvement in peer and formal social support across both time periods, whereas the overall sample reported lowered perceptions of family social support during the same intervals. This latter overall decreased perception of family social support appeared to be driven more by the females than the males. Differential reports in social support for males and females may be related to the fact that the majority of males in our sample were gay or bisexually identified and thus shared another marginalized identity with their same-gender peers—one in which a community of other gay/bisexual men living with HIV exists. In addition, given the history of HIV in the United States and the significant role that the gay community has played in fighting the epidemic and supporting those living with HIV (Abrams, 1990; Curran, 2003; Harper, 2007), it may be easier for males in our sample to find accepting communities and social venues in their communities. For the females, it may be less likely that they would find an easily accessible social network of other women living with HIV, and on the contrary they may be confronted with stigma and rejection (Gielen, Fogarty, O'Campo et al., 2000; Raveis, Siegel, & Gorey, 1998).

Related to the gender differences revealed in family support, we found that measures of personalized stigma and self-image demonstrated improvements over time for males, whereas women reported increased personalized stigma and negative self-image at the 3-month follow-up. It may be that these measures of individual perceptions of stigma and self-image were influenced by the amount and quality of support they received from others

regarding their diagnosis. Given the male youths' potential connection to the larger gay community, it may be that the lack of stigma and acceptance by others within this community may assist these young men in developing a more positive sense of self. Because there is not a parallel social community for young women living with HIV that can provide positive support, these young women may continue to experience stigma related to their HIV status and fail to receive the positive support they need to improve their self image.

The final strong gender difference that was demonstrated in intervention effects is in the area of depressive symptomatology. Male participants demonstrated improvement in such symptoms after the intervention, with the largest decrease occurring directly following the intervention. In fact, male participants' scores on the CES-D at baseline indicated clinically significant levels of depressive symptoms, whereas after the intervention they were in the non-clinical range. Such changes were not found among females, as females did not demonstrate clinical levels of depressive symptoms at any point. The changes in the levels of depressive symptoms for males may be related to the range of improvements already discussed with regard to increased self-acceptance and social support.

Gender Differences

Similar to our findings, several studies have also reported significant gender differences among people living with HIV (Bunting, 1996; Ostrom, Serovich, Lim, & Madison, 2006). For example, a recent study by Gonzalez, Miller, Solomon, Bunn, & Cassidy (2009) reported that women were more likely to report greater concern with public attitudes about people living with HIV/AIDS than men did, thus potentially making them more vulnerable to the effects HIV stigmatization. Stigmatization may also place these women at greater risk for anxiety and depression, possibly explaining why the female participants in ACCEPT experienced slightly more depressive symptoms than the males at follow-up.

Another important outcome related to gender differences was the change of social support among our youth living with HIV over time. Although it is well established in the literature that women and men differ in both in socialization behaviors as well as where they obtain their sources of social support (Belle, 1989; Eagly, Wood, & Deikman, 2000) we found interesting shifts in perceptions over time among our sample. The young women's perception of family social support decreased over time, where as the perception of social support from family increased for males over time. These differences may have emerged as the young women living with HIV, the majority whom identified as mothers, began to seek out emotional support along with disclosing their HIV status, which may have resulted in loss of emotional support from those important members. Consistent with our findings, Gordillo et al. (2009) found that in some instances social support may have negative implications for women living with HIV such that as women felt less support from their intimate partners and family members thus they report greater rates of depression or anxiety. In our sample, the young women reported decreased support from family but increased support from friends. These young women tended to report feelings of isolation from other peers thus as this type of support increases it is possible that the support they seek from other family or intimate partners decreases. Interestingly, among our sample, the young men reported greater classification of clinical depression at the beginning of the intervention than did our female participants. This finding is not consistent with other findings of people living with HIV where rates of depression are similar or greater among females (Golin et al., 2009).

Challenges

Despite these encouraging results, several important lessons were gleaned from the evaluation of Project ACCEPT. First, intervention projects should allow for flexibility

within the program structure. Having more flexibility in the implementation schedule might have allowed youth to attend more of the sessions. As youth struggle with challenges related to living with HIV, particularly during the initial year after diagnosis, it is important to acknowledge the multiple stressors they experience (Hosek et al., 2008). Second, participants in this intervention represented a wide range of time since diagnosis (from 1 to 15 months), thus potentially impacting their need for particular resources. Therefore, the feedback from the participants could have varied based on length of time since diagnosis. For example, those further removed from their diagnosis date may have felt that the basic information about HIV/AIDS was as not important or relevant to them. Furthermore, it was reported by project staff that those diagnosed for less than 6 months were more likely to ask specific medically oriented questions during the sessions. Perhaps expanding the number of medically-oriented sessions for youth diagnosed for less than 6 months will be more beneficial for those youth.

Third, the interventionists and peer facilitators expressed in the focus groups the need for other topics to be added to this intervention related to sexuality. Examples included (a) family planning for males, (b) specific mother-to-child transmission information, (c) broader spectrum of sexuality for females, and (d) building healthy relationships. The family planning information for males is relevant because many youth discussed issues surrounding fatherhood. Additionally, some of the male participants reported having sex with both men and women making it more necessary to address pregnancy prevention in the intervention. There were many misconceptions surrounding mother-to-child transmission, and the participants had many medical questions that the intervention staff members were not medically trained to answer. Thus, adding a medical component focused on mother-to-child HIV transmission, perhaps led by a practitioner, might be helpful as well.

Finally, to replicate this trial on a larger scale, one challenge will be recruiting youth newly diagnosed with HIV because it is estimated that 20–24% of people living with HIV are not aware of their diagnosis. In larger cities, treatment for newly diagnosed youth can be difficult to navigate. Thus, building partnerships with community based organizations and other health care centers to identify newly diagnosed youth and receipt of appropriate care will be integrated into the larger scale intervention program. However, this intervention has the potential to be implemented in a cost-effective manner by training existing staff to implement the intervention within clinical care or community-based settings.

Future Directions

The two prior studies (ATN 055 and ATN 068) have clearly laid the groundwork for an efficacy study by first identifying the specific areas of need that are included in the ACCEPT intervention and then demonstrating feasibility, acceptability, and initial effect sizes. The next logical step in the progression of science will be a randomized controlled trial to test the efficacy of Project ACCEPT to engage youth newly diagnosed with HIV in care in order to improve medical outcomes (e.g., access to antiretroviral medication, viral suppression, survival), psychological outcomes (e.g., psychosocial functioning, quality of life), and public health outcomes (e.g., viral transmission to others via sexual contact).

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TABLE 1

Outline of Project ACCEPT Curriculum

Session No.	Type	Title	Component
I	Individual	Orientation I	Discuss post-diagnosis stressors with interventionist; Generate questions for a medical provider; Meet privately with a medical provider
II	Individual	Orientation II	Preparation for group sessions; Discuss beliefs and thoughts regarding group sessions; Meeting with peer-educator to discuss any other potential concerns
1	Group	Cohesion & HIV overview	Introducing ground rules; Icebreaker activities; sexually transmitted disease and HIV facts; Myths and facts about HIV; Messages about HIV; Condom line-up; Condom demonstration
2	Group	Disclosure	Introducing HIV disclosure; Identifying social support for HIV disclosure; Role plays activities HIV disclosure; Discuss strategies to assist in the disclosure process; Medication regimen homework assignment
3	Group	Preparing for medical intervention	Explore & examine clinical procedures; Discuss challenges related to attending clinic; Explore behaviors and skills required to become an active medical participant; Discuss anti-retroviral medications; Explore strategies to improve adherence to medications; Discuss HIV-related concerns with an HIV medical provider
4	Group	Healthy living	Discuss negative effects of drug and alcohol use; Discuss healthy eating habits; Discuss importance and benefits of regular exercise; Engage in exercise
5	Group	Stress, relaxation, and spirituality	Define stress and stress responses; Brainstorm stress management skills; Explore socially-engaging ways of coping with skills; Practice various relaxation techniques; Explore spirituality
6-F	Group	Female sexuality	Explore perceptions of sexuality; Female anatomy; Discuss HIV and how it pertains to sexuality; Pregnancy planning; Discuss the challenges and responsibilities of motherhood; Condom negotiation skill building
6-M	Group	Male sexuality	Explore perceptions of sexuality; Discuss aspects of sexual orientation; Explore ways of connecting to a supportive community; Discuss issues of dual disclosure; Condom negotiation skill building
7	Group	Self-esteem & self-worth	Explore aspects of self-esteem; Examine impact of low self-esteem on individuals before and after HIV diagnosis; Identify individual and group strategies to improve self-esteem
8	Group	Legal aid & advocacy	Discuss aspects of public policy; Discuss specific HIV-related policies; Identify legal resources; Discuss community engagement; Prepare youth for advocacy engagement; Build skills to become an advocate
9	Group	Future planning	Discuss future planning goals; Develop a road map; Identify social support; Wrap-up activity
III	Individual	Wrap-up	Review action plans from each of the sessions; Identify next steps for future plans; Practice skills to identify additional sources of support

Table 2

Demographic Characteristics of Study Participants in Project ACCEPT

	Overall (<i>n</i> = 50)	Women (<i>n</i> = 22)	Men (<i>n</i> = 28)
Mean Age (<i>SD</i>)	19.24 (2.25)	19.32 (2.6)	19.18 (1.93)
Mean months since diagnosis (<i>SD</i>)	8.36 (4.69)	-	-
Percent of Hispanic Origin (<i>n</i>)	20% (10)	18% (4)	21% (6)
Distribution by Race (<i>n</i>)			
African American	78% (39)	73% (16)	82% (23)
Asian	2% (1)	4% (1)	0% (0)
White	2% (1)	0% (0)	5% (1)
Other	10% (5)	17% (3)	7% (2)
Mixed	8% (4)	9% (2)	7% (2)
Distribution by Highest Level of Education			
Less than High School	50% (25)	50% (11)	50% (14)
High School Graduate/GED	26% (14)	29% (8)	27% (2)
In College	22% (11)	21% (6)	23% (5)
Percentage Currently in School (<i>n</i>)	60% (30)	50% (11)	68% (19)
Distribution by Sexual Orientation			
Straight	44% (22)	96% (21)	4% (1)
Gay/Lesbian	38% (19)	0% (0)	68% (19)
Bisexual	18% (9)	5% (1)	29% (8)
Percent Taking Antiretroviral Medications (<i>n</i>)	24% (12)	18% (4)	29% (8)
Self-reported viral load (<i>n</i>)			
<1,000	20% (2)	20% (1)	20% (1)
1,000–9,999	50% (5)	80% (4)	20% (1)
≥ 10,000	30% (3)	0% (0)	60% (3)
Mean CD4 Count (<i>SD</i>)	520.9 (3.25)	642.4 (393.0)	399.4 (189.2)
Distribution by Mean CD4 Count (<i>n</i>)			
<200	15% (3)	10% (1)	20% (2)
200–499	35% (7)	30% (3)	40% (4)
≥500	50% (10)	60% (6)	40% (4)
Percent Given AIDS Diagnosis (<i>n</i>)	10% (5)	9% (2)	10% (3)
Pregnancy History (<i>n</i> = 15)			
Mean No. of Pregnancies (self or other) (<i>SD</i>)		1.00 (1.33)	2.50 (1.73)
Mean Age of First Pregnancy (self or other) (<i>SD</i>)		14.9 (1.22)	14.5 (2.65)

TABLE 3

Descriptive Statistics and Effect Sizes for Psychosocial Outcomes

Outcome (range)	Time	Overall						Women			Men		
		M	SD	d	M	SD	d	M	SD	d	M	SD	d
HIV Knowledge (0–16)	0	11.28	2.51		11.18	2.74					11.36	2.36	
	1	12.33	2.50	.42	11.85	2.68	.25			12.69	2.35	.58	
	2	12.61	2.66	.52	12.47	2.50	.50			12.70	2.81	.53	
Depressive Symptoms (0–60)	0	16.81	12.09		14.50	10.04				18.77	13.46		
	1	14.49	10.78	.20	14.83	11.61	-.03			14.21	10.31	.39	
	2	15.36	11.73	.12	16.50	11.03	-.20			14.58	12.34	.33	
Disclosure SE (6–30)	0	17.24	8.30		14.57	7.98				19.24	8.10		
	1	18.21	7.65	.12	15.90	7.19	.18			20.06	7.64	.11	
	2	17.73	8.21	.06	15.16	8.62	.07			19.62	7.52	.05	
Discussion SE (8–32)	0	13.58	4.46		14.41	4.48				12.92	4.42		
	1	12.00	3.90	.38	12.10	4.42	.53			11.92	3.54	.25	
	2	13.68	4.76	-.02	13.70	5.12	.15			13.67	4.59	-.17	
Personalized Stigma (18–72)	0	49.80	12.15		52.63	9.43				47.64	13.66		
	1	51.05	11.23	.11	52.74	9.99	.01			49.65	12.21	.16	
	2	49.08	12.01	-.06	49.41	8.83	-.36			48.82	14.20	.09	
Negative Self-Image (13–52)	0	34.70	8.65		37.11	8.77				33.00	8.31		
	1	36.24	8.25	.18	36.16	9.09	-.11			36.32	7.72	.42	
	2	34.84	8.30	.02	34.05	8.07	-.37			35.46	8.60	.30	
Peer Social Support (6–18)	0	12.52	3.33		11.45	3.02				13.36	3.38		
	1	13.67	3.28	.35	13.35	3.83	.57			13.81	2.84	.15	
	2	13.20	2.95	.22	12.58	3.15	.38			13.63	2.78	.09	
Family Social Support (9–27)	0	18.10	4.19		18.00	3.79				18.91	4.57		
	1	17.87	4.56	-.05	17.16	4.50	-.21			18.42	4.61	-.11	
	2	17.79	4.02	-.08	16.29	3.02	-.51			18.84	4.35	-.02	
Formal Social Support (9–27)	0	16.51	4.04		15.64	2.84				17.23	4.74		
	1	17.41	5.04	.20	17.40	4.57	.48			17.43	5.49	.04	
	2	16.99	4.25	.12	16.37	3.29	.24			17.44	4.85	.04	

Outcome (range)	Time	Overall			Women			Men		
		M	SD	d	M	SD	d	M	SD	d
Proactive Coping (5–25)	0	15.43	3.99		14.05	3.90		16.44	3.81	
	1	15.43	4.76	.00	14.37	5.41	.07	16.24	4.14	-.05
	2	14.33	4.55	-.26	12.58	3.40	-.41	15.71	4.92	-.17
Avoidant Coping (6–30)	0	14.62	4.03		14.29	3.66		14.88	4.36	
	1	15.70	4.59	-.25	14.58	4.65	-.07	16.58	4.36	-.40
	2	14.50	4.77	.03	13.79	4.97	.12	15.00	4.65	-.03
Self-Esteem (10–40)	0	17.82	6.19		18.77	6.35		17.04	6.07	
	1	18.24	6.39	-.07	19.42	6.88	-.10	17.25	5.92	-.04
	2	18.41	6.83	-.09	18.44	7.42	.05	18.39	6.52	-.22

Note. Time 0=baseline; Time 1=post-intervention; Time 2=3 months following intervention; d=Cohen's d effect size, as compared with Time 0, with positive values representing favorable results.

TABLE 4

Client Satisfaction Questionnaire Results

Item	Mean	SD
How would you rate the quality of service received?	3.95	.22
Did you get the kind of service you wanted?	3.88	.33
Did this program meet your needs?	3.74	.48
Would you recommend this program to a friend?	3.88	.50
How satisfied were you with amount of help received?	3.91	.37
Did the program help you deal more effectively you're your problems?	3.74	.35
Overall, how satisfied were you with the program?	3.88	.35
Would you come back to this program?	3.83	.35

Note. $n = 43$; potential range of 1–4, with lower scores indicating less satisfaction.