mental health AIDS

A Quarterly Update from the Center for Mental Health Services (CMHS) of the Substance Abuse and Mental Health Services Administration (SAMHSA) Volume 9, Issue 4 – Summer 2008

Biopsychosocial Update

HIV Prevention News

About Adolescents & Young Adults

Teitelman, Ratcliffe, and Cederbaum (2008) "examined [118] African American and Hispanic girls' sexually transmitted infection (STI) and HIV prevention practices, **parent-adolescent communication** about sexual pressure, and **maternal gender norms**" (p. 50). The investigators found that

> [t]eens whose mothers had communicated about sexual pressure from dating partners or resisting sexual pressure from dating partners were more than two times more likely than their counterparts to report abstinence or consistent condom use during sexual intercourse. Further, girls who reported father communication about resisting sexual pressure were five times more likely to practice consistent STI/HIV prevention.
>
> These analyses moved beyond examining just sexual risk communication to include two variables related to maternal gender norms about male-female relationships. Adolescents who perceived that their mothers believed that men's needs were *not* more important than those of women were 11 times more likely to practice abstinence or use condoms consistently during sexual intercourse. This is a critical finding in that messages from mothers about relevant women's feelings and beliefs related to relationship roles empowered adolescents to consistently enact STI/HIV prevention behaviors. (p. 57)

Additionally, these findings "lend support for the importance of distinguishing sexual pressure from partners and peer sexual pressure in parent-daughter conversations. Because these two processes are manifested differently ..., it is important for parental conversations to review the specific strategies needed to address each form of sexual pressure separately. Ideally, these discussions are part of an ongoing dialogue between parents and daughters about the teens' actual social experiences" (p. 58).

Teitelman and colleagues conclude that, "[g]iven the context of increased STI/HIV risk faced by minority urban girls, it is especially critical that parents discuss partner dynamics with their daughters. In particular, conversations about sexual pressure with available mother and father figures may bolster girls' STI/HIV protective behaviors, as would mothers' support for egalitarian decision making in partner relationships" (p. 59). "[Mental health professionals can] play a ... role in facilitating these conversations[,] ... provid[ing] ... parents with age-appropriate resources and assist[ing] in normalizing fears [and stresses that communication about abstinence and/or safer sex may place on a parent], which can help increase parent-child sexual-risk communication" (p. 50).

What about communication with minority urban girls regarding the **female condom**? Latka, Kapadia, and Fortin (2008) "conducted seven single-gender focus groups with 47 New York City boys and girls aged 15-20 years (72% African American; 43% ever on public assistance; 72% sexually active; 25% had either been pregnant or fathered a pregnancy)" (p. 160) to determine the features of protective methods that were most important to them. Latka and colleagues found that "[g]irls consistently organized methods by, and thus were concerned about, contraceptive effectiveness, side effects, and availability (over the counter vs. provider controlled). Participants tended to classify the female condom with the male condom rather than as 'female controlled.' ... [A]mong boys[,] ... contraceptive

In This Issue:

effectiveness was [also] an important theme. Boys, but not girls, consistently and variously articulated an awareness of sexual pleasure when discussing this topic" (p. 160). Despite the fact that female condoms may appeal to adult women in part because they are "female controlled," the investigators suggest that "[e]mphasizing the female condom's contraceptive effectiveness, lack of side effects, and availability may be [of greater] importan[ce] ... when counseling adolescents" (p. 160).

Paxton and Robinson (2008) examined "the relationship between **depressive symptomology** and **sexual risk behavior** within a sample of 1,970 inner-city, economically disadvantaged African-American adolescents in grades nine and eleven" (p. 50). This study "found a significant relationship between depressive symptomology and sexual activity. Consistent with research on sexual activity and depressive symptomology among Caucasian youths ..., gender differences were found in the current study, such that as depressive symptomology increases among females, there is greater sexual risk behavior. However, in the current study this relationship did not exist for males" (pp. 57-58). "The findings strongly point to the inclusion of a mental health component in adolescent sexual risk reduction programs, particularly so for African-American adolescent females. Conversely, in group-based and individual therapy with depressed African-American adolescent females, it may be necessary to address involvement in a variety of risk behaviors, particularly sexual risk behavior" (p. 58).

About Women & Men

Continuing this focus on depressive symptoms, Ryan, Forehand, Solomon, and Miller (2008) examined whether **barriers to care** are related to depressive symptoms and, in turn, whether **depressive symptoms** are related to **sexual risk behavior** among 101 sexually active men and women living with HIV in non-urban areas of New England. "Although barriers to care have been linked to depressive symptoms ... and ... depressive symptoms have been linked to sexual risk behavior ..., depressive symptoms as a link between barriers to care and sexual risk behavior have not been examined" (p. 334). "Four barriers to care were examined: geographical barriers and distance to services; access to and quality of medical and psychological services; community stigma; and personal resources. The results indicated [that] barriers to care, and in particular those pertaining to access to and quality of medical and psychological services[,] were related to depressive symptoms, which, in turn, were related to sexual risk behavior" (p. 331). Because "[d]epressive symptoms appear to serve as a link between barriers to care and risk behavior" (p. 335) among individuals living with HIV in non-urban settings, Ryan and colleagues suggest that, "in addition to efforts to remove barriers to care through community-based interventions, individually-based interventions targeting depressive symptoms should be considered to reduce high-risk sexual behavior of HIV-infected individuals" (p. 335).

In another study that measured depressive symptoms, Bradley, Remien, and Dolezal (2008) assessed 197 **HIV-serodiscordant couples** (159 male/female couples, 38 male/male couples) to examine associations among **depressive symptoms**, **sexual risk behavior**, and **partner satisfaction**. Bradley and colleagues found that "HIV-positive individuals with more depressive symptoms may be less likely to engage in high-risk sexual behavior with their partners than those with less depressive symptoms, but more likely to have sexual partners outside the relationship" (p. 186). More specifically,

> HIV-positive partners with higher depression scores were less likely to be part of couples reporting unprotected sex, and HIV-positive partners' higher depression scores were associated with less unprotected intradyadic sex acts [(i.e., unprotected sex between the primary partners)]. This decrease in intradyadic sexual risk behavior was partially explained by a decrease in any sexual behavior within the couple. On the other hand, HIV-positive subjects with moderate or higher depression were more likely to have outside partners. Adding the partner satisfaction measure to the models ... account[ed] for the relationship between the HIV-positive subjects' depression scores and outside partners, but not for that between higher depression score and reduced intradyadic sexual risk. (p. 186)

mental health **AIDS** is produced four times a year under Contract No. 280-02-0800/280-02-0802 with the Center for Mental Health Services (CMHS), Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS). The content of this publication does not necessarily reflect the views, opinions, or policies of the CMHS, SAMHSA, or HHS.

mental health **AIDS** is compiled and edited by Abraham Feingold, Psy.D. Questions and comments may be directed to the Editor at mentalhealthAIDS@aol.com.

The investigators observe that

> [c]linicians may assume that patients with a lower burden of psychiatric symptoms will demonstrate better health behaviors, including sexual risk reduction, than patients who are more severely symptomatic. However, ... findings that HIV-positive individuals with lower depression scores are less likely to have extradyadic sexual partners and are also more likely to engage in risky sex with their seronegative relationship partners present a mixed and complex picture regarding depressive symptoms and sexual risk. (p. 190)

For this reason, Bradley and colleagues urge clinicians to "assess sexual risk behavior across the range of depression symptom severity" (p. 186).

Continuing the presentation of findings from their study of Living in the Face of Trauma (LIFT), an intervention first introduced in the Spring 2007 issue of *mental health* **AIDS**, Sikkema et al. (2008) conducted a randomized controlled trial with a racially and ethnically diverse sample of 247 men who have sex with men (MSM) and women living with HIV who had histories of childhood sexual abuse (CSA). Study participants were randomly assigned to either a 15-session coping group intervention[1] or a 15-session therapeutic support group intervention.[2] Sexual behavior was assessed at five time points: at baseline; immediately following the intervention; and at 4-, 8-, and 12-month follow-up computer-assisted personal interviews. Sikkema and colleagues found that the LIFT coping group intervention

> was effective in **reducing transmission risk behavior among HIV-positive men and women with extensive histories of CSA**. Over a 12-month follow-up period, participants in the HIV and trauma coping group intervention had a greater reduction in frequency of unprotected intercourse with all partners, and with HIV-negative or serostatus unknown partners, in comparison to those in a therapeutic support group intervention. At the 12-month follow-up assessment, the coping intervention group had reduced unprotected anal and vaginal sex with all partners (HIV-positive, HIV-negative, and serostatus unknown) by an average of 54% compared with the support intervention group. A limited number of interventions targeting HIV-positive adults have demonstrated long-term efficacy in reducing sexual risk behavior, and this is the first trial to demonstrate behavioral effects over time after an intervention focused on coping with CSA and HIV. (p. 510)

Importantly, the investigators note that this

> theoretically based coping intervention focused on psychological adjustment and the development of adaptive coping skills for confronting the combined stress and emotional sequelae of CSA and HIV rather than the behavioral risk reduction skills (... [e.g.], condom negotiation, self-regulatory skills) typical of most HIV prevention interventions. Study participants had experienced repetitive traumas and severe life stressors. Almost all participants had experienced penetrative abuse as a child or adolescent and later revictimization. They were primarily low socioeconomic status racial/ethnic minorities, and many had experienced homelessness, incarceration, and sex trade. These findings suggest that trauma-related stress and factors such as self-esteem, shame, avoidance, and relationship patterns must be addressed to reduce transmission risk behavior effectively among men and women living with HIV/AIDS and CSA and support recommendations to identify specific groups of HIV-positive individuals to determine tailored interventions that work best for them, ... including

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[1] "The intervention model integrated the cognitive theory of stress and coping ... and effective cognitive-behavioral treatment strategies for sexual trauma ... within a transactional framework for understanding sexual abuse outcomes. ... The coping framework of Lazarus and Folkman ... was used to demonstrate appraisal of stressors related to HIV infection and sexual trauma and to apply appropriate coping strategies. ... Adaptive coping included problem-focused strategies for changeable stressors (... [e.g.], problem solving, communication skills) and emotion-focused strategies for unchangeable stressors (... [e.g.], cognitive restructuring, relaxation techniques). Participants identified stressors related to CSA and HIV. Parallels between these traumatic experiences in terms of stress response and coping strategies were addressed.

Other therapeutic activities included identification of individual triggers, selection of attainable goals, skill-building exercises, and exposure. Risk reduction skills were addressed in the context of elements necessary for healthy relationships (... [e.g.], safety, intimacy, power, self-esteem), including sexual relations after sexual abuse, revictimization, and HIV infection. Although skills building and exposure are central features of the intervention, these 2 elements cannot occur adequately without a safe and cohesive environment. Thus, participants shared experiences and offered mutual support and feedback" (p. 508).

[2] "The comparison group paralleled a standard therapeutic support group and was led by experienced cotherapists not trained on the coping intervention model. The purpose of the group was to provide a supportive environment for participants to address issues of HIV and trauma. Because group leaders were skilled clinicians with substantial experience, this treatment condition resembled an interpersonal process group model more than a standard community-based support group. Additionally, participants were aware that all group members shared the common experience of CSA (as a result of study inclusion), and this experience was frequently the first time participants had discussed their early sexual trauma in a group environment. Thus, despite the open format, the group content had a predominant focus on the connections between CSA, HIV/AIDS, current relationships, and life events" (p. 508).

> those that address multiple health and psychosocial problems. ... (pp. 510-511)

Sikkema and colleagues conclude that this "group intervention to address coping with HIV and CSA can be effective in reducing transmission risk behavior among HIV-positive men and women with histories of sexual trauma" (p. 506) and "should be incorporated into community-based mental health and prevention efforts to reduce the number of new HIV infections" (p. 512).

Finally, in an effort to draw together the wealth of quantitative research findings on sexual risk-reduction interventions, Noar (2008) systematically reviewed and synthesized 18 **meta-analytic studies of behavioral interventions designed to reduce HIV-related sexual risk behavior in defined target populations**. "The median meta-analysis in the review contained ... 19 primary studies with a cumulative *N* = 9,423 participants" (p. 335). In Noar's words, "[o]ne of the most promising findings is that every meta-analysis in this review found significant sexual risk reduction outcomes on at least one outcome variable. In fact, every meta-analysis that tested for it found significant effects on condom use and 9 of 11 found effects on unprotected sex. Examination of effects on reduction of sex partners, however, revealed that such effects were less strong and less consistent" (p. 343). "[A]lso promising is the fact that four of six meta-analyses found significant reductions in STDs [(sexually transmitted diseases)] as a result of interventions" (p. 347). In numerical terms, this review "suggests that typical behavioral interventions increased the odds of condom use by 34%, decreased the odds of unprotected sex by 32%, ... [in]creased the odds of [a reduction in number of] sex partners by 15%, decreased the odds of new STDs by 35%, and decreased the odds of risk behavior (as measured by sexual risk indices) by 28%" (p. 348). Importantly, "when considering all of the sexual risk outcomes, there was some variability by target population. For instance, interventions with MSM, people living with HIV, and Hispanics/Latinos appeared to have the strongest effects overall; more moderate effects were found in heterosexual adults and drug users; and weaker/more mixed effects were found in adolescents and STD patients" (pp. 348-349).

Noar also examined moderating analyses across these 18 meta-analytic studies of HIV prevention interventions. Although some conflicting findings were noted with regard to particular moderating factors, several general conclusions could be drawn from this review:

> Evidence was found to support segmentation strategies within interventions in that a number of interventions were more efficacious when they were delivered to single (versus mixed) race or gender groups. This was presumably the case because homogeneous groups allow for intervention content to be more carefully targeted to those groups. Related to this, some meta-analyses provided evidence that interventions were more efficacious when the race of facilitators was matched to participants and one provided support for tailoring on gender/cultural norms ... . These findings are consistent with both tailoring and targeting practices ... as well as a recent meta-analysis which suggested that HIV prevention interventions were more efficacious when interventionists and recipients shared similar demographics ... .
>
> In addition, evidence was found to support skills-training as an important component of behavioral interventions. This finding is consistent with several behavioral theories which suggest that individuals need not only the motivation to engage in safer sex, but also the skills and self-efficacy to engage in safer sexual behaviors ... . It is also consistent with the findings of a recent large meta-analysis of HIV prevention

Tool Box

Books & Articles

Acevedo, V. (2008). Cultural competence in a group intervention designed for Latino patients living with HIV/AIDS. *Health & Social Work, 33*(2), 111-120.
"This article describes a group intervention designed for Latino patients living with HIV/AIDS in New York City. The intervention effectively integrates culturally competent practice with traditional social work practice[, setting the stage] ... for participants to explore issues commonly faced by patients living with HIV/AIDS in a cultural context. Case examples are used to describe themes that emerged during the intervention, which illustrate cultural influences on issues such as adherence, social isolation, stigma, disclosure, safer sex practices, and patient-provider communication. Cultural factors inherent ... [in] Latino culture that are known to influence a patient's health experience and the development of effective interventions are also presented" (p. 111).

Everall, I.P., & Grant, I. (Eds.). (2008). HIV and the brain: The neuropsychiatry of HIV. *International Review of Psychiatry, 20*(1), 1-101.
"The advent of effective antiretroviral therapy substantially altered the natural history of HIV infection[,] with major reductions in mortality allowing infected individuals to live considerably longer. ... [In turn] a new set of challenges ha[s emerged] ... for both researchers and clinicians engaged in the understanding and treatment of HIV and its central nervous system related disorders. These contemporary challenges are reflected in the composition and contents of the papers included in this review [that address] ... three different areas: HIV biology and neuropathology; clinical issues of HIV neurocognitive impairment; and ... co-morbid severe men-

interventions across numerous target populations which found skills training to be an important intervention component ... . In the current review, evidence did *not* support all skills training components in all meta-analyses, however, and an important distinction to draw is what types of skills are being taught. For instance, some interventions focus on personal or self-management skills such as goal setting and self-reinforcement, others focus on communication skills such as discussing and negotiating condom use, and still others focus on technical skills such as how to correctly use a condom. The relation of these differing skill types to efficacy varied, and interventionists should carefully consider which skills might be most important for a particular target population. In

tal illness[es] and their treatment in the setting of HIV infection" (p. 1).

Galletly, C.L., Pinkerton, S.D., & Petroll, A.E. (2008). CDC recommendations for opt-out testing and reactions to unanticipated HIV diagnoses [Commentary]. *AIDS Patient Care & STDs, 22*(3), 189-193.
"The U.S. Centers for Disease Control and Prevention (CDC) now recommend ... testing all health care patients for HIV – regardless of their reported risk behaviors – using an 'opt-out' approach in which patients are informed that an HIV test will be conducted unless they explicitly decline to be tested. These new testing procedures will facilitate the identification of persons living with HIV who are unaware of their infection. However, some of these newly diagnosed persons may not previously have considered the possibility that they might have HIV and may be ill-equipped to cope with an HIV diagnosis. The present commentary reviews the potential reactions of persons who receive unanticipated HIV-positive diagnoses and suggests that additional research is needed to better understand these reactions and associated harms" (p. 189).

Harris, G.E., & Larsen, D. (2008). Understanding hope in the face of an HIV diagnosis and high-risk behaviors. *Journal of Health Psychology, 13*(3), 401-415.
"Receiving an HIV diagnosis can be emotionally devastating, leading the newly diagnosed to believe that all hope for a good future is lost. Participants in the present study were overwhelmed by the initial diagnosis. Often believing that hope was unobtainable, they engaged in high-risk behaviors. In time, participants began to re-experience hope and alter their high-risk lifestyles. Hope was found in five main experiences, including: (1) receiving support; (2) engaging in meaningful life experiences; (3) perceiving options; (4) receiving treatment; and (5) maintaining life quality. Healthcare professionals should consider these five categories as potential sources for fostering hope when working with people who are engaged in high-risk behavior and newly diagnosed with HIV" (p. 412).

Ickovics, J.R. (2008). "Bundling" HIV prevention: Integrating services to promote synergistic gain. *Preventive Medicine, 46*(3), 222-225.
"Bundling is defined as the aggregation of services to increase effectiveness (i.e., creating synergy of effort). The purpose of this commentary is to review the utilization and potential benefits of bundling in its application to HIV prevention. ... Bundling of HIV prevention provides an opportunity to reach high-risk persons who are asymptomatic and/or may not otherwise seek care by eliminating barriers to prevention" (p. 222).

Ingram, B.L., Flannery, D., Elkavich, A., & Rotheram-Borus, M.J. (2008). Common processes in evidence-based adolescent HIV prevention programs. *AIDS & Behavior, 12*(3), 374-383.
"Dissemination of evidence-based HIV prevention programs for adolescents will be increased if community interventionists are able to distinguish core, essential program elements from optional, discretionary ones. We selected five successful adolescent HIV prevention programs, used a qualitative coding method to identify common processes described in the procedural manuals, and then compared the programs. Nineteen common processes were categorized as structural features, group management strategies, competence building, and addressing developmental challenges of adolescence. All programs shared the same structural features (goal-setting and session agendas), used an active engagement style of group management, and built cognitive competence. Programs varied in attention to developmental challenges, emphasis on behavioral and emotional competence, and group management methods. This qualitative analysis demonstrated that successful HIV programs contain processes not articulated in their developers' theoretical models. By moving from the concrete specifics of branded interventions to identification of core, common processes, we are consistent with the progress of 'common factors' research in psychotherapy" (p. 374).

Kang, E., Mellins, C.A., Yiu Kee Ng, W., Robinson, L.-G., & Abrams, E.J. (2008). Standing between two worlds in Harlem: A developmental psychopathology perspective of perinatally acquired human immunodeficiency virus and adolescence. *Journal of Applied Developmental Psychology, 29*(3), 227-237.
"This selective review of the growing developmental psychopathology literature and the authors' clinical work at a pediatric HIV program in Harlem, NY provide an overview of how developmental psychopathology offers an integrative framework that elucidates how autonomy, peer relationships, and self-concept evolve among 13-21 year old adolescents. This paper highlights the importance of considering influences of both perinatal HIV and the culture of poverty on adolescent development, and of adopting multilevel interventions and research to address how interactions among biologic, environmental, and HIV-related stressors (serostatus disclosure, medical treatment adherence, illness stigma) influence the development of adolescents with perinatal HIV" (p. 227).

Maxwell, C., Aggleton, P., & Warwick, I. (2008). Involving HIV-positive people in policy and service development:

(Tool Box is continued on Page 6)

addition, *how* such skills are taught, which has been found to vary greatly by intervention, is an important consideration and one that is worthy of further research attention ... .

Moreover, support was found for the long held notion that theory-based interventions are more efficacious than those that are not theory-based ... . (p. 349)

Speaking to the limitations of this approach, Noar points out that this review, "[l]ike any review, by necessity ... could only focus on generalizations across projects, rather than focus on the unique approach and details of each meta-analytic study. ... Readers interested in a particular meta-analysis with a particular target population should consult the original article for more complete reporting and details" (p. 350). Additionally, although "methods for meta-analysis have been studied for decades, methods for 'meta-analysis of meta-analyses' do not currently exist. Thus, ... [this] review relied on simple statistics, such as median effect size, to attempt to estimate the 'typical' effect of interventions. More sophisticated approaches that aggregate and weight effect sizes are used in meta-analysis, and perhaps in the future such methods will be applied to meta-analysis of meta-analyses" (p. 350). Finally, Noar notes that, "although HIV behavioral interventions have demonstrated widespread efficacy in research trials, it is yet to be determined whether or not they are capable of widespread effectiveness under real world conditions" (p. 351).

HIV Assessment News

HIV Counseling & Testing

In their analysis of audio recordings derived from 49 HIV-test counseling

(Tool Box -- continued from Page 5)

Recent experiences in England. *AIDS Care, 20*(1), 72-79.
"A study was undertaken in three areas of England to establish the types of user involvement mechanisms in place for HIV-positive people to influence service and policy development. ... [A] range of (innovative) methods for facilitating HIV-positive people's greater participation in service planning and delivery [are identified], as well as some of the challenges encountered by people living with HIV and service providers when implementing ... [greater involvement]. The paper concludes by identifying some specific strategies for improving user involvement in HIV service provision" (p. 72).

Morgan, E.E., Woods, S.P., Scott, J.C., Childers, M., Beck, J.M., Ellis, R.J., Grant, I., Heaton, R.K., & the HIV Neurobehavioral Research Center (HNRC) Group. (2008). Predictive validity of demographically adjusted normative standards for the HIV Dementia Scale. *Journal of Clinical & Experimental Neuropsychology, 30*(1), 83-90.
"A brief and accessible cognitive screening measure for HIV-related cognitive impairment is a necessary tool for clinicians and researchers, especially in light of the potential increase in the prevalence of HIV-related neurocognitive disorders and the likelihood of presentation with subtle effects in the HAART [(highly active antiretroviral therapy)] era" (p. 89). "In comparison to the traditional HDS [(HIV Dementia Scale)] cut score (raw score total ≤ 10), [the] use of ... demographically adjusted normative standards significantly improved the sensitivity ... and overall classification accuracy ... of the HDS for identifying participants with HIV-1-associated neurocognitive disorders" (p. 83). "Table 4 [(p. 87)] provides a quick reference tool for approximating T-scores from scaled scores, which are grouped by broad age and education categories" (p. 86).

Nemeroff, C.J., Hoyt, M.A., Huebner, D.M., & Proescholdbell, R.J. (2008). The Cognitive Escape Scale: Measuring HIV-related thought avoidance. *AIDS & Behavior, 12*(2), 305-320.
"Cognitive escape provides a model for examining the cognitive processes involved in escaping from thoughts of HIV/AIDS in a population of men who have sex with men (MSM).[1] This investigation presents psychometric information and validation data on the Cognitive Escape Scale (CES), a measure of HIV-related cognitive avoidance. This study also examined the associations between the CES and self-report measures of theoretically related constructs, including HIV-related worry, sensation-seeking, depressive symptoms, perceived stress, and risky sexual behaviors. ... Exploratory and confirmatory factor analyses supported a 3-factor structure to the CES, suggesting three strategies of cognitive escape: fatalism/short-term thinking, thought suppression/distraction, and alcohol/drug use" (p. 305). "The CES is a convenient, brief self-report measure ... that may be usable for both HIV positive and negative men (with some caveats ...), and whose components are related to risky sexual behavior. As such, it may be of use to AIDS prevention programs, HIV testing counselors, healthcare practitioners, public health professionals, and researchers alike. In a clinical setting, the CES could potentially help direct intervention or educational efforts toward the appropriate target, be it depressive fatalism, patterns of substance use, or a sense of coping 'burnout'" (p. 317).

[1] See the **Tool Box** on "New Thinking on *Not* Thinking About HIV Risk" in the Fall 2006 issue of *mental health* **AIDS** for more information on explanatory models of HIV-related risk taking.

Senn, T.E., Carey, M.P., & Vanable, P.A. (2008). Childhood and adolescent sexual abuse and subsequent sexual risk behavior: Evidence from controlled studies, methodological critique, and suggestions for research. *Clinical Psychology Review, 28*(5), 711-735.
"In this paper, we review the literature investigating the relation between CSA [(childhood and adolescent sexual abuse)] and subsequent sexual risk behaviors among men and women. ... Suggestions for future research and implications for clinical practice are discussed" (p. 711).

Soroudi, N., Perez, G.K., Gonzalez, J.S., Greer, J.A., Pollack, M.H., Otto, M.W., & Safren, S.A. (2008). CBT for medication adherence and depression (CBT-

sessions conducted in northern California, Lee and Sheon (2008) found that when

> counsellors attempt to use the **reason for testing** discussion as a lead-in to a discussion of risk behaviour, clients often describe their testing as part of a routine, not in response to a specific risk. Clients use three practices to present themselves as reasonable and responsible people who are in control of their HIV status. First, clients present the normal and routine nature of testing, thereby portraying their reasonableness in seeking an HIV test. Secondly, clients deny or downgrade their risk when counsellors seek to identify a specific risk. Thirdly, when introducing a particular risk, clients package it within mitigating contexts that emphasise their knowledge about and control over the risk. These practices can make it difficult for counsellors to focus the counselling session on a specific risk incident. (p. 167)

A remedy to this challenge was observed in the transcripts of

> [s]essions by one counsellor ... [participating in this study that offer] an alternative route to a discussion of concerns over risk behaviour. In a departure from the rest, this counsellor designed an open-ended question such as 'What does routine testing do for you?' when clients presented routine testing. This kind of question opens up the range of topics clients can talk about, rather than focusing the discussion on risk behaviour. ...
>
> This kind of discussion on the role of routine testing in the client's

AD) in HIV-infected patients receiving methadone maintenance therapy. *Cognitive & Behavioral Practice, 15*(1), 93-106.
"The present study describes the feasibility and outcome, in a case series approach, of cognitive behavioral therapy to improve adherence and depression (CBT-AD) among individuals with HIV and depression undergoing methadone maintenance treatment for heroin dependence. ... [I]n CBT-AD, patients first receive a cognitive behavioral intervention focusing on improving skills related to medication adherence. Each of the subsequent CBT modules (activity scheduling, cognitive restructuring, problem-solving training, and relaxation training/ diaphragmatic breathing) is designed to address both self-care/adherence behaviors as well as depression" (p. 93).

Stepleman, L.M., Trezza, G.R., Santos, M., & Silberbogen, A.K. (2008). The integration of HIV training into internship curricula: An exploration and comparison of two models. *Training & Education in Professional Psychology, 2*(1), 35-41.
"It can be challenging to get HIV experience during graduate school, and few programs have faculty devoted to HIV endeavors. The authors propose the internship year as a reasonable time to develop HIV competencies within a broader internship curriculum. To explore this idea further, the authors examined two internships that offer specialized HIV training. To increase psychology's capacity to provide HIV training, recommendations are proposed for the application of these models to other internship sites" (p. 35).

Walkup, J., Blank, M.B., Gonzalez, J.S., Safren, S., Schwartz, R., Brown, L., Wilson, I., Knowlton, A., Lombard, F., Grossman, C., Lyda, K., & Schumacher, J.E. (2008). The impact of mental health and substance abuse factors on HIV prevention and treatment. *Journal of Acquired Immune Deficiency Syndromes, 47*(Suppl. 1), S15-S19.
"Syndemic health problems occur when linked health problems involving 2 or more afflictions interact synergistically and contribute to the excess burden of disease in a population. ... This article describes a research agenda for beginning to understand the complex relations among [mental illness], [substance abuse], and HIV ..." (p. S15).

Wingood, G.M., & DiClemente, R.J. (2008). The ADAPT-ITT model: A novel method of adapting evidence-based HIV interventions. *Journal of Acquired Immune Deficiency Syndromes, 47*(Suppl. 1), S40-S46.
"Given the time and cost associated with the development, implementation and evaluation of efficacious HIV interventions, adapting existing evidence-based interventions (EBIs) to be appropriate for a myriad of at-risk populations may facilitate the efficient development of new EBIs. Unfortunately, few models of theoretic frameworks exist to guide the adaptation of EBIs. Over the past few years, the authors have systematically developed a framework for adapting HIV-related EBIs, known as the 'ADAPT-ITT' model. The ADAPT-ITT model consists of 8 sequential phases that inform HIV prevention providers and researchers of a prescriptive method for adapting EBIs. The current article summarizes key components of the ADAPT-ITT model and illustrates the use of the model in several case studies" (p. S40).

Wong, W.K.T., & Ussher, J. (2008). How do subjectively-constructed meanings ascribed to anti-HIV treatments affect treatment-adherent practice? *Qualitative Health Research, 18*(4), 458-468.
"Findings from research studies into treatment (non)adherence have positioned the act as a medical issue that could be remedied by behavioral strategies. The present study, conducted in Sydney, Australia, aims to examine treatment-(non)adherent practice as a subjective expression of meanings ascribed to treatments ... . The findings indicate that people with HIV negotiate and position treatments in particular ways that lead to multiple and varied understanding of treatments. The ways treatments are positioned in their everyday lives suggest that meanings ascribed to treatments impact on the way individuals negotiate demands embedded in the medically-constructed practice of adherence" (p. 458).

– Compiled by Abraham Feingold, Psy.D.

> [approach to] risk reduction seems beneficial for the counselling interaction. It not only pays attention to the client's presentation and validates routine testing as a legitimate part of HIV healthcare, but can also help illuminate the ways that routine testing functions as part of an overall risk-reduction strategy. Previous research shows that over time, many routine testers tend to view their repeated negative test results as proof that their current risk-reduction strategies are effective or that they are somehow immune to HIV infection … . A discussion of the client's current testing patterns can help them see how routine testing can contribute to a 'certificate of health effect' that provides a warrant for risk behaviours ... . In addition, such a discussion can provide a more client-centered footing on which to launch future risk-reduction steps relevant to the client's current view of ... [his] situation. This different route to a risk discussion can help make counselling more effective by paying more attention to the context of how clients present their own HIV healthcare during the session. (pp. 178-179)

How do men and women who test seropositive make sense out of that information? Valle and Levy (2008) looked into "the **cognitive interpretations** African American injection drug users [(IDUs)] make **of an HIV-positive test result** and the attitudinal and behavioural patterns that accompany those interpretations" (p. 130) among 80 IDUs who tested seropositive within a larger sample of 839 street-recruited study participants. "Individuals who interpreted testing HIV-positive as a 'wake[-]up call' displayed the attitudinal and behavioural patterns of 'being blessed', 'living clean' and 'advocacy'. Those that interpreted the test result as a 'death knell' displayed 'self-destructive', 'pleasure-seeking' and 'vengeance' [behavior]. Those that interpreted the positive test result as 'just one more problem' displayed 'resignation' and 'minimization'" (p. 130).

As Valle and Levy see it, the "period following the diagnosis of HIV provides an opportunity for intervention. A positive HIV status can produce lifestyle changes that either facilitate or militate against a person's health and quality of life. HIV-prevention efforts can be improved by helping individuals living with the virus to interpret and act on their diagnosis in positive ways" (p. 130). More specifically, in the view of these investigators, "HIV-prevention interventions that target African American injectors living with HIV would benefit from structuring their services to consider the interpretation the injector makes of his or her status. Medical and social service providers could help HIV-positive individuals to refrain from high-risk behaviours by reframing their diagnosis in more positive ways [i.e., as a 'wake-up call' rather than a 'death knell' or 'just one more problem']. Such a re-conceptualisation may well influence the success of HIV prevention efforts" (p. 136).

Psychiatric Assessment

With data obtained from a departmental electronic medical record system, Baillargeon et al. (2008) "examined **the association of** six **major psychiatric disorders with HIV mono-infection, HIV/HCV** [(hepatitis C virus)] **co-infection and HIV/HBV** [(hepatitis B virus)] **co-infection** ... [among] 370,511 Texas Department of Criminal Justice inmates who were incarcerated for any duration between January 1, 2003 and July 1, 2006" (p. 124). The six psychiatric disorders under study included major depressive disorder, dysthymic disorder, bipolar disorder, schizophrenia, schizoaffective disorder, and psychotic disorders other than schizophrenia. Baillargeon and colleagues found that "all four disease groups (all HIV combined, HIV only, HIV/HCV and HIV/HBV) exhibited consistently higher rates of psychiatric disorders than their uninfected counterparts. With the exception of two outcomes (schizophrenia and schizoaffective disorder) in the HIV/HBV group, these associations persisted across all of the disorders under study and were statistically significant even after adjusting for age, gender and race" (p. 127). Additionally, in "comparison to offenders with HIV mono-infection, those with HIV/HCV co-infection had an elevated prevalence of any psychiatric disorder" (p. 124). These "findings suggest that HIV-infected offenders, particularly those co-infected with HCV, may benefit from targeted interventions that integrate mental health, prevention and pharmacotherapy adherence programs" (p. 128).

Similarly, Tegger et al. (2008) monitored a cohort of men and women living with HIV and receiving care at a university-affiliated HIV primary care clinic in Seattle, Washington, since 1995. In a review of data from 2004, Tegger and colleagues found that, among 1,774 cohort participants,

> 63% had a mental illness (including mood, anxiety, psychotic, or personality disorders), 45% had a substance use disorder, and 38% had both. There were 278 patients who met criteria for HAART [(highly active antiretroviral therapy)] eligibility. After controlling for other factors, patients with **depression** and/or **anxiety** were significantly less likely to initiate HAART compared with patients without a mental illness ... . However, patients with depression/anxiety who received antidepressant/antianxiety medications were equally likely to initiate HAART as patients without a mental illness ... . [The investigators] found that patients with

> mental illness or substance use disorders receive HAART at lower $CD4^+$ cell counts and higher HIV-1 RNA [(viral load)] levels than patients without these disorders. However, HAART initiation among patients who receive treatment for depression/anxiety is associated with no delay. (p. 233)

These "findings suggest a need for mental illness and substance use screening in HIV-primary care settings that do not already do so, as well as integrated psychiatric care and substance use treatment" (p. 240).

HIV Treatment News

Medical Care

Sinclair et al. (2008) set out to "define the **effect of antiretroviral therapy** (ART) **on activation of T cells in cerebrospinal fluid** (CSF) and blood, and interactions of this activation with CSF HIV-1 RNA concentrations" (p. 544) among men and women living with HIV. To do this, the investigators conducted "a cross-sectional study comparing 4 subject groups: (1) [53] HIV-1-infected subjects taking no ART for at least 3 months, referred to as 'offs'; (2) [30] infected subjects on stable combination ART for at least 3 months with plasma HIV-1 RNA levels > 500 copies/mL ('failures')[3]; (3) [40] infected subjects also on stable combination ART for at least 3 months, but with plasma HIV-1 RNA levels < 500 copies/mL ('successes'); and (4) [14] HIV-1-uninfected volunteers who served as controls (HIV negatives)" (p. 545).

Across the four groups, study participants were similar in terms of age, gender, and education. Moreover, the "ongoing antiretroviral drug regimens of the 2 treatment groups were not different with respect to the number and class of combination therapies except for greater use of nonnucleoside reverse transcriptase inhibitors in the successes. Likewise, ... the 2 treated groups did not differ in the number of CNS [(central nervous system)]-penetrating drugs or in the duration of therapy[.] ... [Importantly, n]one of the subjects suffered ongoing neurological disease" (p. 546).

As recounted in a summary of this study on the *POZ* magazine Web site (2008), Sinclair and colleagues found that

> [alt]hough the offs and failures had similar levels of HIV in blood, levels of HIV in the CSF were significantly lower in the failures than the offs. When Sinclair's team looked for signs of immune activation ..., they found that remaining on a failing regimen reduced the amount of activation in both the blood and the brain. The offs had activation levels in both blood and CSF that were roughly double that of the HIV negatives. Immune activation was significantly lower in the failures and lower still in the successes. As would be expected, the HIV-negative group had the lowest levels of immune activation of all the groups.

In short, "[d]espite having similar levels of HIV in the blood, people who continue taking a failing antiretroviral ... regimen have lower levels of HIV and reduced immune activation in the brain compared with people not on treatment ... . This is potentially good news for people who may be at risk for HIV-related brain disorders like AIDS dementia complex" (*POZ*, 2008). As described by *POZ*, "Sinclair and her team conclude that while the results of their study are promising, similar research should be carried out in people with varying levels of neurological impairment to determine how much of a role immune activation and HIV levels in CSF play in brain disorders."

Psychiatric/Psychological/ Psychosocial/Spiritual Care

Neuropsychological Impairment

In a pilot study that assessed the psychomotor performance of 46 men and women living with HIV, Vance, Smith, Neidig, and Weaver (2008) found an association between **anger** and **psychomotor impairment** on Trails A and the Grooved Pegboard for non-dominant hand, neuropsychological tests commonly used to assess cognitive performance among persons living with HIV. The investigators reason that "interventions that focus on anger management could have a therapeutic effect on psychomotor performance" (p. 93).

Adherence to Treatment

Active substance use has the potential to affect antiretroviral adherence negatively. To understand better the associations among correlates of **schedule adherence** (i.e., the percentage of antiretrovirals taken on time), Atkinson, Nilsson Schönnesson, Williams, and Timpson (2008) "developed an exploratory path model of schedule adherence" (p. 260) with data from a sample of 130 African American crack cocaine users who were living with HIV and prescribed HAART. Atkinson and colleagues found that "the effects of psychological distress on schedule adherence were mediated by patients' relationship with their doctor and optimism towards antiretroviral treatment. Adherence was also associated with patients' self-efficacy regarding their medical regimen which, in turn, was associated with their social support" (p. 260). In the view of these investigators,

> [c]linicians will need technical knowledge and skill with behaviour change to promote adherence in HIV-positive drug users ... . Other potential interventions may include peer counselling and social support[.] ... Results ... suggest that schedule adherence may be increased by

[3] More precisely, it is the medication that failed the study subjects, not the study subjects themselves who failed.

Tool Box

Research on HIV-Related Cognitive-Behavioral Interventions, Stress Management Interventions, & Their Interface: A Confluence of Conclusions & Critiques

In a relatively short period of time, several major reviews and meta-analyses have been published that will interest the many practicing clinicians who offer cognitive-behavioral interventions (CBIs), stress management interventions, and cognitive-behavioral stress management (CBSM) interventions to people living with HIV.

Subpopulation-Specific CBIs

Crepaz et al. (2008) conducted a meta-analysis to determine "the efficacy of ... CBIs ... for improving the mental health and immune functioning of people living with HIV" (p. 4). CBIs

> focus on the interaction of thoughts, feelings, and behaviors ... . Although there are various CBI techniques, the most common practices focus on altering irrational cognitions related to negative psychological states (e.g., depression, anger, anxiety), correctly appraising internal and external stressors, gaining stress management skills, and developing adaptive behavioral coping strategies. A recent systematic review of meta-analyses on CBIs ... showed that CBIs are highly effective for adult and adolescent unipolar depression, generalized anxiety disorder [or GAD], panic disorder, social phobia, posttraumatic stress disorder [or PTSD], and childhood depressive and anxiety disorders. Across many disorders, including depression and anxiety, the intervention effects are maintained for substantial periods (e.g., 12 months). In cases of depression, CBIs demonstrated greater long-term effects, with relapse rates half those of pharmacotherapy ... . (pp. 4-5; see also Minority Report)

The investigators included data from 15 controlled trials, published between 1991 and 2005, in their analysis. Eleven of these 15 trials taught stress management skills, and 10 were offered in a group format. Crepaz and colleagues found that "[s]ignificant intervention effects were observed for improving symptoms of depression ..., anxiety ..., anger ..., and stress ... . There is limited evidence suggesting intervention effects on CD4 cell counts ... . The aggregated effect size estimates for depression and anxiety were statistically significant in trials that provided stress management skills training and had more than 10 intervention sessions" (p. 4). Additional analyses

> showed that the significant intervention effects on depression and anxiety were observed at the immediate postintervention assessment; however, there was no evidence for longer term effectiveness. It is plausible that without boosters, there would be a gradual discontinuation in the practice of skills to correctly assess irrational thoughts and improve coping and stress management skills. ... [T]he findings ... suggest that the challenge of coping with emotional issues over the course of HIV infection may require on-going behavioral reinforcement to prevent relapse. (p. 10)

Crepaz and colleagues correctly acknowledge a variety of limitations to this meta-analytic review, a number of which

> reflect the limitations of the primary studies. Some trials included an immediate postintervention assessment but no follow-up assessment with which to compare the results. This omission makes it difficult to determine whether the intervention effects are sustainable over time or whether they are merely a statistical artifact. It would be valuable if future trials assessed outcomes of interest at multiple-assessment periods and for longer periods after the intervention. Moreover, the failure to report on potentially important variables (e.g., medication adherence, taking antidepressant medication) in the primary studies limited ... [the] ability [of Crepaz and colleagues] to examine more closely clinical moderators of the intervention effects on mental health and immune function. Clear and transparent reporting of key elements such as these in intervention studies would improve the quality of future meta-analyses ... . All the trials relied on convenience samples and over half of the trials had a sample size less than 100. It would be beneficial for the field if prospective, controlled trials were conducted to evaluate the impact of CBIs on larger, more generalizable cohorts and clearly report the power analysis for the anticipated effect.
>
> ... Certainly, more research in this area is needed. It would be valuable if future research closely examined the relationship among interventions, psychological states, medication adherence, and immune functions – particu-

improving adherence self-efficacy and treatment optimism and by alleviating psychological distress. But they also suggest that factors directly linked to adherence may in turn be influenced by other factors. ... [This] study suggests that the quality of the patient-doctor relationship plays an indirect, but important role in schedule adherence. Thus, educational interventions ... [for] doctors to promote patient-centred medicine should be encouraged and evaluated. (pp. 266-267)

Nurses, too, can benefit from such training, as demonstrated by DiIorio et al. (2008). She and her colleagues randomly assigned 247 low-income, primarily African American recipients of HIV care in Atlanta to one of two conditions: five sessions of **motivational interviewing** (MI) delivered by registered nurses in one-to-one counseling sessions over a 3-month period ("Get Busy Living")[4] or a care-

[4] "The majority (approximately 80%) of the sessions were held in person and lasted on average between 20 and 90 minutes[,] with

larly long term – and identified other relevant moderators of the intervention effects. Such research inquiry will likely lead to significant and sustained improvement in mental health among persons living with HIV. (p. 12)

De-stressing Distress

Recognizing the utility of stress management skills training for persons living with HIV, Scott-Sheldon, Kalichman, Carey, and Fielder (2008) conducted a meta-analysis to examine "the impact of stress-management interventions at improving psychological, immunological, hormonal, and other behavioral health outcomes among HIV+ adults" (p. 129). "For this review, stress management was defined as any method such as cognitive restructuring, social support training, or mindfulness meditation used to assist with coping and/or managing stress among people living with HIV" (p. 130).

The meta-analysis integrated the results of 35 randomized controlled trials in which 46 separate stress management interventions were evaluated. All studies appeared between 1989 and 2006. The vast majority (89%) were published in journals, although unpublished papers (e.g., dissertations or conference reports) were also included. "These studies sampled 3,077 adults with HIV with a retention rate of 80% at follow-up (based on the largest available *n* at any follow-up)" (p. 131).

The investigators offered more specific details on the interventions

(Tool Box is continued on Page 12)

Minority Report

Although many cognitive-behavioral treatments have received empirical support, "the samples in ... effectiveness studies are composed primarily of White European American individuals" (Horrell, 2008, p. 160). Moreover,

> simply including minority individuals in research studies ... [does] not provide enough information regarding the effectiveness of psychotherapeutic interventions with minority populations ... . Several confounding factors have been hypothesized to influence the effectiveness of psychotherapeutic interventions with ethnic minorities, including socioeconomic status, immigration history, minority (or social) status, level of education, access to health care, and degree of assimilation with the White majority culture ... . None of these constructs operate independently of one another, making the task of identifying variables that affect treatment outcomes extremely complicated ... . (Horrell, 2008, pp. 160-161)

Looking as far back as 1950, Horrell (2008) identified 12 studies, published between 1994 and 2005, that examined the effectiveness of cognitive-behavioral therapy (CBT) "with adults of African American, Asian American, or Hispanic/Latino descent with a variety of diagnoses[, including] ... depression, ... PTSD ..., panic disorder with agoraphobia, and substance abuse ..." (p. 161). A portion of Horrell's summary statement follows:

> On the basis of the 12 studies reviewed ..., CBT appears to be an effective treatment for use with clients from ethnic minority backgrounds. Seven studies demonstrated significant treatment gains with CBT compared with a placebo or wait-list control. CBT was effective in reducing the symptoms of a variety of disorders, including depression, PTSD, GAD, and panic disorder. ... The only study that did not report promising results for the use of CBT with ethnic minority participants was conducted with depressed individuals who were HIV[-]positive (Markowitz et al., 2000).[1] The authors found an increase in self-reported depressive symptoms in a small subgroup of African Americans who received CBT. Further investigation is needed to determine the effectiveness of CBT in the treatment of depression in chronically ill African American men. (p.166)

References

Horrell, S.C.V. (2008). Effectiveness of cognitive-behavioral therapy with adult ethnic minority clients: A review. *Professional Psychology: Research & Practice, 39*(2), 160-168.

Markowitz, J.C., Spielman, L.A., Sullivan, M., & Fishman, B. (2000). An exploratory study of ethnicity and psychotherapy outcome among HIV-positive patients with depressive symptoms. *Journal of Psychotherapy Practice & Research, 9*(4), 226-231.

[1] Horrell writes that "Markowitz, Spielman, Sullivan, and Fishman (2000) examined the interaction between ethnicity and psychotherapy intervention for HIV-positive individuals with major depression. ... There was a significant difference in scores on the outcome measures from baseline to posttreatment; however, the authors found a significant ethnicity by treatment interaction for both outcome measures and post hoc analyses, indicating differences only for African American participants. Specifically, African Americans assigned to the CBT treatment had significantly higher depression scores at posttreatment than individuals from other ethnic backgrounds or those African Americans assigned to any of the other treatment groups. It should be noted that small numbers of participants were assigned to each treatment condition; between three and eight participants were in each of the four treatment conditions. In addition, the authors conducted post hoc tests and reported no Bonferroni or similar correction, allowing the risk of Type I error, which the authors did suggest was a possibility ... . According to the authors, these results suggest that modifications to CBT may be needed before it is used to treat African Americans with depression. However, as there was no description of the CBT intervention used, it was difficult to compare these results with the results from other studies" (p. 164).

as-usual control condition. All study participants were either initiating ART or changing their antiretroviral treatment regimen. The MI intervention "sought to build confidence, reduce ambivalence and increase motivation for ART medication-taking.[5] Medication adherence was measured by the Medication Event Monitoring System (MEMS®) from the time of screening until the final follow-up conducted approximately 12 months following the baseline assessment" (p. 273).

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a median of 45, 32 and 30 minutes for sessions 1, 2 and 3-5, respectively. Session 1 was completed in-person for all participants. Telephone sessions (for sessions 2-5) were conducted as needed for participants who were unable to meet the counsellor in the clinic. For sessions 2-5, 17%, 21%, 15% and 16% were completed via telephone. ... Participants were paid $10 for completing the first MI session and $5 for each of the remaining four sessions. In addition to the five MI sessions, participants in the intervention group received a copy of the Get Busy Living video, a journal and a calendar" (p. 275).

[5] See the **Tool Box** on "Emerging Methods for Motivating Effective Medication Practice" in the Summer 2006 issue of *mental health* **AIDS** for more information on the application of MI to antiretroviral medication-taking.

(Tool Box -- continued from Page 11)
included in the meta-analysis:

> Interventions were conducted in small groups (64%) or one-on-one (36%); small group interventions consisted of a median of 10 sessions of 90 minutes and tended to have a median of two facilitators and eight participants, whereas one-on-one interventions consisted of a median of 16 sessions of 49 minutes each. Interventions frequently included coping skills (59%), intrapersonal skills training (e.g., planning of stress management; information-only or actively practiced; 50%), and active practice of mental and/or physical relaxation exercises (48%); they often included HIV/AIDS education (including rationale for stress management; 37%), social support (37%), and exercise education, planning, or practice (26%). Interventions infrequently included medication adherence (13%) or nutritional education, planning, or practice (7%), relaxation exercise information (discussed or demonstrated but not practiced; 11%), or spirituality (4%). Supplemental materials (e.g., brochures, guided relaxation audiocassettes) were provided in 33% of the interventions. Intervention content was frequently tailored to the group (37%) or individual (22%) with 37% of facilitators matched to the participant(s) on some characteristic (gender, race, HIV status, sexual orientation, or age). Of the 35 interventions reporting details about the intervention leaders, 71% used professionals-in-training (e.g., clinical graduate students) and/or professionals (terminal professional degree, e.g., PhD).
>
> The most typical comparison condition, used by 74% of investigators, was an assessment-only control (i.e., no explicit stress-management treatment or wait-listed). Of the 12 interventions using ... more active comparison conditions (e.g., education-only, brief form of intervention), these interventions were characterized by a median of eight sessions of 75 minutes each with a median of one facilitator and 4.25 participants. Supplemental materials (e.g., brochures, relaxation exercises) were provided in 17% of the active comparisons conditions. (p. 133)

"Coping with a chronic, life-threatening disease ... is not without consequence as disease progression often involves a series of psychological and physical stressors that may impair daily functioning and quality of life. These stressors may involve a variety of physical symptoms, pain, concerns over disclosure of and stigma associated with HIV, and distress regarding one's own mortality ... ."
—— Scott-Sheldon, Kalichman, Carey, & Fielder, 2008, p. 129

Scott-Sheldon and colleagues found that "stress-management interventions for adults living with HIV infection were ... effective in reducing emotional distress including anxiety, depression, and psychological distress. These interventions also reduced fatigue and improved quality of life. The effect sizes ... observed were in the small to medium range, consistent with effects found for stress-management interventions (i.e., mindfulness-based) in cancer, heart disease, and other chronic illnesses ..." (p. 134). Of interest is the additional finding that "reductions in anxiety were adversely related to inclusion of medication adherence information and/or planning in the intervention content. It is important to note that few studies included medication adherence components but, when they did, the anxiety-reducing effects of stress management were lessened. ... [The investigators] hypothesize that improving adherence to demanding medication regimens, such as those required in treating HIV infection, requires increased vigilance and may inadvertently elevate anxiety" (pp. 134-135).

Echoing findings reported by Crepaz and colleagues, these investigators report that "[s]tress-management interventions do not appear to improve CD4+ counts, viral load, or hormonal outcomes compared with controls" (p. 129). Scott-Sheldon and colleagues speculate that

> [t]he absence of immunological or hormonal benefits may reflect the studies' limited assessment period (measured typically within 1-week postintervention), participants' advanced stage of HIV (HIV+ status known for an average of 5 years), the inclusion/exclusion of participants using ART [(antiretroviral therapy)], the lack of information regarding ART adherence, and/or sample characteristics (predominately male and White participants). Future investigation should examine more diverse samples, explore patient characteristics that might moderate intervention efficacy, and use lengthier assessment periods to understand better the impact of stress-management interventions for HIV+ adults. (pp. 136-137)

An important issue raised by this review is the

> applicability of stress-management interventions for all persons affected by HIV. The majority of participants in the [randomized controlled trials] ... studied were men (82%) and White (56%); only 3% of study participants had a history of severe mental illness. These characteristics contrast with the epidemiology of HIV and AIDS, when people of color, women, those with alcohol and other drug dependencies, the homeless, and the mentally ill are disproportionately vulnerable. ... Along with research to test enhanced and lower cost interventions, studies are needed to test stress-management strategies that can be used in clinical and community services for non-Whites and women, including those with histories of mental health and substance abuse problems. Along these same lines, there is no basis for generalizing the stress-management interventions tested thus far to developing countries that are home to the vast majority of people living with HIV/AIDS worldwide. ... Research is needed to examine the efficacy and cost benefits of stress-reduction interventions that can serve people living with HIV/AIDS at greatest need. (p. 136)

Combination Punch

Brown and Vanable (2008) assembled a focused review and critique of CBSM interventions for persons living with HIV. This paper "(1) summarizes key features of stress management interventions for HIV-infected people that employ cognitive-behavioral intervention strategies, (2) synthesizes stress, coping, psychological, and health status outcomes from these interventions, and (3) provides a methodological critique of the literature and guidance for the future application of stress management interventions in HIV research and care settings" (p. 27). The investigators "reviewed 21 stress management interventions designed for HIV-infected individuals that included both cognitive and behavioral skills training" (p. 26). More specifically,

> [a]cross all the interventions, the cognitive and behavioral approaches were designed to facilitate adaptive coping and reduce the negative effects of stress. Emotional regulation strategies and reducing overall psychological distress were often specified as goals of the interventions. As a behavioral strategy, the majority of studies (76%) included a relaxation training component, with progressive muscle relaxation the technique most often included ... . Another key behavioral component of most interventions (62%) was to identify participants' existing social support, discuss the importance of support networks, and encourage adoption of strategies to enhance the use of social support to cope with stress ... . Furthermore, across interventions, the use of other active coping strategies (e.g., problem solving) was stressed as more adaptive than avoidant coping strategies (e.g., substance use).
>
> In all of the reviewed interventions, stress management skills training also included modules on the use of cognitive strategies to modify HIV-infected people's approach to appraising stressors and modules that encouraged the use of active problem-solving strategies. For instance, cognitive distortions and automatic thoughts about HIV-related stressors were often identified and targeted via cognitive restructuring. In studies evaluating variations of coping effectiveness training ..., the focus was on the stress appraisal process and matching the stressor's level of perceived changeability with the use of either problem- or emotion-focused coping strategies. Similarly, in problem-solving approaches, participants were taught to clearly identify characteristics of specific stressors, brainstorm potential solutions, select a coping strategy, and evaluate the effectiveness of the chosen solution for the problem situation. (p. 28)

The stress management interventions incorporated into this review were largely administered over multiple sessions and in a group format. It should be noted that

> [s]ome studies excluded patients with the presence or history of specific HIV symptoms or an AIDS diagnosis (67% ...), as well as cognitively impaired patients or those with psychotic symptoms (71% ...). Although all interventions sought to improve stress management, a surprisingly high percentage of studies (57% ...) excluded individuals based on current or past psychiatric [history], substance abuse history, or personality disordered history. The degree to which individuals were experiencing psychological distress, especially their level of depres-

(Tool Box is continued on Page 14)

"[S]tress management training is increasingly viewed as integral to the broader goal of assuring that patients maintain adequate self-care for their illness ... . In so far as stress management interventions can reduce distress and, potentially, improve disease management and health outcomes, an evaluation of the current state of the science with regard to these interventions is of considerable importance."

—— Brown & Vanable, 2008, p. 27

(Biopsychosocial Update -- continued from Page 11)

Dilorio and colleagues found that

> [p]articipants in the intervention condition showed a trend towards having a higher mean percent of prescribed doses taken and a greater percent of doses taken on schedule when compared to the control group during the months following the intervention period. This effect was noted beginning at about the eighth month of the study period and was maintained until the final study month. Although the finding was weaker for overall percent of prescribed doses taken, the results for the percent of doses taken on schedule suggests that the MI intervention may be a useful approach for addressing specific aspects of medication adherence, such as ... [adherence] to a specified dosing schedule. (p. 273)

Depression can also negatively affect antiretroviral adherence. On this point, Horberg et al. (2008) reviewed data from a cohort of patients seen for HIV medical care in two large health maintenance organizations who were initiating a new HAART regimen. In total,

> 3359 patients were evaluated [and monitored over a 12-month period]; 42% had a **depression** diagnosis, and 15% used SSRIs [(**selective serotonin reuptake inhibitors**; antidepressants)] during HAART. Depression without SSRI use was associated with significantly decreased odds of achieving ≥ 90% adherence to HAART ... . Depression was associated with significantly lower odds of an HIV RNA level < 500 copies/mL ... . Depressed patients compliant with SSRI medication (> 80% adherence to SSRI) had HAART adherence and viral control statistically similar to nondepressed HIV-infected patients taking HAART. Compar-

(Tool Box -- continued from Page 13)

sion, often served as either an exclusion or inclusion criteri[on] ... . For example, some studies only recruited individuals with moderate levels of depression ..., while other interventions would not allow individuals diagnosed with major depressive disorder to participate ... . (p. 31)

Brown and Vanable found that "[m]ost studies noted positive changes in perceived stress, depression, anxiety, global psychological functioning, social support, and quality of life. However, results were mixed for coping and health status outcomes ..." (p. 26).

Promises to Keep

Although CBSM interventions show considerable promise when employed with persons living with HIV, Brown and Vanable contend that "this literature is limited by measurement problems, research design features, a narrow focus on HIV-infected men who have sex with men [(MSM)], and feasibility concerns for intervention dissemination" (p. 26). "In addition, the exclusive focus on group-based intervention approaches and the need to target unique concerns of HIV-infected patients raise significant concerns about the feasibility of disseminating interventions to resource-limited settings" (p. 35). Brown and Vanable expand upon these points and their remediation as follows:

Measurement of Intervention Outcomes and Processes

o *Lack of Consensus Regarding Best Practices for Assessment of Coping Hinders Interpretability of Interventions' Effectiveness* – ... In the absence of consensus regarding best practices for coping assessment, a greater emphasis on assessment of coping self-efficacy may be warranted. Coping self-efficacy can be assessed without reference to a particular stressor and is arguably of more direct relevance to the way in which coping skills are taught in stress management interventions. That is, interventions typically seek to modify participants' ability and confidence to successfully manage stress across situations using adaptive coping strategies. Thus, the level of coping self-efficacy may generalize well to a variety of stressful situations ... . (p. 35)

o *Need to Identify Active Ingredients of Stress Management Interventions* – The reviewed interventions typically implemented multisession programs with numerous components included in the treatment package. Further assessment of the efficacy of individual treatment components compared to other strategies should be employed. Similarly, the bulk of interventions were tested in a group format. Therapy process variables and nonspecific group factors may be important active ingredients to consider when evaluating the efficacy of stress management interventions. ... It may be that ... the provision of additional social support in group interventions ... play[s] an important role in treatment outcomes. (p. 35)

o *Use of Depression Scales that Overlap with HIV Symptoms May Result in Inaccurate Assessment of Depressive Symptoms* – In the diagnostic criteria for mood disorders, somatic symptoms are prominent diagnostic features[.] ... A potential solution for depression assessments for HIV-infected patient samples is to focus on the cognitive and affective domains of depression, rather than physical symptoms that may be a function of HIV or medication side effects ... . (p. 36)

Research Designs to Evaluate Intervention Efficacy

o *Future Studies Should Include Comparison Conditions with Equivalent Treatment Intensity and Length* – The majority of studies compared a stress management intervention condition to a no intervention control group. ... [F]uture

ing depressed with nondepressed HIV-infected patients, CD4 T-cell responses were statistically similar; among depressed patients, those compliant with SSRI had statistically greater increases in CD4 cell responses. (p. 384)

Horberg and colleagues emphasize that, "[b]ecause depression is negatively associated with HAART adherence and with clinical outcome measures for these patients, ... screening for depression is essential. ... Patients who are found to be depressed should be offered therapy, because compliant SSRI medication use was associated with improved HAART adherence and HIV laboratory parameters" (p. 389).

Similarly, Vranceanu et al. (2008)

used brief self-report screening measures of **depression** and **post-traumatic stress disorder** (PTSD) in ... HIV/AIDS care settings to examine (1) frequency of positive screens for these diagnoses; (2) the degree to which those with a positive screen were prescribed antidepressant treatment; and (3) the association of continuous PTSD and depression symptom scores, and categorical (screening positive or negative) PTSD and depression screening status, to each other and to ART adherence as assessed by the [MEMS®], regardless of antidepressant treatment. (p. 313)

The investigators analyzed available data from 156 adults living with HIV that were taken at five time points, yielding a total of 444 data points. Vranceanu and colleagues found that

[p]articipants screened positive for PTSD at 21% of visits, ... depression at 22% of visits[, and for both at 14% of visits] ... . At visits when participants screened positive for both depression and PTSD, 53.6% of the time they were on an antidepressant. Those who screened positive for PTSD were more likely to also screen positive for depression. In multiple regression analyses that included both continuous and dichotomous PTSD and depression

studies should utilize research designs that allow the effect of treatment intensity to be controlled for by using comparison treatments of equal length and intensity. Indeed, in research designs that included support group comparison conditions, differences between the stress management and comparison conditions were often more minimal ... . (p. 36)

o *Studies Should Include Longer Follow-up Assessments to Assess Long-Term Intervention Efficacy* – ... Most of the reviewed studies reported only on data from preintervention and an immediate postintervention assessment (52%). Longitudinal assessments may be especially important for the measurement of immune status markers that may vary naturally with time ... . Conducting longer follow-ups could also facilitate a greater focus on within-person variability for intervention outcomes. ... (p. 36)

Sample Characteristics

o *Focus on Samples of High-functioning HIV-infected, Caucasian MSM Limits the Generalizability of Findings to Other HIV-infected Subgroups* – ... [F]uture research should implement and test stress management interventions

(Tool Box is continued on Page 16)

and controlled for shared variance due to clustering of multiple observations, only depression contributed significant unique variance, suggesting the primary role of depression and the secondary role of PTSD in poor adherence in individuals with HIV. (p. 313)

Vranceanu and colleagues suggest that the results of this study

> highlight the importance of assessing and treating depression in HIV-infected individuals. Although not directly related to adherence measures, PTSD increased the likelihood of depression, and thus negatively affected adherence through an indirect pathway, or through common distress. Brief instruments such as those used in this study[6] could be incorporated in[to] the care of [individuals living with] HIV ... . This would allow referral to evidence-based treatment methods for PTSD and depression, via antidepressant or cognitive-behavioral therapy, which may increase ART adherence and potentially enhance HIV treatment outcomes. (p. 320)

Finally, Koenig et al. (2008) used a randomized controlled design to examine "whether persons who participated in ... [a clinic-based multicomponent social support] intervention[7] achieved and maintained better adherence, and subsequently had better virologic outcomes, in the first 6 months of therapy compared with those who received standard-of-care adherence counseling" (p. 161). Two components of the intervention merit specific mention:

> To tailor strategies to each individual patient's needs[,] ... a structured interview [was used] to help patients identify adherence barriers, generate possible solutions, select strategies to overcome the barriers, and, in subsequent meetings, evaluate how the strategies were working. This interview, ... the **Semi-Structured Interview for Developing Medication Adherence Plans** (SIDMAP), was used at each patient contact to identify, and then evaluate and revise, adherence barriers and strategies as they evolved over time.
>
> ... A second component of the intervention involved identifying and involving a **support partner** ... [to] assist the patient with adherence. ... Support partners attended meetings with the patient and [the] nurse-interventionist, contributing to the identification of barriers and generation of helpful strategies, and were also welcomed at informational multipatient group meetings. Outside of clinic visits, they provided tangible and ongoing adherence-related assistance to the patient. (p. 160)

Importantly,

> [o]f 226 participants who were randomized and began the trial, 87 (38%) were lost to the study by 6 months. The proportion of adherent participants declined steadily over time ... [in both the intervention and control groups]. Sustained adherence was associated with increased odds of achieving an undetectable [viral load] ... . In intention-to-treat analyses, a larger proportion of the intervention group than the control group was adherent ... and achieved an undetectable [viral load] ... . However, the major-

[6] "The SPAN ... is an abbreviated form of the widely used Davidson Trauma Scale ... and is a reliable and valid screening tool for PTSD ... . It has four items measuring startle, physiological arousal, anger, and numbness" (p. 316). "The PC-SAD is a reliable and valid tool for assessing depression in the primary care setting. ... The PC-SAD is a 37-item DSM-IV-compatible depression screening. ... It does not overlap with somatic symptoms of HIV infection" (p. 316).

[7] "The intervention involved five sessions with ... [a] nurse-interventionist delivered just prior to and during the first 2 months following dispensing of medication. Two of these sessions occurred before the dispensing of medication (7-14 days apart), and three sessions occurred following medication dispensing (at Weeks 2, 4, and 8). In addition, there was also a session at 6 months. ... Support partners were welcome at all sessions, but were required to attend at least one of the first two sessions and two of the first four. Participants were also contacted by phone five times between intervention sessions: at Weeks 1, 6, and 10 and at Months 4 and 5 after beginning medications. In addition, participants were required to attend at least two of six group educational sessions at any time during the intervention. ... The first two sessions typically lasted 2 to 3 hours, depending on how much the patient already understood about HIV disease and antiretroviral medications; Sessions 3 through 6 typically lasted about 1.5 hours, ranging from 45 min to 2 hours" (pp. 161-162).

ity of participants who remained … [in the] study experienced some reduction in [viral load] ..., regardless of experimental condition. (p. 159)

In other words, "[d]espite the efficacy of the intervention on adherence, and the significant association between sustained adherence and viral suppression, the intervention was not consistently associated with improved health outcomes. Specifically, whereas a larger proportion of those randomized to the intervention had undetectable viral loads, the effect of intervention was not statistically significant when considering just those who remained on-study" (p. 167). These findings prompt Koenig and colleagues to observe that "[e]arly discontinuation of care and treatment may be a greater threat to the health of HIV patients than imperfect medication-taking" (p. 159).

Coping, Social Support, & Quality of Life

Polzer Casarez and Miles (2008) explored **spiritual coping** through in-

(Tool Box -- continued from Page 15)

targeting a broader range of HIV-infected patient populations, especially … [injecting] drug users, women, and ethnic minorities. ... In addition, a major limitation of the literature concerns the fact that most studies excluded patients who were experiencing psychological distress. ... Thus, findings from the reviewed studies are not generalizable to HIV-infected patients reporting mental health difficulties (the very patients who may benefit most from these interventions). ... [F]uture stress management programs should be adapted for individuals experiencing psychological distress. The role of premorbid mental health functioning could then be examined as a potential mechanism influencing the intervention's efficacy. Indeed, one of the reviewed studies noted that individuals with the highest preintervention assessment levels of distress reported the most significant decreases in psychological distress after a stress management intervention ... . (pp. 36-37; see also Swiss Tease)

Data Analytic Concerns

o *Multiple Statistical Comparisons Increase the Likelihood of Type I [(False Positive)] Errors* – ... Future studies should focus on analyses guided by a priori hypotheses, report on all key outcomes measured, control for multiple statistical tests, use more conservative alpha levels for exploratory analyses, or report effect sizes and confidence intervals for findings. (p. 37)

o *Literature Focuses on Statistical Significance with Little Attention Given to Clinical Significance* – ... In the case of stress management treatments, clinical significance should focus primarily on the practical change in one's ability to adaptively manage stress. In turn, clinical significance for these interventions would then evaluate the impact of this change on an individual's functioning in other domains such as psychological health and immune functioning. Thus, future research should clearly identify treatment goals and provide measurements of the degree to which HIV-infected patients evidence clinically significant improvement after completing a stress management intervention. (p. 37)

Intervention Dissemination and Tailoring to HIV-infected Individuals

o *Need for Cost-effective, Easily*

Swiss Tease

Berger et al. (2008) randomly assigned 104 adults attending HIV primary care clinics in four Swiss cities and taking combination ART (cART) to standard medical care or to standard medical care plus CBSM group training. The study objective was "to investigate the effect of such training on virological, immunological and psychological parameters over a 12-month study period" (p. 768). The CBSM training

> consisted of 12 weekly group sessions lasting 2 h and provided during a 12[-]week period for each group. ... Sessions were moderated by one cognitive-behavioral psychotherapist (university degree and formal ... cognitive-behavioral training) and one postgraduate psychotherapy trainee (university degree and second year in cognitive behavioral training). Group sizes ranged between four and 10 participants. The rationale of the intervention utilized a manual-based multicomponent approach, including HIV-relevant topics and psychotherapeutic techniques ... .
>
> With the exception of the first (introduction) and last (discussion) session, each session was dedicated to a particular topic (e.g. stress, depression, work, etc.). (p. 769)

The treatment modules in the CBSM included:

> Psycho-education – Each topic is described and discussed in terms of its relevance to HIV; participants also receive written material including summaries on recent scientific findings and 'to do' lists
>
> Group dynamic exercises – Empathy, respect, trust and cohesion within the group are encouraged and practiced with short and defined ice-breaker, e.g., sharing personal information, and trust-building, e.g., establishment of group rules, exercises
>
> Homework – Each topic is accompanied by homework, which encompasses either the assessment of problematic/helpful aspects or the transfer and practice of techniques learned to everyday life
>
> Cognitive strategies – The objective is to identify and acknowledge cognitions as major determinants of feelings and behavior and, if necessary, to modify them; alternative self-instructions are then practiced in role-plays and real life
>
> Progressive muscle relaxation (PMR) – The objective is to train participants to recognize muscular tension and to self-induce relaxation; in the first five sessions, PMR techniques are taught by the psychotherapist, whereas in the remaining sessions, participants act as PMR trainers for the group; participants also receive written and spoken (CD) PMR instructions (p. 769)

terviews with 38 **African American mothers** living with HIV in the southern United States and found that the "women dealt with the stresses of HIV through a relationship with God" (p. 118). These mothers, who had a child who was also living with HIV,

> viewed God as all-powerful, a major force in all aspects of their lives, and particularly critical in living with HIV and dealing with [the] possibility of death. The relationship between the mothers and God operated through a partnership; essential to this partnership was the woman's participation in spiritual practices [(e.g., prayer, reading the Bible)] that helped her communicate with God and strengthened her faith and trust in God. The study further explicates the dimensions of their spirituality, namely the perspective that God is in control and that the women had to participate in that relationship for God to respond. Furthermore, as a result of their spirituality, the women experienced less worry, fear, and

Disseminated Stress Management Interventions – ... Although group-delivered training provides the added benefit of fostering social support, some HIV-infected patients may be reticent to attend groups because of confidentiality concerns or dislike of group meetings. Thus, the usefulness of group stress management interventions may be limited to a relatively small subset of patients who could otherwise benefit from such programs. ... An important gap in the literature is to examine the efficacy of briefer, more cost-effective stress management approaches that can meet the needs of a broad range of patients. ... [P]articularly promising ... approach[es include] ... the use of [telephone-based and computer-delivered interventions] ... . (p. 37)

o *Future Interventions Should Target the Unique Stressors Faced by Individuals Living with HIV* – The reviewed interventions typically provided participants with broad stress management training[;] ... few interventions have included modules designed to address the unique challenges of being HIV infected. For example, HIV-infected patients often report significant levels of stigma and discrimination that could be targeted in ... interventions for this population ... . In addition, stress associated with maintaining satisfying, intimate relationships with partners could also be highlighted ... . These unique challenges, along with others, should be given greater attention within the context of HIV-infected stress management interventions. ... (pp. 37-38)

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Notably, "[a]ll dependent variables were assessed at baseline and at 1, 6 and 12 months after termination of CBSM training in the intervention group" (p. 769).

Berger and colleagues "found no effects of CBSM training on morbidity, viral load and CD4 cell counts, and adherence to cART compared with standard medical care. However, ... [the investigators] did observe benefits of CBSM training on quality of life and psychological distress. Notably, significant improvements in distress were only observable in individuals with high distress at baseline" (pp. 772-773). Berger and colleagues conclude that

> CBSM group training is an efficacious and effective intervention for enhancing quality of life and psychological well-being in HIV-infected persons taking stable [ART] with restored immunity and little somatic morbidity. Its beneficial effects are particularly observed among persons who present with depression and anxiety scores at baseline ... which indicate high psychological distress. Therefore, screening for psychological distress ... and referral to individually acceptable psychotherapeutic interventions should be integral to HIV management ... . (p. 774)

In comparing this study to those reviewed in the main **Tool Box**, several advances in study design highlighted by Berger and colleagues bear mentioning. These include "the inclusion of a [diverse] group of HIV-infected persons from ... routine practice clinical setting[s,] ... the longitudinal assessment of the clinically relevant markers of HIV infection, the use of an intervention according to a manual, and the recruitment at multiple study centers" (p. 773). Berger and colleagues also recognize that "the mode of group training might have affected the acceptability of the intervention, which would explain the fact that only a small proportion (6.1%) of eligible individuals actually agreed to participate. Other routes of administration with known efficacy, such as individual psychotherapy, might prove to be more accessible to HIV-infected persons who are unwilling to participate in group therapy sessions ..." (pp. 773-774).

Although "[t]he absence of an effect of CBSM on clinical markers may be explained by the relatively small contribution of psychosocial factors to HIV progression among persons on cART with complete viral suppression and restored immune function" (p. 774), Berger and colleagues suggest that "[s]ince a negative impact of psychological distress on HIV disease progression has been demonstrated in prospective studies with a follow-up of up to 9 years ..., effects of CBSM training on the clinical status might be observed in the long-term observation of HIV-infected individuals with high levels of psychological distress" (p. 774).

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> distress associated both with their diagnosis and with their child's health.
>
> Although God was perceived to be in control of all aspects of their lives, for these women, a particularly salient characteristic of God's control was the power to heal or to help them during a crisis. God helped them by providing supportive intermediaries or giving them the inner strength to manage the stressors they faced. (p. 127)

The investigators make a point of noting that "[m]others' participation in their relationship with God mostly focused on their own internal spiritual practices. However, some also discussed church attendance as an important spiritual practice and source of support. On the other hand, a number of mothers voiced reluctance to attend church due to fear of disclosure of their HIV status and the stigma, or because of negative attitudes of church members about people with HIV" (p. 128).

Polzer Casarez and Miles urge clinicians who are "working with mothers with HIV to acknowledge their spirituality and assess how spirituality helps them cope with and manage their illness" (p. 118).[8] Among women for whom spiritual beliefs and/or practices contribute to self-care and coping with HIV, "in-depth exploration could focus on specifics of her spiritual practices, her views about how spirituality helps, and how the ... [clinician] might support her spiritually. Sensitive probing might also reveal dilemmas the woman faces regarding church attendance and related concerns about stigma and disclosure[.] ... Helping women express concerns about the stigma related to HIV and problem-solving ways to manage these concerns is important" (pp. 129-130).

Murphy and Marelich (2008) investigated **resiliency** – "the capacity for successful adaptation despite challenging circumstances" (p. 284) – among 111 well children between the ages of 6 and 11 years whose mothers were living with HIV disease. Mothers and their children were assessed at four time points: baseline, 6 months, 12 months, and 18 months. Murphy and Marelich found that

> [i]n this sample ... more severe maternal illness was associated with decreased resiliency. Resilient children of HIV-positive mothers in this sample reported better coping self-efficacy than did non-resilient children. ... The children classified as resilient also evidenced better self-esteem and higher self-report of effectiveness than the non-resilient children. Data from the mothers of these children served as a second informant validation of those findings, with mothers reporting lower negative mood, interpersonal problems, ineffectiveness, anhedonia and negative self-esteem. This may be linked to better coping skills, in that these children may be able to cope with depression more effectively than the non-resilient children. (p. 289)

Murphy and Marelich are quick to note, however, that

> the majority of the children (68%) were classified as non-resilient. Those children are dealing with poorer coping self-efficacy and more depressive symptoms. They could benefit from a number of efforts to improve their resiliency outcomes. First, such children are likely to not report that they have a strong adult attachment in their life, and research indicates they could strongly benefit from such a contact. ... Second, non-resilient children of HIV-infected mothers could benefit from problem solving and coping skills training. Children can be taught to label feelings, develop self-control, learn problem-solving skills and apply anger management techniques ... . Children in such programs, in addition to showing skills acquisition, may show improvements in clinical symptomatology. Finally, these children also may benefit from direct psychotherapeutic intervention for depression. Relieving psychological distress may assist these children in being able to function and cope more adaptively, as well as facilitate attachment to adult figures that can provide support. (p. 289)

Although countless studies have examined the influence of stress, coping, and depression on HIV disease progression, far less attention has been paid to the contribution of personality characteristics to the advancement of HIV disease. To address this gap in research, Ironson, O'Cleirigh, Weiss, Schneiderman, and Costa (2008) monitored a diverse sample of 104 men and women living with HIV disease over a 4-year period. Their purpose was to examine how the **Five-Factor Model** or the "Big Five" personality domains (Neuroticism [N], Extraversion [E], Openness [O], Agreeableness [A], Conscientiousness [C]) and their respective facets[9] and profiles are re-

[8] See the **Tool Box** on "All That Is Sacred: A Primer on Spiritual Assessment" in the Spring 2007 issue of *mental health* **AIDS** for information on a two-stage spiritual assessment process.

[9] The personality domains measured by the Revised NEO Personality Inventory (NEO-PI-R), and their respective facet scales, are as follows: Neuroticism (Anxiety, Angry Hostility, Depression, Self-Consciousness, Impulsiveness, Vulnerability); Extraversion (Warmth, Gregariousness, Assertiveness, Activity, Excitement Seeking, Positive Emotions); Openness (Fantasy, Aesthetics, Feelings, Actions, Ideas, Values); Agreeableness (Trust, Straightforwardness, Altruism, Compliance, Modesty, Tender-Mindedness); Conscientiousness (Competence, Order, Dutifulness, Achieve-

lated to changes in CD4 cell count and viral load.

Ironson and colleagues found that the domains of O, E, and C were significantly associated with slower disease progression over the 4-year period, "controlling for age, education, gender, race, initial disease status, and antiretroviral medications" (p. 251). Delving more deeply,

> [f]acets of the[se] ... domains that were significantly related to slower disease progression were assertiveness, positive emotions, and gregariousness ... [within the E domain]; ideas ... [and a]esthetics ... [within the O domain]; [and] achievement striving and order [within the C domain] ... . In addition, profile analyses suggested personality styles which seem to underscore the importance of remaining engaged[;] ... Creative Interactors (E+O+), Upbeat Optimists (N-E+), Welcomers (E+A+), Go Getters(C+E+), and Directed (N-C+) ... had slower disease progression, whereas the "homebody" profile ... [E-O-] was significantly associated with faster disease progression. (p. 245)

Importantly, this study "did not account for psychiatric disorders in the sample nor were psychotropic medications included in the analysis. It is possible that acute psychiatric disturbances or their treatment may have biased the personality assessment. Similarly, the absence of neuropsychological assessment or physician assessed hepatitis C allows for the possibility that unidentified cognitive impairments or co-occurring liver disease may have unduly influenced some of the relationships reported here" (p. 251).

ment Striving, Self-Discipline, Deliberation). "Interpretation on the domain level yields a rapid understanding of the individual, while interpretation of specific facet scales gives a more detailed assessment" (Costa & McCrae, 1995, p. 21).

Speaking to the importance of these findings, Ironson and colleagues point out that these

> domains, facets, and profiles may have particular relevance for psychosocial and behavioral medicine interventions to improve disease management in people living with HIV in several important ways. First, the observed associations between personality and HIV disease progression may help to identify those at risk for a less favorable disease course. Second, the observed associations in the present study between personality and established risk factors for an accelerated disease course (i.e., depression, substance use, medication adherence) may also help to specify the targets for psychosocial interventions.
>
> Perhaps most importantly, personality assessment may help to triage patients into the most appropriate treatment. For example, those low in C may benefit from increased environmental supports around medication and medical appointment adherence ... ; those low in [E] may particularly benefit from social support utilization interventions; and those high in [O] may be particularly receptive to alternative or complimentary treatments. It is important to remember, however, that the purpose of personality assessment and the aim of any treatment intervention is not to change the individual's personality, but rather, with appropriate training, to enable the individual to change ... [his or her] attitudes and behavior given ... [his or her] basic tendencies or personality. Targeting specific treatment that best conforms to the individual's personality may help to ensure a more effective intervention and better health outcomes. (pp. 251-252)

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Tool Box

A Note on Content

This publication has been developed to help the frontline provider of HIV-related mental health services, allied professionals, and consumers stay up-to-date on research-based developments in HIV care. The contents for the "Biopsychosocial Update" are drawn from a variety of sources including, but not limited to: the *CDC HIV/STD/TB Prevention News Update* (http://www.cdcnpin.org/news/prevnews.htm); the *Kaiser Daily HIV/AIDS Report* (http://report.kff.org/hivaids/); and information e-mailed by Florida International University researcher Robert M. Malow, Ph.D., ABPP. Other sources are identified when appropriate.

It is presumed that readers have at least a fundamental understanding of medical, psychiatric, psychological, psychosocial, and spiritual considerations when assessing and intervening with people who are living with HIV/AIDS and their families. For additional background information on these aspects of care, the following resources may be of assistance:

Bartlett, J.G., & Gallant, J.E. (2007). *Medical management of HIV infection, 2007 edition.* Baltimore: Johns Hopkins University, Division of Infectious Diseases.

Fernandez, F., & Ruiz, P. (Eds.). (2006). *Psychiatric aspects of HIV/AIDS.* Philadelphia: Lippincott Williams & Wilkins.

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www.samhsa.gov