

HHS Public Access

J Black Sex Relatsh. Author manuscript; available in PMC 2017 November 06.

Published in final edited form as:

Author manuscript

J Black Sex Relatsh. 2016; 3(3): 75–91. doi:10.1353/bsr.2016.0007.

Addressing Unmet Sexual Health Needs among Black Adolescents with Mental Illnesses

Bridgette M. Brawner, PhD, APRN,

Assistant Professor of Nursing, Center for Health Equity Research, Center for Global Women's Health, University of Pennsylvania School of Nursing, 418 Curie Blvd., Room 419, Philadelphia, PA 19104

Ehriel F. Fannin, PhD(c), RN,

Ruth L. Kirschstein NRSA Predoctoral Fellow (T32NR007100), Center for Health Equity Research, Center for Global Women's Health, University of Pennsylvania School of Nursing

Janaiya L. Reason, MPH(c), and

Research Coordinator, Center for Health Equity Research, Center for Global Women's Health, University of Pennsylvania School of Nursing

Guy Weissinger, MA

BSN-to-PhD Hillman Scholar, Center for Health Equity Research, University of Pennsylvania School of Nursing

Abstract

Despite advances in HIV epidemiologic and prevention research, adolescents with mental illnesses remain a historically underserved group with respect to human immunodeficiency virus (HIV)/ sexually transmitted infection (STI) prevention resources. Black adolescents with mental illnesses in particular are a relatively underserved, hidden population in the field of sexual health. Strategies and guidelines are needed to account for underlying psychopathology among Black adolescents with mental illnesses in ways that current models have yet to address. In this paper, we propose several actionable mechanisms to better integrate HIV/STI and mental health related services and activities for sexual health promotion.

Historically, people dealing with mental illnesses were presumed to lack interest in sexual intercourse or intimate relationships (Thomas, 1988). Over the years, however, researchers demonstrated that not only were adolescents and adults with mental illnesses sexually active, but they were engaging in more sexual risk behaviors than their peers without mental illnesses (Elkington et al., 2013; Marengo et al., 2015; Meade & Sikkema, 2005). Additionally, increased prevalence rates of human immunodeficiency virus (HIV) have been documented among adults with serious mental illnesses when compared to the general adult population (Blank, Mandell, Aiken, & Hadley, 2002; Rosenberg et al., 2001). Similar

Corresponding Author: brawnerb@nursing.upenn.edu, 215-898-0715.

Conflict of Interest Statement: The authors report no real or perceived vested interests that relate to this article (including relationships with pharmaceutical companies, biomedical device manufacturers, grantors, or other entities whose products or services are related to topics covered in this manuscript) that could be construed as a conflict of interest.

discoveries were made among youth wherein those with mental illnesses reported increased rates of HIV risk-related sexual behaviors (Brown et al., 2010; Teplin et al., 2005).

In the United States, Black adolescents are at the epicenter of our national epidemic for HIV and other sexually transmitted infections (STIs; Centers for Disease Control and Prevention, 2014a, 2014b). Black adolescents seeking treatment for mental illnesses (both inpatient and outpatient) are at heightened risk because they engage in risk behaviors (e.g., having sex under the influence of drugs and/or alcohol) more frequently than their peers (Brawner, Gomes, Jemmott, Deatrick, & Coleman, 2012; Brown et al., 2010). Yet we lack clear, evidence-based strategies/guidelines to screen for and address sexual health and HIV/STI prevention needs in this demographic.

A growing body of research focuses on developing a better understanding of sexual risk behaviors in non-clinical samples of Black adolescents experiencing psychological symptoms (Elkington, Bauermeister, & Zimmerman, 2010; Turner, Latkin, Sonenstein, & Tandon, 2011). While the aforementioned research is greatly needed, there remains a paucity of data on the sexual health needs of Black adolescents receiving mental health treatment. Findings from Black adolescents seeking treatment for clinically diagnosed mental illnesses consistently demonstrate that this group tends to have earlier sexual debut and comorbid substance abuse issues, and is less likely to use condoms (Brawner, Davis, Fannin, & Alexander, 2012b; Starr, Donenberg, & Emerson, 2012; Woods-Jaeger, Jaeger, Donenberg, & Wilson, 2013). Given increased rates of risk behaviors, we hypothesize that those in need of inpatient or outpatient mental health services have unique psychoeducational needs and thus require specialized assessment and intervention strategies. For example, our data (published elsewhere) indicate that an adolescents' psychological state may influence his/her decisions about sex and relationships, and that teaching skills for coping mechanisms and emotion regulation are key to mitigating contextual factors (e.g., dysregulated expressions of sadness and anger) that contribute to HIV/STI risk. Further investigations are needed to better understand the nuances of these occurrences.

Behavioral interventions have proven to be successful for the general adolescent population (Protogerou & Johnson, 2014; Santa Maria, Markham, Bluethmann, & Mullen, 2015), yet we do not know if these same benefits translate to adolescents with mental illnesses. We do know, however, that sexual health promotion programs are most effective when they are tailored to the unique context of target populations (Airhihenbuwa, Ford, & Iwelunmor, 2013). We posit that without tailoring intervention content to the psychological factors that may drive HIV/STI risk behaviors among Black adolescents with mental illnesses (e.g., impulsivity, internalized stigma), the interventions will not be as effective. Thus, less attention to sexual health needs among Black adolescents with mental illnesses has significant public health implications for this understudied group. For example, standardized methods do not exist to screen for sexual health concerns (e.g., risk for HIV/STIs) and develop individualized risk reduction plans during mental health treatment encounters (Wright, Akhtar, Tosh, & Clifton, 2012). Moreover, many mental health treatment programs are not equipped to handle the sexual health needs of their clients (McKinnon, Wainberg, & Cournos, 2001; Solomon et al., 2007). In fact, it has been noted that some mental health providers are uncomfortable discussing sexual health topics with consumers (Quinn,

Happell, & Browne, 2011). The continued lack of integration of mental and physical health services (including comprehensive sexual health assessment) further complicates matters and underscores missed opportunities to provide holistic care. The same holds true for the general population of adolescents with mental illnesses regardless of racial/ethnic background. However, with the growing HIV/STI epidemic among Black youth, we believe this underserved population warrants explicit focus.

In this comment, we highlight the importance of addressing unmet sexual health needs among Black adolescents with mental illnesses. First, we provide a brief snapshot of sexual health among Black adolescents, with reference to differences among those with mental illnesses. Second, we demonstrate that sexual risk behaviors can be viewed as psychopathologic behaviors wherein some Black adolescents with mental illnesses use sexual intercourse to mitigate psychological distress. Third, we present findings from current HIV/STI prevention programs delivered in mental health treatment settings. Lastly, we propose ways to better integrate HIV and mental health related services and activities for optimal HIV/STI prevention. It is important to note that we acknowledge that Blacks (e.g., individuals of African descent) are not a monolithic group. Shared experiences from their racial identification, however, may include steadfast resilience in the face of discrimination and significantly poorer health resources and outcomes (Jones, 2000). We believe that these unifying factors can be used as a resource to foster gender and cultural pride when working with this demographic.

SEXUAL HEALTH AMONG BLACK ADOLESCENTS

Cognitive changes that occur during adolescence include a shift from a thinking style that is childlike and concrete to an expanded ability to think conceptually, make connections, and understand consequences (American Academy of Pediatrics, 2002). During this time, adolescents begin to make important decisions about planning for the future, romantic relationships, and experimentation with drugs and alcohol. Sexual curiosity and experimentation are critical components of normal adolescent development (Santrock, 2006). Issues arise, however, when adolescents are confronted with unintended consequences of sexual activity, such as HIV/STIs. Low risk perception, high STI rates, substance abuse and lack of awareness are all documented HIV risk factors for youth (Centers for Disease Control and Prevention, 2013).

Many HIV-positive individuals acquire the virus during adolescence or young adulthood (Idele et al., 2014). In fact, in 2010, adolescents aged 13 to 24 accounted for 26% of HIV diagnoses (Centers for Disease Control and Prevention, 2012). When stratified by race/ ethnicity, Black adolescent males aged 13 to 24 were diagnosed with HIV at a rate more than three times that of Hispanic/Latino adolescent males and 11 times that of White adolescent males (144.9 vs. 41.4 and 13.1 per 100,000 respectively; Centers for Disease Control and Prevention, 2012). Additionally, Black adolescent females aged 13 to 24 were diagnosed with HIV at a rate more than six times that of Hispanic/Latino adolescent females aged 13 to 24 were diagnosed with HIV at a rate more than six times that of Hispanic/Latino adolescent females aged 13 to 24 were diagnosed with HIV at a rate more than six times that of Hispanic/Latino adolescent females aged 13 to 24 were diagnosed with HIV at a rate more than six times that of Hispanic/Latino adolescent females aged 13 to 24 were diagnosed with HIV at a rate more than six times that of Hispanic/Latino adolescent females and 20 times that of White adolescent females (38.4 vs. 6.4 and 1.9 per 100,000 respectively; Centers for Disease Control and Prevention, 2012). Although the seroprevalence of HIV among adolescents with mental illnesses remains unknown, HIV-

infection rates among adults with mental illnesses have been found to range from 1% to 23% (Carey, Weinhardt, & Carey, 1995; Cournos & McKinnon, 1997; Rosenberg et al., 2001; Scott & Happell, 2011)—which is higher than the general adult seroprevalence of 0.6% (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2004).

Similarly, STI rates follow a trend of inequity. Adolescents aged 15 to 24 accounted for 68% of all reported Chlamydia infections in 2013, with the highest rate among Black adolescents (Centers for Disease Control and Prevention, 2014b). Chlamydia was reported at a rate five times greater among Black adolescent females aged 15 to 19 when compared to White adolescent females (6,907.6 vs. 1,383.3 per 100,000) and 9.5 times higher among Black adolescent males aged 15 to 19 compared to White adolescent males (2,109.6 vs. 221.3 per 100,000; Centers for Disease Control and Prevention, 2014b). Gonorrhea, syphilis, and human papillomavirus (HPV) demonstrate similar disparities among Black adolescents (Centers for Disease Control and Prevention, 2010).

SEXUAL RISK BEHAVIORS AS PSYCHOPATHOLOGIC BEHAVIORS

To preserve the health and viability of future generations, it is imperative that we understand the contextual nuances of sexual risk behaviors among Black adolescents with mental illnesses. Initial studies of adolescents receiving mental health services indicate that they typically have low self-esteem, significantly greater cognitive deficits, negative attitudes about prevention and decreased perceived vulnerability to HIV/STIs (Brown, Danovsky, & Lourie, 1997). We posit that sexual risk behaviors are, at times, psychopathologic behaviors. Psychopathology is traditionally defined as the study of mental disorders (Oxford Dictionaries, 2016). Clinically, however, the term can also be used to indicate behaviors or experiences that signify that an individual has a mental illness. We see sexual behaviors as more than just coping strategies, but as psychopathologic behaviors that can be evidence of underlying psychiatric concerns-particularly in developmentally inappropriate sexual displays such as those seen among survivors of childhood sexual abuse (Jones et al., 2012). In other words, psychiatric symptoms such as guilt, emotional lability and anxiousness can cause individuals to engage in maladaptive behaviors that they might otherwise avoid in an effort to mitigate distress (Brawner, 2012). Calls have been made to conduct additional research in treatment-seeking populations to better understand psychopathologic symptoms and personality constructs (Krueger & Markon, 2006). Thus we maintain that the psychosocial sequelae of mental illnesses necessitate targeted HIV/STI risk reduction strategies that account for unique psychopathology in treatment-seeking populations (e.g., sexually active Black adolescents with mental illnesses receiving outpatient mental health treatment).

Psychological symptoms linked to sexual risk behaviors include depression, anxiety, and post-traumatic stress, and are often the result of exposure to violence or secondary to mood disorders, Attention-Deficit/Hyperactivity Disorder, or psychoses (Hall, Kusunoki, Gatny, & Barber, 2014; Miron & Orcutt, 2014; Sarver, McCart, Sheidow, & Letourneau, 2014; Voisin, Hotton, & Neilands, 2014). Among Black adolescents and young adults in particular, depressive symptoms are predictively associated with multiple sex partners (Khan et al., 2009), a well-documented contributor to HIV seroconversion (Boily, Alary, & Baggaley,

2012). Moreover, this demographic is also more likely to have a history of STIs than their counterparts who are not experiencing depressive symptoms (Khan et al., 2009; Lee, O'Riordan, & Lazebnik, 2009). It is important to note that the presence of an STI increases the risk of HIV acquisition two-fold (Fleming & Wasserheit, 1999). Comorbidities like alcohol and substance abuse also contribute to the psychopathology, and further increase the chance of HIV/STI risk-related sexual behaviors such as multiple lifetime partners, more frequent sexual intercourse, unprotected sex, and relationship violence (Carswell, Hanlon, Watts, & O'Grady, 2014; Mason, Campbell, Zaharakis, Foster, & Richards, 2014; Sarver et al., 2014).

Externalizing disorders (i.e., Conduct Disorder) affect an adolescent's ability to negotiate peer norms that encourage risk behaviors, while internalizing disorders (i.e., Major Depressive Disorder) affect self-efficacy and ability to negotiate safer sexual behaviors like condom use (Brown et al., 2014; Joppa et al., 2014; Sarver et al., 2014). Cognitive deficits, such as impulsivity, limited appraisal of risky situations, and poor judgment are also associated with increased risk of HIV and STI infection (Brown, Danovsky, et al., 1997; Crepaz & Marks, 2001; Donenberg et al., 2005). Emotional lability among adolescents with mental illness may supersede impulse control and motivation to avoid adverse behaviors, thus contributing to the use of HIV/STI risk-related sexual behaviors to self-soothe and alleviate distress (Brawner, 2012).

Black adolescents with mental illnesses are at even greater risk of HIV exposure because they engage in HIV/STI risk-related sexual behaviors at higher rates than other adolescents (Donenberg et al., 2005). For example, Brawner, Davis, Fannin and Alexander (2012a) demonstrated that while clinically depressed and non-depressed Black adolescent females held similar positive attitudes toward condoms, there were stark differences in condom use frequency. Loneliness, fear of abandonment and motivation to use sexual intercourse as a stress reliever may explain these differences (Brawner, 2012; Brawner, Gomes, et al., 2012), as well as the effects of racial and ethnic discrimination (Tobler et al., 2013) and internalized stigma (Elkington et al., 2013).

HIV/STI PREVENTION INTERVENTIONS FOR ADOLESCENTS WITH MENTAL ILLNESSES

The majority of successful HIV/STI prevention interventions are based on cognitive and behavioral determinants of sexual risk (Mavedzenge, Luecke, & Ross, 2014). These models may not adequately address the risk mechanisms of adolescents who have psychiatric, cognitive, behavioral, and/or emotional deficits. Further, empirical investigations on the generalizability of traditional HIV/STI prevention programs to adolescents with mental illnesses is virtually nonexistent. While research on adults cannot be generalized to adolescents without significant evidence, we can learn from the successes and shortcomings of the adult literature to inform interventions for adolescents. Behavioral interventions for adults with mental illnesses demonstrated increased condom use, decreased number of sexual partners, and increased HIV knowledge post behavioral interventions (Carey et al., 2004; Kalichman, Sikkema, Kelly, & Bulto, 1995; Senn & Carey, 2008; Weinhardt, Carey,

Carey, & Verdecias, 1998). Despite issues with smaller sample sizes and limited racial/ ethnic diversity, these studies demonstrate that targeted, psychoeducational interventions can be used to decrease sexual risk behaviors among persons with mental illnesses.

Even though increased rates of sexual risk behaviors are well documented among adolescents receiving mental health treatment, very few studies have specifically looked at delivering HIV/STI risk reduction interventions to this demographic. Only four published studies are available for HIV prevention programs designed for adolescents in inpatient and/or outpatient mental health treatment (Brown et al., 2014; Brown, Reynolds & Lourie, 1997; Ponton, DiClemente, & McKenna, 1991; Thurstone, Riggs, Klein, & Mikulich-Gilbertson, 2007). Collectively, the results of these studies indicated decreases in HIV transmission myths, increases in intentions for condom use, and improved self-efficacy. With the exception of Brown et al. (2014), the samples were predominantly composed of non-Black participants. Further, interventions that focus on gender and cultural pride have been successful for Black adolescents (DiClemente, Wingood, Rose, Sales, & Crosby, 2010), yet a comparable model does not exist in the published literature for those with mental illnesses. Thus it remains unknown what effect a theoretically driven, gender and culturally relevant, psychoeducational skills-building HIV/STI prevention intervention targeted to Black adolescents with mental illnesses would have on their sexual risk behaviors. We posit that while other intervention models have proven to be successful, the aforementioned targeted intervention would achieve the greatest effect.

Biomedical, behavioral and structural HIV prevention interventions have also proven to be successful for adolescents (Pettifor et al., 2013), but to our knowledge no published studies were specifically developed or adapted to address the sexual health needs of Black adolescents with mental illnesses. Internationally, bundling HIV/STI prevention with mental health treatment for adolescents has been considered (Edwards, Britton, Jenkins, Rickwood, & Gillham, 2014; Flisher & Dawes, 2009). Previous interventions have documented success; however, additional randomized controlled trials are needed to supplement this dearth of research to address HIV/STI risk reduction needs among Black adolescents with mental illnesses. Although adolescents with mental illnesses may benefit from HIV prevention strategies targeted to a broad range of adolescents, future interventions should also be tailored to address their affective needs (Hall et al., 2008). Thus, in addition to the aforementioned factors, it is important that interventions for Black adolescents with mental illnesses specifically address psychological concerns, including emotion regulation (Sales, Lang, Hardin, Diclemente, & Wingood, 2010). For example, emotions (e.g., fear, insecurity) play a significant role in shaping sexual behaviors that increase risk for HIV/STIs as emotions drive heuristics for one's balancing of perceived benefits versus risks of sexual practices, such as condom use (Gutnik, Hakimzada, Yoskowitz, & Patel, 2006). Additionally, the influence of social and structural drivers of the HIV/STI epidemic (e.g., social capital, concentrated disadvantage) on individual behavior must be acknowledged (Brawner, 2014). A comprehensive intervention that addresses the psychopathology of mental illnesses through a social determinants approach may best facilitate knowledge and skill acquisition to prevent HIV/STIs in a context that is relevant to the daily lives of Black adolescents with mental illnesses. The paucity of research on HIV/STI risk among

adolescents with mental illnesses—not just community dwelling adolescents experiencing psychological symptoms—makes it difficult to develop this area of science.

INTEGRATING HIV AND MENTAL HEALTH SERVICES FOR HIV PREVENTION

It is imperative that we develop a better understanding of factors that contribute toward HIV/STI risk-related sexual behaviors, such as psychiatric correlates of behavior. We propose several actionable mechanisms to better integrate HIV/STI and mental health related services and activities for sexual health promotion. First, sexual health professionals can lead the charge to develop clinical guidelines for the assessment of HIV risk-related sexual behaviors during *all* mental health treatment encounters (Brawner, Alexander, Fannin, Baker & Davis, 2015). Currently, a "gold standard" to assess and meet the sexual health needs of clients in mental health treatment does not exist. Given that such standards drive clinical education and practice (Hewitt & Cappiello, 2015), it is crucial to move forward in this direction. Standardized questions, with individualized probes, can then be used to conduct comprehensive sexual health histories. We will also have to advocate for information gathering during the initial intake, as well as at all subsequent follow-up assessments. This will likely require additional provider training to ensure that they are comfortable talking to youth about sexual health topics, and to provide a safe space to acknowledge and repudiate unconscious biases about adolescent sexuality (Boekeloo, 2014).

Second, both sexual health and mental health researchers should continue to conduct studies to generate data and identify unique, unmet HIV/STI risk reduction needs in the target demographic. These data can then be used to develop gender and culturally relevant, developmentally and psychologically appropriate HIV/STI risk reduction programs to engage Black adolescents who are in inpatient and/or outpatient mental health treatment. Theory-based HIV/STI prevention interventions that are psychologically tailored and developmentally appropriate are needed for adolescents to reduce sexual risk behaviors (Montanaro & Bryan, 2014). Through rigorous randomized controlled trials, investigators can design and disseminate manualized curricula for comprehensive HIV/STI risk assessment and prevention programs to be delivered in mental health treatment settings. While proven effective programs are available for the general adolescent population, challenges remain in identifying the best ways to help them access these services (Mavedzenge et al., 2014). A variety of inpatient and outpatient treatment settingsincluding residential treatment programs and day programs—can be targeted to engage youth currently receiving mental health treatment and address their unmet sexual health needs.

Third, in an ideal world, all agencies would be able to co-locate HIV prevention services with mental health treatment; however, we acknowledge the challenges posed by limited resources (Whiteford et al., 2014). Where co-location is not feasible, we suggest innovative pairings between mental health agencies and AIDS Service Organizations (ASOs), or comparable community-based sexual health providers, for service provision. Health educators and case managers from the community agencies could then maintain scheduled

hours in the mental health programs to offer free and confidential HIV testing, as well as behavioral risk reduction counseling. Based on agency capacity and client preferences, risk reduction education and counseling can be done in small groups or individual sessions. Mental health case managers are also capable of delivering HIV prevention messages, and their practice may become enhanced through the process (Tennille, Solomon, & Blank, 2010). Collaborative efforts between primary care and mental health providers are essential, in addition to family involvement, to prevent unintended sexual health outcomes (e.g., unwanted teen pregnancies) in this demographic (Brown et al., 2014; Brown et al., 2013). Advancements have been made with integrating HIV services into substance abuse programs (Murphy et al., 2014), and these models can serve as evidence-based practices for the mental health system.

CONCLUSION

As noted by the World Health Organization (2010), "Sexual health is fundamental to the physical and emotional health and well-being of individuals, couples and families, and to the social and economic development of communities and countries" (pg. 1). While all adolescents with mental illnesses deserve targeted attention and services (Patel, 2007), enduring sexual health disparities in Black America substantiate particular focus on Black adolescents with mental illnesses. Given disproportionate HIV disease burden among Black adolescents, alongside increased sexual risk behaviors among Black adolescents with mental illnesses, culturally relevant and situated interventions are essential. Partnerships with stakeholders in nontraditional settings embedded within the community (e.g., inpatient and outpatient mental health treatment programs) can enhance sexual health dialogue and prevention efforts with underserved groups. However we move forward, the time has come to inform mental health treatment settings. Given that adolescent health is imperative to public health, this topic is timely, innovative and bears great significance.

Acknowledgments

This work was supported by the Centers for Disease Control and Prevention (Minority AIDS Research Initiative) grant # U01PS003304 awarded to Dr. Bridgette M. Brawner, the Ruth L. Kirschstein NRSA Predoctoral Fellowship (5T32NR007100-13; PI: Sommers) awarded to Ms. Ehriel Fannin, and the Hillman Scholars Program in Nursing Innovation at Penn awarded to Mr. Guy Weissinger. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention, the National Institutes of Health or the Hillman Scholars Program.

References

- Airhihenbuwa CO, Ford CL, Iwelunmor JI. Why culture matters in health interventions: Lessons from HIV/AIDS Stigma and NCDs. Health Education & Behavior. 2013; 41(1):78–84. DOI: 10.1177/1090198113487199 [PubMed: 23685666]
- American Academy of Pediatrics. Bright futures. Chicago: American Academy of Pediatrics; 2002.
- Blank MB, Mandell DS, Aiken L, Hadley TR. Co-occurrence of HIV and serious mental illness among Medicaid recipients. Psychiatric Services. 2002; 53(7):868–873. doi: http://dx.doi.org/10.1176/ appi.ps.53.7.868. [PubMed: 12096171]
- Boekeloo BO. Will you ask? Will they tell you? Are you ready to hear and respond?: Barriers to physician-adolescent discussion about sexuality. JAMA Pediatrics. 2014; 168(2):111–113. [PubMed: 24378601]

- Boily MC, Alary M, Baggaley R. Neglected issues and hypotheses regarding the impact of sexual concurrency on HIV and sexually transmitted infections. AIDS and Behavior. 2012; 16(2):304–311. DOI: 10.1007/s10461-011-9887-0 [PubMed: 21279678]
- Brawner BM. Attitudes and beliefs regarding Depression, HIV/AIDS, and HIV risk-related sexual behaviors among clinically depressed African American adolescent females. Archives of Psychiatric Nursing. 2012; 26(6):464–476. DOI: 10.1016/j.apnu.2012.06.003 [PubMed: 23164403]
- Brawner BM. A multi-level understanding of HIV/AIDS disease burden among African American women. Journal of Obstetric, Gynecologic, & Neonatal Nursing. 2014; 43(5):633–643. DOI: 10.1111/1552-6909.12480
- Brawner BM, Alexander KA, Fannin EF, Baker JL, Davis ZM. The role of sexual health professionals in developing a shared concept of risky sexual behavior as it relates to HIV transmission. Public Health Nursing. 2015; epub ahead of print. doi: 10.1111/phn.12216
- Brawner BM, Davis ZM, Fannin EF, Alexander KA. Clinical depression and condom use attitudes and beliefs among African American adolescent females. Journal of the Association of Nurses in AIDS Care. 2012a; 23(3):184–194. [PubMed: 21737313]
- Brawner BM, Davis ZM, Fannin EF, Alexander KA. Clinical depression and condom use attitudes and beliefs among African American adolescent females. Journal of the Association of Nurses in AIDS Care. 2012b; 23(3):184–194. DOI: 10.1016/j.jana.2011.03.005 [PubMed: 21737313]
- Brawner BM, Gomes MM, Jemmott LS, Deatrick JA, Coleman CL. Clinical depression and HIV riskrelated sexual behaviors among African-American adolescent females: unmasking the numbers [Research Support, N.I.H., Extramural Research Support, U.S. Gov't, P.H.S.]. AIDS Care. 2012; 24(5):618–625. DOI: 10.1080/09540121.2011.630344 [PubMed: 22292603]
- Brown LK, Danovsky MB, Lourie KJ. Adolescents with psychiatric disorders and the risk of HIV. Journal of the American Academy of Child & Adolescent Psychiatry. 1997; 36(11):1609–1617. [PubMed: 9394948]
- Brown LK, Hadley W, Donenberg GR, DiClemente RJ, Lescano C, Lang DM, ... Oster D. Project STYLE: A multisite RCT for HIV prevention among youths in mental health treatment. Psychiatric Services. 2014; 65(3):338–344. DOI: 10.1176/appi.ps.201300095 [PubMed: 24382603]
- Brown LK, Hadley W, Stewart A, Lescano C, Whiteley L, Donenberg G, DiClemente R. Psychiatric disorders and sexual risk among adolescents in mental health treatment. Journal of Consulting and Clinical Psychology. 2010; 78(4):590–597. DOI: 10.1037/a0019632 [PubMed: 20658815]
- Brown LK, Reynolds LA, Lourie KJ. A pilot HIV prevention program for adolescents in a psychiatric hospital. Psychiatric Services. 1997; 48(4):531–533. [PubMed: 9090740]
- Carey MP, Carey KB, Maisto SA, Gordon CM, Schroder KEE, Vanable PA. Reducing HIV-risk behavior among adults receiving outpatient psychiatric treatment: Results from a randomized controlled trial. Journal of Consulting and Clinical Psychology. 2004; 72(2):252–268. [PubMed: 15065959]
- Carey MP, Weinhardt LS, Carey KB. Prevalence of infection with HIV among the seriously mentally ill: Review of research and implications for practice. Professional Psychology: Research and Practice. 1995; 26(3):262–268.
- Carswell SB, Hanlon TE, Watts AM, O'Grady KE. Correlates of risky sexual activity for urban African American youth in an alternative education program. Education and Urban Society. 2014; 46(6):631–652. DOI: 10.1177/0013124512468005
- Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance 2009. 2010. Retrieved March 3, 2014, from http://www.cdc.gov/std/stats09/surv2009-Complete.pdf
- Centers for Disease Control and Prevention. Estimated HIV Incidence in the United States, 2007–2010. 2012. Retrieved January 31, 2015, from http://www.cdc.gov/hiv/topics/surveillance/resources/reports/#supplemental
- Centers for Disease Control and Prevention. HIV among Youth. 2013. Retrieved January 31, 2015, from http://www.cdc.gov/hiv/risk/age/youth/index.html
- Centers for Disease Control and Prevention. HIV among African Americans. 2014a. Retrieved January 31, 2015, from http://www.cdc.gov/hiv/risk/racialethnic/aa/facts/

- Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance 2013. 2014b. Retrieved January 31, 2015, from http://www.cdc.gov/std/stats13/surv2013-print.pdf
- Cournos F, McKinnon K. HIV seroprevalence among people with severe mental illness in the United States: A critical review. Clinical Psychology Review. 1997; 17(3):259–269. [PubMed: 9160176]
- Crepaz N, Marks G. Are negative affective states associated with HIV sexual risk behaviors? A metaanalytic review. Health Psychology. 2001; 20(4):291–299. [PubMed: 11515741]
- DiClemente RJ, Wingood GM, Rose E, Sales JM, Crosby RA. Evaluation of an HIV/STD sexual risk-reduction intervention for pregnant African American adolescents attending a prenatal clinic in an urban public hospital: Preliminary evidence of efficacy. Journal of Pediatric and Adolescent Gynecology. 2010; 23(1):32–38. S1083-3188(09)00187-9 [pii]. DOI: 10.1016/j.jpag.2009.05.003 [PubMed: 19643646]
- Donenberg GR, Schwartz RM, Emerson E, Wilson HW, Bryant FB, Coleman G. Applying a cognitivebehavioral model of HIV risk to youths in psychiatric care. AIDS Education and Prevention. 2005; 17(3):216–220.
- Edwards C, Britton M, Jenkins L, Rickwood D, Gillham K. Including a client sexual health pathway in a national youth mental health early intervention service—project rationale and implementation strategy. Health Education Research. 2014; 29(2):354–359. DOI: 10.1093/her/cyt154 [PubMed: 24510406]
- Elkington KS, Bauermeister JA, Zimmerman MA. Psychological distress, substance use, and HIV/STI risk behaviors among youth. Journal of Youth and Adolescence. 2010; 39(5):514–527. DOI: 10.1007/s10964-010-9524-7 [PubMed: 20229264]
- Elkington KS, Hackler D, Walsh TA, Latack JA, McKinnon K, Borges C, ... Wainberg ML. Perceived mental illness stigma, intimate relationships, and sexual risk behavior in youth with mental illness. Journal of Adolescent Research. 2013; 28(3):378–404. DOI: 10.1177/0743558412467686 [PubMed: 25477706]
- Fleming DT, Wasserheit JN. From epidemiological synergy to public health policy and practice: The contribution of other sexually transmitted diseases to sexual transmission of HIV infection. Sexually Transmitted Infections. 1999; 75(1):3–17. [PubMed: 10448335]
- Flisher AJ, Dawes A. Synergistic opportunities: Mental health and HIV/AIDS. Journal of the American Academy of Child & Adolescent Psychiatry. 2009; 48(8):780–781. [PubMed: 19628993]
- Gutnik LA, Hakimzada AF, Yoskowitz NA, Patel VL. The role of emotion in decision-making: A cognitive neuroeconomic approach towards understanding sexual risk behavior. Journal of Biomedical Informatics. 2006; 39(6):720–736. DOI: 10.1016/j.jbi.2006.03.002 [PubMed: 16759915]
- Hall HI, Song R, Rhodes P, Prejean J, An Q, Lee LM, ... Janssen RS. Estimation of HIV incidence in the United States. JAMA: The Journal of the American Medical Association. 2008; 300(5):520–529. DOI: 10.1001/jama.300.5.520 [PubMed: 18677024]
- Hall KS, Kusunoki Y, Gatny H, Barber J. Stress symptoms and frequency of sexual intercourse among young women. The Journal of Sexual Medicine. 2014; 11(8):1982–1990. DOI: 10.1111/jsm.12607 [PubMed: 24894425]
- Hewitt C, Cappiello J. Essential competencies in nursing education for prevention and care related to unintended pregnancy. Journal of Obstetric, Gynecologic, & Neonatal Nursing. 2015; 44(1):69–76. DOI: 10.1111/1552-6909.12525
- Idele P, Gillespie A, Porth T, Suzuki C, Mahy M, Kasedde S, Luo C. Epidemiology of HIV and AIDS among adolescents: Current status, inequities, and data gaps. JAIDS. 2014; 66(Suppl 2):S144– S153. DOI: 10.1097/qai.000000000000176 [PubMed: 24918590]
- Joint United Nations Programme on HIV/AIDS (UNAIDS). 2004 Report on the Global AIDS epidemic. 2004. Retrieved October 5, 2005, from http://www.unaids.org/bangkok2004/ GAR2004_html/ExecSummary_en/ExecSumm_en.pdf
- Jones CP. Levels of racism: A theoretic framework and a gardener's tale. American Journal of Public Health. 2000; 90(8):1212–1215. [PubMed: 10936998]
- Jones DJ, Lewis T, Litrownik A, Thompson R, Proctor LJ, Isbell P, ... Runyan D. Linking childhood sexual abuse and early adolescent risk behavior: The intervening role of internalizing and

externalizing problems. [journal article]. Journal of Abnormal Child Psychology. 2012; 41(1):139–150. DOI: 10.1007/s10802-012-9656-1

- Joppa MC, Rizzo CJ, Brown LK, Hadley W, Dattadeen JA, Donenberg G. ... Group, P. S. S. Internalizing symptoms and safe sex intentions among adolescents in mental health treatment: Personal factors as mediators. Children and Youth Services Review. 2014; 46:177–185. [PubMed: 25284921]
- Kalichman SC, Sikkema KJ, Kelly JA, Bulto M. Use of a brief behavioral skills intervention to prevent HIV infection among chronic mentally ill adults. Psychiatric Services. 1995; 46(3):275–280. [PubMed: 7796217]
- Khan MR, Kaufman JS, Pence BW, Gaynes BN, Adimora AA, Weir SS, Miller WC. Depression, sexually transmitted infection, and sexual risk behavior among young adults in the United States. Archives of Pediatrics & Adolescent Medicine. 2009; 163(7):644–652. [PubMed: 19581548]
- Krueger RF, Markon KE. Understanding psychopathology: Melding behavior genetics, personality, and quantitative psychology to develop an empirically based model. Current Directions in Psychological Science. 2006; 15(3):113–117. [PubMed: 18392116]
- Lang DL, Rieckmann T, DiClemente RJ, Crosby RA, Brown LK, Donenberg GR. Multi-level factors associated with pregnancy among urban adolescent women seeking psychological services. Journal of Urban Health. 2013; 90(2):212–223. DOI: 10.1007/s11524-012-9768-5 [PubMed: 23054473]
- Lee S, O'Riordan M, Lazebnik R. Relationships among depressive symptoms, sexually transmitted infections, and pregnancy in African-American adolescent girls. Journal of Pediatric and Adolescent Gynecology. 2009; 22(1):19–23. DOI: 10.1016/j.jpag.2007.12.003 [PubMed: 19232298]
- Marengo E, Martino DJ, Igoa A, Fassi G, Scápola M, Urtueta Baamonde M, Strejilevich SA. Sexual risk behaviors among women with bipolar disorder. Psychiatry Research. 2015; 230(3):835–838. doi: http://dx.doi.org/10.1016/j.psychres.2015.10.021. [PubMed: 26564549]
- Mason MJ, Campbell L, Zaharakis N, Foster R, Richards S. Levels of teen dating violence and substance use in an urban emergency department. Journal of Developmental and Behavioral Pediatrics. 2014; 35(9):576–581. DOI: 10.1097/DBP.0000000000000095 [PubMed: 25170914]
- Mavedzenge SN, Luecke E, Ross DA. Effective approaches for programming to reduce adolescent vulnerability to HIV infection, HIV risk, and HIV-related morbidity and mortality: A systematic review of systematic reviews. JAIDS. 2014; 66(Suppl 2):S154–169. DOI: 10.1097/QAI. 000000000000178 [PubMed: 24918591]
- McKinnon K, Wainberg ML, Cournos F. HIV/AIDS preparedness in mental health care agencies with high and low substance use disorder caseloads. Journal of Substance Abuse. 2001; 13(1):127–135. DOI: 10.1016/S0899-3289(01)00074-8 [PubMed: 11547614]
- Meade CS, Sikkema KJ. HIV risk behavior among adults with severe mental illness: A systematic review. Clinical Psychology Review. 2005; 25(4):433–457. doi: http://dx.doi.org/10.1016/j.cpr. 2005.02.001. [PubMed: 15914265]
- Miron LR, Orcutt HK. Pathways from childhood abuse to prospective revictimization: Depression, sex to reduce negative affect, and forecasted sexual behavior. Child Abuse & Neglect. 2014; 38(11): 1848–1859. DOI: 10.1016/j.chiabu.2014.10.004 [PubMed: 25455965]
- Montanaro EA, Bryan AD. Comparing theory-based condom interventions: Health Belief Model versus Theory of Planned Behavior. Health Psychology. 2014; 33(10):1251–1260. DOI: 10.1037/ a0033969 [PubMed: 23977877]
- Murphy BS, Branson CE, Francis J, Vaughn GC, Greene A, Kingwood N, Adjei GA. Integrating adolescent substance abuse treatment with HIV services: Evidence-based models and baseline descriptions. Journal of Evidence-Based Social Work. 2014; 11(5):445–459. DOI: 10.1080/15433714.2012.760968 [PubMed: 25490999]
- Oxford Dictionaries. Psychopathology. 2016. Retrieved March 18, 2016, from http:// www.oxforddictionaries.com/definition/english/psychopathology
- Patel V, Flisher AJ, Hetrick S, McGorry P. Mental health of young people: A global challenge. The Lancet. 2007; 369:1302–1313.

- Pettifor A, Bekker LG, Hosek S, DiClemente R, Rosenberg M, Bull SS. ... HIV Prevention Trials Network (HPTN) Adolescent Scientific Committee. Preventing HIV among young people: Research priorities for the future. JAIDS. 2013; 63(Suppl 2):S155–160. DOI: 10.1097/QAI. 0b013e31829871fb [PubMed: 23764629]
- Ponton LE, DiClemente RJ, McKenna S. An AIDS education and prevention program for hospitalized adolescents. Journal of the American Academy of Child and Adolescent Psychiatry. 1991; 30(5): 729–734. [PubMed: 1938786]
- Protogerou C, Johnson BT. Factors underlying the success of behavioral HIV-prevention interventions for adolescents: A meta-review. [journal article]. AIDS and Behavior. 2014; 18(10):1847–1863. DOI: 10.1007/s10461-014-0807-y [PubMed: 24903669]
- Quinn C, Happell B, Browne G. Talking or avoiding? Mental health nurses' views about discussing sexual health with consumers. International Journal of Mental Health Nursing. 2011; 20(1):21–28. DOI: 10.1111/j.1447-0349.2010.00705.x [PubMed: 21199241]
- Rosenberg SD, Goodman LA, Osher FC, Swartz MS, Essock SM, Butterfield MI, ... Salyers MP. Prevalence of HIV, Hepatitis B, and Hepatitis C in people with severe mental illness. American Journal of Public Health. 2001; 91(1):31–37. [PubMed: 11189820]
- Sales JM, Lang DL, Hardin JW, Diclemente RJ, Wingood GM. Efficacy of an HIV prevention program among African American female adolescents reporting high depressive symptomatology. Journal of Women's Health. 2010; 19(2):219–227. DOI: 10.1089/jwh.2008.1326
- Santa Maria D, Markham C, Bluethmann S, Mullen PD. Parent-based adolescent sexual health interventions and effect on communication outcomes: A systematic review and meta-analyses. Perspectives on Sexual and Reproductive Health. 2015; 47(1):37–50. DOI: 10.1363/47e2415 [PubMed: 25639664]

Santrock, JW. LifeSpan Development. 11. New York, NY: McGraw-Hill; 2006.

- Sarver DE, McCart MR, Sheidow AJ, Letourneau EJ. ADHD and risky sexual behavior in adolescents: Conduct problems and substance use as mediators of risk. Journal of Child Psychology and Psychiatry. 2014; 55(12):1345–1353. DOI: 10.1111/jcpp.12249 [PubMed: 24813803]
- Scott D, Happell B. The high prevalence of poor physical health and unhealthy lifestyle behaviours in individuals with severe mental illness. Issues in Mental Health Nursing. 2011; 32(9):589–597. DOI: 10.3109/01612840.2011.569846 [PubMed: 21859410]
- Senn TE, Carey MP. HIV, STD, and sexual risk behavior reduction for individuals with a severe mental illness: Review of the intervention literature. Current Psychiatry Reviews. 2008; 4(2):87–100. [PubMed: 18584060]
- Solomon PL, Tennille JA, Lipsitt D, Plumb E, Metzger D, Blank MB. Rapid assessment of existing HIV prevention programming in a community mental health center. Journal of Prevention & Intervention in the Community. 2007; 33(1–2):137–151. DOI: 10.1300/J005v33n01_11 [PubMed: 17298936]
- Starr LR, Donenberg GR, Emerson E. Bidirectional linkages between psychological symptoms and sexual activities among African American adolescent girls in psychiatric care. Journal of Clinical Child & Adolescent Psychology. 2012; 41(6):811–821. DOI: 10.1080/15374416.2012.694607 [PubMed: 22742458]
- Tennille J, Solomon P, Blank M. Case managers discovering what recovery means through an HIV prevention intervention. Community Mental Health Journal. 2010; 46(5):486–493. DOI: 10.1007/s10597-010-9326-0 [PubMed: 20549558]
- Teplin LA, Elkington KS, McClelland GM, Abram KM, Mericle AA, Washburn JJ. Major mental disorders, substance use disorders, comorbidity, and HIV-AIDS risk behaviors in juvenile detainees. Psychiatry Online. 2005; 56(7):823–828. DOI: 10.1176/appi.ps.56.7.823

Thomas B. Asexual Patients. Nursing Times. 1988; 85(33):49–51.

- Thurstone C, Riggs PD, Klein C, Mikulich-Gilbertson SK. A one-session human immunodeficiency virus risk-reduction intervention in adolescents with psychiatric and substance use disorders. Journal of the American Academy of Child & Adolescent Psychiatry. 2007; 46(9):1179–1186. doi: http://dx.doi.org/10.1097/chi.0b013e31809fe774. [PubMed: 17712241]
- Tobler AL, Maldonado-Molina MM, Staras SA, O'Mara RJ, Livingston MD, Komro KA. Perceived racial/ethnic discrimination, problem behaviors, and mental health among minority urban youth.

Ethnicity & Health. 2013; 18(4):337–349. DOI: 10.1080/13557858.2012.730609 [PubMed: 23043428]

- Turner AK, Latkin C, Sonenstein F, Tandon SD. Psychiatric disorder symptoms, substance use, and sexual risk behavior among African-American out of school youth. Drug and alcohol dependence. 2011; 115(1–2):67–73. DOI: 10.1016/j.drugalcdep.2010.10.012 [PubMed: 21145182]
- Voisin DR, Hotton AL, Neilands TB. Testing pathways linking exposure to community violence and sexual behaviors among African American youth. Journal of Youth and Adolescence. 2014; 43(9): 1513–1526. DOI: 10.1007/s10964-013-0068-5 [PubMed: 24327295]
- Weinhardt LS, Carey MP, Carey KB, Verdecias RN. Increasing assertiveness skills to reduce HIV risk among women living with a severe and persistent mental illness. Journal of Consulting and Clinical Psychology. 1998; 66(4):680–684. [PubMed: 9735586]
- Whiteford H, McKeon G, Harris M, Diminic S, Siskind D, Scheurer R. System-level intersectoral linkages between the mental health and non-clinical support sectors: A qualitative systematic review. The Australian and New Zealand Journal of Psychiatry. 2014; 48(10):895–906. DOI: 10.1177/0004867414541683 [PubMed: 25002710]
- Woods-Jaeger BA, Jaeger JA, Donenberg GR, Wilson HW. The relationship between substance use and sexual health among African-American female adolescents with a history of seeking mental health services. Women's Health Issues. 2013; 23(6):e365–e371. DOI: 10.1016/j.whi.2013.08.004 [PubMed: 24183411]
- World Health Organization. Developing sexual health programmes: A framework for action. 2010. Retrieved January 29, 2015, from http://whqlibdoc.who.int/hq/2010/ WHO_RHR_HRP_10.22_eng.pdf
- Wright N, Akhtar A, Tosh GE, Clifton AV. HIV prevention advice for people with serious mental illness. The Cochrane Library. 2012; 12(CD009639):1–22. DOI: 10.1002/14651858.CD009639.pub2 [PubMed: 23833567]

Biographies

Bridgette Brawner is an Assistant Professor at the University of Pennsylvania School of Nursing. Her research aims to promote sexual health in disenfranchised communities. Her current HIV prevention work takes a novel, multi-level approach to better understand risk contexts and intervene across individual, social and structural levels.

Ehriel Fannin is a PhD student at the University of Pennsylvania School of Nursing with a research focus on reducing unintended pregnancy. Her current research integrates behavioral and sexual economics theories to explain how tangible and intangible resources, such as emotional security, affect sexual decision-making and subsequent health outcomes.

Janaiya Reason is a Research Coordinator and MPH student at the University of Pennsylvania. Her research aim is to develop and test HIV prevention interventions for vulnerable populations, including youth infected with and at risk for HIV. She has extensive experience in community engaged research with marginalized youth.

Guy Weissinger is a PhD student at the University of Pennsylvania School of Nursing. His research interest is in the mechanisms of healthcare inequality for individuals with mental illness, especially those with chronic health conditions. He seeks to understand the sources of inequality at the patient, provider and systems levels.