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## Exploring Black College Females' Perceptions Regarding HIV Prevention Message Content

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### Abstract

Media messages can facilitate delivery of accurate HIV/STI-related information. This study's **purpose** was to examine pre-existing media campaigns from the *iMPPACS* study to assess age, gender, and culturally appropriate components identified by African American females who attend HBCUs. In three separate focus group sessions, 31 Black female college students (*Age*=20) viewed four vignettes and heard three audio-only clips, then ranked and commented on them based on perceived satisfaction of HIV prevention content and appropriateness of delivery. Conventional qualitative analysis, using NVivo software, was employed until saturation of content was achieved and themes derived. Six major themes emerged and were designated as: 1) Social media; 2) Mirror Image; 3) Visually dynamic Advertisements; 4) The Real World; 5) People, Place, Things; and 6) HIV Knowledge. Visually-stimulating content (i.e. graphics) was found to be most appealing in marketing HIV prevention, with brief monologue/dialogue from scenarios that resemble daily life. Socially and culturally relevant HIV prevention messages are important to Black college female students. Participants recommended creating short audio-visual messages that encompass familiar contexts like dorm rooms and appealing graphics for HIV health promotion messages, such as emojis. Future audio-only prevention advertisements for this population should employ recognizable voices (e.g. celebrity). Finally, messaging should be promoted on open and close circuited social media platforms.

### Keywords

HIV prevention; preferred content; Black college females; media messages

### Introduction

African American women are disproportionately affected by Human Immunodeficiency Virus (HIV), accounting for the majority of new HIV infections among women (Centers for Disease Control and Prevention (CDC), 2015, 2014a, November, 2014b, July, 2014c, March; Painter, Herbst, Diallo, & White, 2014, April 18). According to recent CDC reports, African American women comprised the fourth largest demographic of new HIV infections among all race/ethnicity, gender, and transmission categories—specifically among women, 64% of

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new infections occurred in heterosexual Black females (CDC, 2015, 2014a, November; The Henry J. Kaiser Family Foundation [Kaiser], 2014, April). At some point in their lifetimes, an estimated 1 in 32 African American women will be diagnosed with HIV infection (CDC, 2014b, March; Hodder et al., 2010; Kaiser, 2014, April).

### **Sexually Transmitted Infection (STI)/HIV Risk in College Students**

Adefuye and colleagues (2009) note that the college environment may be an epicenter for the HIV/AIDS epidemic (Adefuye, Abiona, Balogun, & Lukobo-Durrell, 2009). Although the CDC does not provide specific epidemiologic data on college students, it is estimated that 1-in-500 college students in the US is infected with HIV (Adefuye, Abiona, Balogun, & Lukobo-Durrell, 2009). We infer that the HIV risk in the general African American female population is mirrored in the sub-population of African American female college students (Brown et al., 2012; Hou, 2009; Mongkuo et al., 2012).

### **STI/HIV Risk: Historically Black Colleges/Universities (HBCUs)**

Approximately 81% of students who attend HBCUs are African American [National Center for Education Statistics, (NCES)] (n.d.). African American women are likely to be infected while attending college (Ferguson et al., 2006; Thomas et al., 2008). Risk factors that promote HIV acquisition among African American college females on HBCU campuses range from little or no condom use (Adefuye, Abiona, Balogun, & Lukobo-Durrell, 2009; Hou, 2009) to gender-ratio imbalance (larger proportion of women enrolled in HBCUs than males) (Ferguson, Quinn, Eng, & Sandelowski, 2006; Sutton, 2011) and concurrent partnerships (Sutton, 2011). African American students are more likely than those from traditional white institutions (TWI) to have had vaginal sex at a younger age (16.3 vs. 17.5 years,  $p < .001$ ), to have had an STI, or to have been or gotten someone pregnant (Hou, 2009); targeted interventions specific to African American college students are indicated.

### **iMPPACS Study Design**

*Social cognitive theory (SCT) of mass communication* and in-depth knowledge of African American adolescent socio-ecology are included in the iMPPACS study theoretical framework (Romer et al., 2009). Mass media interventions for adolescents in the United States, and elsewhere, have proven efficacious in promoting safer sexual behavior (Horner et al., 2008; Romer et al., 2009; Sznitman et al., 2011). Sznitman and colleagues (2011) implemented a mass media campaign (*iMPPACS*) [*iMPPACS* is the acronym developed for the project as a multi-city program “in Macon, Providence, Philadelphia, Atlanta, Columbia, and Syracuse”] that addressed the effects of culturally sensitive and developmentally appropriate long-term media delivery for socio-behavioral modification of HIV perception in high risk African American adolescents (Sznitman et al., 2011). The intervention used vignettes, after conducting extensive formative research, to dramatize adolescents resolving issues concerning sexual encounters and risk-taking behavior. African American adolescents, aged 14–17 years ( $N = 1,710$ ), were recruited. The media intervention reached virtually all the adolescents in the trial and produced a range of effects including improved normative condom-use negotiation expectancies and increased sex refusal self-efficacy (Sznitman et al., 2011). Project *iMPPACS* serves as one of the major HIV-prevention media campaigns directed to black youth in the US, and demonstrates the influence of HIV

prevention media messages on sexual behavior. However *iMPPACS* did not address high risk African American college-aged women (18–24 years) who attend HBCUs; these approaches have not been well-integrated into such campus health promotion efforts. We, therefore, sought to inform development of age-appropriate and gender-specific HIV prevention advertisements by evaluating the established *iMPPACS* vignettes for relevance in the Black college female population.

**Purpose**—Media specific HIV/STI prevention interventions for African American women who attend HBCUs are timely given the social media climate and their preference for accessing health information via the internet/technological sources (Chandler et al., 2013; Payton, Kvasny, & Kiwanuka-Tondo, 2014). This study’s purpose was to examine (using formative research–focus groups) the pre-existing media campaigns from the *iMPPACS* study to assess age, gender, and culturally appropriate components identified by African American females who attend HBCUs. We were cognizant of the theoretical framework employed by the *iMPPACS* study; however, our consideration of theory, in keeping with the premise of qualitative research design, was both exploratory and result-dependent.

## Methods

This study received institutional review board approval prior to implementation. Three 90 minute focus group sessions were conducted ( $n_1=11$ ;  $n_2=11$ ;  $n_3=9$ ) with a convenience sample of 31 African American college females aged 18–24 ( $M=20$ ) who were enrolled at a Southeastern Historically Black University in the United States.

## Study Design

**Inclusion criteria**—All participants had to self-report race as Black (includes Black/African American and Black/Hispanic), had no auditory or visual impairment, and had to speak and understand English. Additional inclusion criteria included: Age (18–24 years), current sexual activity (sexually active with a male partner), and listen to the radio and/or watch TV/audio visual media at least 1 hour daily.

**Recruitment & Enrollment**—Recruitment relied on study advertisements that were posted and distributed on the University campus (e.g., dorm distribution) and advertisements in campus media (e.g., newspapers). Females who expressed interest (via e-mail or phone) were contacted by phone and screened to determine if they met the inclusion criteria. Participants determined to be eligible were scheduled for each pre-scheduled focus group session. Weekly telephone and email reminders were sent to each participant and their plan to attend was confirmed one day prior to the focus group session. Upon arrival to the focus group sessions participants were asked to read and, after questions were answered, sign a consent form explaining the study, potential risks/benefits, confidentiality, and the option to withdraw from the study at any time. The focus group was scheduled and held in a conference room on campus. Participants were given \$30 each for participating in the focus group.

## Data Collection

The primary investigator (PI) facilitated each audio-recorded focus group session; a co-moderator was also present to observe and record ideas and nonverbal communication. The female PI and male co-moderator were both Black/African American and trained in how to facilitate focus group sessions. The moderator followed a semi-structured interview guide based on the research purpose. Open-ended questioning was used to generate in-depth discussion; examples include: a) “When I say ‘safe sex’ what comes to mind?” b) “What is hard about practicing safe sex?” and c) “What are important backdrops for message delivery (e.g. College campus, fraternity/sorority party scenarios, etc.)?”

The planned discussions were designed to obtain information regarding Black college females’ views of the *iMPPACS* vignettes [4 TV vignettes and 3 radio messages] and whether the HIV campaign prevention content was relevant to Black college female students. Considering that the *iMPPACS* study targeted a younger audience, we selected vignettes that were subjectively deemed most appropriate for emerging adults. Table 1 summarizes each audio and/or video presentation (i.e., TV/Radio vignette and corresponding HIV prevention/risk reduction content).

All TV vignettes were shown consecutively, without interruption. At the conclusion of the final TV vignette, participants were asked to assign a unique rank (from 1 – 4) to all four messages (based on content relevance and degree of interest/engagement) where 1 = most relevant, and 4 = least relevant message. Each participant was given the opportunity to verbally explain and document in writing their rank choices. Following the discussion related to the videos, the three radio prevention messages were played in succession, without interruption. As before, participants were asked to assign a unique rank (from 1 – 3) of the audio-only clips (based on content relevance and degree of interest/engagement) where 1= most relevant, and 3= least relevant message.

Questions that were asked after the TV (audio-visual) vignettes include: “*In this video clip what information was most memorable?*”, “*What information from this video clip should be in a media message targeted for women like you?*”, “*What information from this video clip does not apply to women like you and should be removed?*”, and “*How might this clip be made more appropriate/effective for women like you?*”

Similarly, questions posed regarding the Radio (audio-only) vignettes were: “*In this radio message what information was most memorable?*”, “*What information from this radio message should be in a media message targeted for women like you?*”, and “*What information from this radio does not apply to women like you and should be removed?*”

We also queried if any additional adverse/unintentional sexual outcomes should be included within sexual health campaigns targeting this population (i.e. emphasis on other sexually transmitted infections (STIs); pregnancy). Also, participants were asked to indicate the preferred method of message delivery (e.g., radio (audio only), TV (audio-visual), Internet (portable: audio-visual/social media) for a campus-based HIV prevention media campaign intervention.

Content that was presented to focus group participants is exemplified in this excerpt from the iMPPACS study (Radio message: *Best Friends*): **Female:** *Hey Dave I need your advice;* **Male:** *Sure. What's up?* **Female:** *You know Daniel's cousin;* **Male:** *Oh yeah, I remember that Dude;* **Female:** *Anyway, things have gotten serious between us, and last night he told me that he wanted us to stop using condoms. I want to keep using condoms but I know he's going to think I don't trust him or I'm having sex with somebody else. He just likes it raw because it feels better;* **Male:** *Look! From where I stand, a condom feels better than HIV, STDs, or a screaming baby"* (Sznitman et al., 2011).

Immediately after the focus group, the PI and research staff debriefed. This debriefing included a discussion of group characteristics, group interactions, what went well, what could be improved for the next group, and possible patterns. Verbatim transcription was conducted on all audio-recorded focus group sessions by a professional transcriptionist.

### Data Coding and Analysis

Two research team members, using conventional content analysis (Hsieh & Shannon, 2005), independently identified emergent codes from focus group transcripts as a preliminary way to sort and organize the data into categories and then themes; NVivo served as the data management tool. Research team members met several times to resolve coding and categorical discrepancies derived from the focus group transcripts. This approach, followed by finalization of the codebook, provided consistency in thematic development and increased the likelihood of inter-rater reliability. Corresponding major themes, sub-themes, and supportive quotes are presented in Table 2.

Visual Anthropac Freelist 1.0 software (<http://anthropac.software.informer.com>) was also employed to deduce the psychological salience of preferred media among respondents (See Table 2). To generate salience scores, Anthropac utilized a formula that factored the frequency with which a preferred media was listed, the order in which the media were listed, and the number of media in each list. The formula for salience,  $S$ , is thus:  $S = (\sum [L - R_j + 1]) / L/N$ , where  $L$  is the length of each list,  $R_j$  is the rank of item  $J$  in the list, and  $N$  is the number of lists in the sample (Smith, 1998; Auriemma et al., 2015). Media that were most preferred, and listed early in rank order, had the highest salience scores (confirmation of participant agreement in media choices). Incomplete or improperly-ranked participant data were omitted and counted as attrition. General perspectives for each prevention message (Table 2) were also summarized using a select number of participant comments.

### Results

Modern culture of vast information and dynamic technology is congruent with the intimate and frequent use of social media-based platforms by Black college females; for our participants, it was considered, by far, the most optimal and practical outlet for dissemination of HIV prevention content. Visually-stimulating content (e.g., graphics, audio/visual commercials or public service announcements) was found to be most appealing in marketing HIV prevention. However, audio (i.e. audio-visual and audio-only) content served to supplement learning when combined with monologue or dialogue from scenarios and settings that resemble daily life. Discussion of safer sex suggested that participants

acknowledged the usefulness of prevention efforts (e.g., condom use), yet had concerns about initiating such conversations with sexual partners. Relevant quotes were selected based on how well they reflected specific codes, thematic categories, and/or the level of participant agreement for a particular comment during focus group sessions.

### Reactions to *IMPPACS* Video & Audio-only Content

Aggregated data were represented by 24 video and 21 audio-only evaluations. True rank (calculated rank), and salience (as listed, respectively), for *Spot 3 - Relationship* (1 (1.96), 0.760) suggest that the majority of participants considered this message to be most appropriate for their population. Participants generally agreed that *Spot 3 - Relationship* was most appropriate because it involved male and female interviewees, reflected unscripted and realistic expression of opinions, and portrayed practical depictions of partner communication about sex. Video message appropriateness was less for *He's Experienced* (2 (2.25), 0.688), *Class of 2008* (3 (2.63), 0.594), and least for *Check Yourself* (4 (3.17), 0.458), because they were not as contextually relevant to what our participants experienced as college students. References to self-efficacy in seeking HIV information, and assessing HIV risk (e.g., “pull-out” method) or risk of unintended pregnancy, were often positively mentioned in review of comments for the less appropriate media, *He's Experienced*. As depicted in *Class of 2008*, a number of participants could recount similar occurrences of sexual compromise that promote HIV risk behaviors for relationships that involve partners who were revered as “popular” due to their involvement in athletics or other esteemed affiliations. Dated language and terminology was found to be the most common rationale in negative perception of the *Check Yourself* video message.

*Best Friends* (1 (1.48), 0.841) was identified as the most appropriate audio message, followed by *I've Got Mine* (2 (1.95), 0.683); participants identified with the *Girls Who Respect Themselves* audio message the least (3 (2.57), 0.476). Pragmatic dialogue and HIV risk communication among sexual partners (as well as peers) were well-received characteristics of *Best Friends*. *I've Got Mine* included content such as background sex sounds (e.g., moaning, kissing) that participants found to be distasteful. However, they did appreciate that the male character initiated condom use and promoted self-efficacy for assessing HIV risk to the female character. As with *Check Yourself* (least appropriate video message), the audio message *Girls Who Respect Themselves* was least representative of Black college female perspectives due to the outdated nature of its dialogue (e.g., the term “Jimmy hat” was used instead of condoms).

### Black College Female Millennials

**Preferred HIV prevention message platforms**—Social media outlets such as Facebook, Instagram, and Twitter as the most effective way to deliver STI/HIV prevention messages - preferably, via pictures or videos - emerged as a frequent and congruent theme in all discussion groups.

One female stated, “*I never wake up and check the news, but if I see it on Twitter or on my Instagram then I'll take the time to look it up...*”

Also, respondents expressed that messages should be displayed frequently, be precise, and be presented by other young Black women. Such videos, when presented by a person from the same age group and racial background, promote reception of the message. We share two respondent's perspectives,

*“I only see [HIV] prevention commercials or ads once in a blue moon ... So, it needs to be a lot more visible.”*

*“I feel like it might be better if you have a lot of short commercials with a Black woman – not necessarily a healthcare professional, but a down to earth person that's around the same age group. Because I feel like that's who we listen to.”*

The key phrases here are: *commercials with a Black woman* and *around the same age*. These phrases echoed the sentiments of many of the respondents about HIV commercials focusing on Black college women.

**Strategies for delivery of HIV prevention messages**—Black college women indicated that the type of information and modality for information delivery needed to protect themselves from acquiring STIs, HIV or becoming pregnant was primarily to receive ‘real’ information that reflects the magnitude of the problem with statistical facts specific to their environment or real life stories in the form of visual messages and relatable images. Many of the study respondents reported that most information presented on television about STIs and HIV is usually misrepresented. For instance, HIV positive individuals are often portrayed as skinny, debilitated, isolated, depressed, and generally unhealthy. These portrayals give the wrong impression of many who are HIV positive. In their opinion, these misconceptions may lead emerging adults to have a false sense of security about having unprotected sex with “healthy looking” people even though those individuals may be HIV positive. Two women stated,

*“Pictures will work. To a certain extent it will instill fear, but having a person who already experienced [living with HIV] tell you about it, I think that's the real kick”.*

*“Show different faces [of real people who are living with HIV]. People who you can relate to, like young people, old people, professional people, dirty people, clean people.”*

Other participants stressed the need for sex education to be integrated into an educational platform that is delivered on campus or through the University, in addition to churches. They were of the opinion that many Black female students enter college with little to no knowledge about sex and how to practice safe sex. They only know what they see on television or what they hear from their friends, with no in-depth idea of what is expected of them or what to expect from their male counterparts. These respondents suggested that sex education should be included in the curriculum of first year students, whether as part of an orientation or a curricular course. Information on STIs and HIV symptoms, how to protect against unplanned pregnancies, as well as spreading awareness on the consequences of drug/alcohol use, which is common among their peers, are examples of suggested content to be offered in the proposed course(s). We share the thoughts of a few participants below:

“*[Provide] Education on the disease and then [teach] how to deal with current situations...*”

“*Alcohol and drug abuse can affect your behavior, which includes sexual behavior.*”

**Content to consider for HIV prevention messages**—Aside from knowledge and information modalities, respondents discussed the meaning of safe sex. While some agreed on the use of condoms as the means to practicing safe sex, others emphasized the importance of honesty/disclosure when communicating with partners, committing to one sex partner, and being responsible by getting tested regularly for STIs and HIV. Participants also shared their ideals on barriers to safe sex, which ranged from exposure to unscrupulous peer or partner pressure and exposure to sexually explicit media, which, in their opinion, airs an overwhelming amount of sexually charged content. These identified sources of persuasion made it difficult for these emerging adults to practice STI/HIV preventive behavior. As one group participant mentioned:

“*It’s hard especially in our age group [or younger] to practice safe sex because the relationships are so short for us....then people always feel pressured or obligated to [engage in sex].*”

## Discussion

Mass media-based platforms (e.g. social media, health websites) can be effective tools for delivery of prevention messages and accurate information related to HIV/STIs. Until recently, no attempt had been made to inform HIV-prevention media campaigns directed specifically to the high-risk African American college female community. We assessed Black female HBCU students’ perspectives regarding effective campus-based components of pre-existing, adolescent-focused HIV prevention media messages (*iMPPACS*).

Focus group discussion of *iMPPACS* audio-visual and audio-only vignettes by Black college women revealed that they preferred HIV prevention messages that were relatable, candid, and brief. Themes and their respective operational definition include: a. *Social Media*-use of current technology (e.g., Facebook, Twitter) for HIV prevention message delivery; b. *Mirror Image*-advertisements that are reflective of target population age and culture; c. *Visually-Dynamic Advertisements*-attractive graphical representation of HIV effects on health and lifestyle; d. *Real World*-accurate representation of HBCU student experiences; e. *People, Place, and Things*-influences from peer exchanges, mind altering substances, or high risk environments that influence HIV risk behavior; and f. *HIV knowledge*-receipt of factual content about HIV transmission in Black women.

Consistent with previous research, and complimentary to the amount of social media usage by Black youth, the suggested mode of delivery for HIV prevention content was *Social Media* outlets (Chandler et al., 2015; Payton et al., 2014, Pew Research Center, 2014). Participants recommended creating short audio-visual messages with an emphasis on scenarios that market relatable or familiar contexts/settings (e.g., dorm room), appealing graphics for HIV health promotion messages (e.g., emojis), and realistic visual



representation of overall HIV health and wellness (e.g., people living with HIV look like me). Associated catchphrases that can be featured on social media platforms such as Instagram, Facebook or Twitter are also ideal. Musical accompaniment and jingles further facilitate message recognition and recall. Additionally, audio-only messages that feature celebrity-voiced monologues or dialogues are appealing to Black college females. Because mass media airtime is expensive, utilizing YouTube or other social media platforms as a means to increase viewership and frequency of HIV prevention commercial content can be a practical, low cost option. In addition, taking advantage of campus media, such as University web pages/social media pages, could facilitate targeted marketing for the HIV prevention messages.

Participants expressed preferences for specific content to be included within prevention messages. In reference to the major themes *Mirror Image* and *Visually-Dynamic Advertisements*, it is important that Black female college students are able to identify with the presenter of HIV prevention messages; their attention must first be captured before information processing can occur. Being able to relate to the presenter of the STI/HIV prevention messages, both culturally and demographically, has vital relevance for Black female college students. Previous research confirms that learning is facilitated by having educators with whom students can identify (El-Bassel, Caldeira, Ruglass, & Gilbert, 2009; Nelson, & Morrison-Beedy, 2008). Consistent with major theme *People, Place, and Things*, Black female college students expressed that, in addition to a relatable educator, realistic settings and circumstances such as parties, alcohol/drug use, and peer influence should be inspirations for commercial development.

Similar to results noted by Payton, Kvasny, and Kiwanuka-Tondo (2014), the Black college women wanted information to be candid and precise, and felt that freshmen could benefit from these efforts the most. To heighten *HIV Knowledge*, Participants recommended a ‘freshman loading dose of HIV information’ that would include not only exposure to all the HIV prevention media, but a freshman orientation on sex and sexuality that would coincide with the general orientation offered by the university.

The *iMPPACS* authors investigated the deep-rooted, influential values and beliefs of African American adolescents toward sexual health risk management in relation to variability in this population’s sexual risk behavior. The result was an approach to prevention message development that, comparable to entertainment education, incorporates relevant language, identifiable media characters, and dramatized scenarios that serve to elicit engagement in sexual health discussions among those at particularly high risk (Romer et al., 2009; Sznitman et al., 2011). Similarly, our study results indicate that Black college females’ HIV prevention message preferences include scenarios that represent the college experience and express unscripted conversations in plain language. Use of age- and culturally-appropriate terminology/vernacular was a *Real World* sub-theme in the least ranked video and audio messages. One participant stated: “Needs new language/words”. This suggests agreement between our study and the *iMPPACS* study (Sznitman et al., 2011) in use of phrases and terms that are culturally-/age-appropriate and current. Participants were overwhelmingly displeased with, and singled out the phrase “Jimmy hat” in reference to condoms. A

participant commented: “Jimmy hat? It is outdated. Just say condoms”. They felt it was juvenile and impeded on uptake of message importance.

### **iMPPACS and Beyond - HIV Prevention Message Model**

After men who have sex with men (MSM), heterosexual black women carry the largest burden of all new Human Immunodeficiency Virus (HIV) infections in the United States (CDC, 2014a). Although *iMPPACS* targeted males and females, one objective of this study was to determine what components of existing HIV prevention messages are identified as significant or irrelevant for Black college women. We are seeking to provide customized population-endorsed directives for addressing HIV-specific health promotion in this high risk group.

In comparison to the *iMPPACS* target population, tailored (i.e. age, gender, and culturally appropriate) messages specific to Black college females enhance relatability and HIV prevention efficacy (Chandler et al., 2013). Participant responses also suggest that design of future interventions should expand beyond those theoretical concepts that support the *iMPPACS* study. In design of prevention messages, *iMPPACS* considered multi-level cultural sensitivity and *SCT* as frameworks for effective health communication with African American youths (Romer et al., 2009; Sznitman et al., 2011). However, a number of participant responses from this study cannot be readily explained by *SCT* or socio-ecological model concepts. Study evaluation suggests that the use of social support (Behar, 1986; Cobb, 1976; Cohen & Wills, 1985) and recognition of gender-power roles (Connell, 1987) in theoretical framework design may be useful when creating novel and representative HIV prevention media advertisements that target Black females in HBCUs.

*Social Support Theory (SST)* (Cobb, 1976) in prevention advertisement may provide personal motivation, empowerment, and opportunities to engage with others that can relate to target population difficulties (or, in the case of male perspective, respect and honor those difficulties). *SST* was implied in the video ranked top (*Spot 3-Relationship*) with themes of discussing condom use when “*getting serious in a relationship*”, and the male friend giving advice to the female that “*sex ain’t better than love*”. Additionally, social support was evident in the top ranked audio media (*Best Friends*), where the male friend said “a condom feels better than HIV, STDs, or a screaming baby”. One participant summarized the preventative effect of social support in the following statement: “*Good to have a nice friend like that, the male best friend is giving great advice (to the female friend) - safe sex is the best sex*”.

The gender-power dynamic, as described in Connell’s (1987) *Theory of Gender and Power (TGP)*, plays an integral part in Black adolescent female sexual decision-making (Wingood et al., 2006); at the college level, these decisions may be mediated by HIV prevention communication interventions that highlight and reinforce benefits of social support (e.g., empowerment and motivation), as well as education. In discussing difficulties in navigating sexual communication, one participant commented: “*The strange thing with females, they don’t ask their partner to get tested. They don’t make sure [that testing occurred], they just [engage in sexual intercourse without protest or discussion of HIV status].*” Another group member mentioned: “*There’s girls that don’t want to [encourage partner testing]. They just*

*let the guy lead the [sexual] situation - if he doesn't pull out a condom, then [one is not likely to be used]."*

## Study Limitations

The *iMPPACS* messages were not specific to female African American college students; they were originally developed for 14–18 year old African American teens in urban community settings. In addition, the content was seven years old at the time of the current study's implementation phase. Based on previous work (Chandler, Anstey, Ross, & Morrison-Beedy, 2016), study messages were subjectively selected from the pool of existing *iMPPACS* HIV prevention content. Although the target populations are not the same, what we are describing is a transitional population that is likely to embrace some of the same characteristics of the *iMPPACS* population for which there is empirical evidence (i.e. media and/or HIV prevention message preferences). Nevertheless, the *iMPPACS* study was an appropriate model for our study because it was created for HIV prevention purposes suitable for African American audiences. It was also a cost-effective and practical use of video and audio clips.

## Conclusion

Effective HIV prevention program for Black college females requires continued engagement on topics such as condom navigation, sexual communication between peers and/or partners, and access to HIV information. Our study showed that social and culturally appealing HIV prevention messages will enhance reception of HIV prevention media content important to Black college female students. Preferred language, such as direct mention of condoms, rather than colloquialisms should be used in this population. Additional considerations for current linguistic adaptations (e.g., "mobile texts are the new shorthand"; euphemisms/slangs) help to ensure cultural appropriateness. Media messages that are less than one minute in duration and delivered on social media platforms are preferred by this population. In addition, media messages created with recognizable backgrounds and objective representation of life with HIV are important considerations for effective reach to Black female college students. We also recommend unscripted, natural, and matter-of-fact HIV prevention messages that are delivered in multiple relational scenarios and natural environmental settings.

Taken together, we have provided very specific needs expressed by this population for relevant HIV prevention media efforts. Future media efforts should seek to include content that is contextually college-specific and speaks to this subculture of young Black women who exist in the University microenvironment. Findings from this study will inform future HIV prevention media/education initiatives targeting Black HBCU female students with the aim to reduce the national rates of HIV related morbidity and mortality, as well as the disease burden on Black populations.

## References

- Adefuye AS, Abiona TC, Balogun JA, Lukobo-Durrell M. HIV sexual risk behaviors and perception of risk among college students: implications for planning interventions. [Research Support, Non-U.S. Gov't]. *BMC Public Health*. 2009; 9:281.doi: 10.1186/1471-2458-9-281 [PubMed: 19653901]
- Auriemma CL, Lyon SM, Strelec LE, Kent S, Barg FK, Halpern SD. Defining the Medical Intensive Care Unit in the Words of Patients and Their Family Members: A Free Listing Analysis. *American Journal of Critical Care*. 2015; 24(4):e47–e55. [PubMed: 26134339]
- Behar, J. Social support: Theory, research and applications. In: Sarason, IG., Sarason, BR., editors. *Social Science & Medicine*. Vol. 22. Elsevier Ltd; 1986. p. 1369-1370.
- Centers for Disease Control and Prevention. HIV among women. 2015. Retrieved from <http://www.cdc.gov/hiv/group/gender/women/index.html>
- Centers for Disease Control and Prevention. Diagnoses of HIV Infection in the United States and Dependent Areas, 2012. 2014a Nov.24 Retrieved from [http://www.cdc.gov/hiv/pdf/surveillance\\_Report\\_vol\\_19\\_no\\_2.pdf](http://www.cdc.gov/hiv/pdf/surveillance_Report_vol_19_no_2.pdf).
- Centers for Disease Control and Prevention. Social Determinants of Health among Adults with Diagnosed HIV Infection in 20 States, the District of Columbia, and Puerto Rico, 2010. 2014b Jul. 19 Retrieved from [http://www.cdc.gov/hiv/pdf/surveillance\\_Report\\_vol\\_19\\_no\\_2.pdf](http://www.cdc.gov/hiv/pdf/surveillance_Report_vol_19_no_2.pdf).
- Centers for Disease Control and Prevention. HIV Among Women [Fact Sheet]. 2014c Mar. Retrieved from [http://www.cdc.gov/hiv/pdf/risk\\_women.pdf](http://www.cdc.gov/hiv/pdf/risk_women.pdf)
- Chandler, R., Anstey, EH., Ross, H., Morrison-Beedy, D. *Journal of the Association of Nurses in AIDS Care*. 2016 Jan. Perceptions of Black College Women on Barriers to HIV-Risk Reduction and Their HIV Prevention Intervention Needs.
- Chandler R, Canty-Mitchell J, Kip KE, Daley EM, Morrison-Beedy D, Anstey E, Ross H. College Womens' Preferred HIV Prevention Message Mediums: Mass media versus interpersonal relationships. *The Journal of the Association of Nurses in AIDS Care: JANAC*. 2013; 24(6):491–502. DOI: 10.1016/j.jana.2012.09.001 [PubMed: 23465402]
- Cobb S. Social support as a moderator of life stress. *Psychosomatic Medicine*. 1976; 38(5):300–314. [PubMed: 981490]
- Cohen S, Wills TA. Stress, social support, and the buffering hypothesis. *Psychological bulletin*. 1985; 98(2):310. [PubMed: 3901065]
- Connell, RW. *Gender and power: Society, the person and sexual politics*. Stanford University Press; 1987.
- El-Bassel N, Caldeira NA, Ruglass LM, Gilbert L. Addressing the unique needs of African American women in HIV prevention. *American Journal of Public Health*. 2009; 99(6):996–1001. DOI: 10.2105/AJPH.2008.140541 [PubMed: 19372518]
- Ferguson YO, Quinn SC, Eng E, Sandelowski M. The gender ratio imbalance and its relationship to risk of HIV/AIDS among African American women at historically black colleges and universities. *AIDS Care*. 2006; 18(4):323–331. DOI: 10.1080/09540120500162122 [PubMed: 16809109]
- Finer LB, Henshaw SK. Disparities in Rates of Unintended Pregnancy in the United States, 1994 and 2001. *Perspectives on Sexual and Reproductive Health*. 2006; 38(2):90–96. [PubMed: 16772190]
- Gayle HD, Keeling RP, Garcia-Tunon M, Kilbourne BW, Narkunas JP, Ingram FR, Curran JW. Prevalence of the human immunodeficiency virus among university students. *N Engl J Med*. 1990; 323(22):1538–1541. DOI: 10.1056/NEJM199011293232206 [PubMed: 2233933]
- Horner JR, Romer D, Vanable PA, Salazar LF, Carey MP, Juzang I, Valois RF. Using culture-centered qualitative formative research to design broadcast messages for HIV prevention for African American adolescents. [Research Support, N.I.H., Extramural]. *J Health Commun*. 2008; 13(4): 309–325. DOI: 10.1080/10810730802063215 [PubMed: 18569363]
- Hsieh H, Shannon F, Shannon SE. Three approaches to qualitative content analysis. *Qualitative Health Research*. 2005; 15:1277. [PubMed: 16204405]
- James, C., Salganicoff, A., Thomas, M., Ranji, U., Lillie-Blanton, M., Henry, J., Kaiser Family Foundation & Wyn, R. *Putting Women's Health Care Disparities on the Map: Examining Racial and Ethnic Disparities at the State Level*. The Henry J. Kaiser Family Foundation; 2009.

- Juzang I. Mass media as an HIV-prevention strategy: using culturally sensitive messages to reduce HIV-associated sexual behavior of at-risk African American youth. [Research Support, N.I.H., Extramural]. *American Journal of Public Health*. 2009; 99(12):2150–2159. DOI: 10.2105/AJPH.2008.155036 [PubMed: 19833995]
- National Center for Education Statistics. Fact Sheet. n.d.Retrieved from: <http://nces.ed.gov/fastfacts/display.asp?id=667> on May 5, 2015
- Nelson LE, Morrison-Beedy D. Research team training: moving beyond job descriptions. *Applied Nursing Research*. 2008; 21:159–164. DOI: 10.1016/j.apnr.2006.09.001 [PubMed: 18684410]
- Payton FC, Kvasny L, Kiwanuka-Tondo J. Online HIV prevention information. *Internet Research*. 2014; 24:520–542. DOI: 10.1108/IntR-09-2013-0193
- Pew Research Center. African Americans and Technology Use. Washington, DC: Aaron Smith; 2014. [Research Support, N.I.H., Extramural]. *Journal of Adolescent Health*. 49(3):244–251. DOI: 10.1016/j.jadohealth.2010.12.007
- Romer D. Using culturally sensitive media messages to reduce HIV-associated sexual behavior in high-risk African American adolescents: Results from a randomized trial. *Journal of Adolescent Health*. 2011; 49(3):244–251. DOI: 10.1016/j.jadohealth.2010.12.007 [PubMed: 21856515]
- Romer D, Sznitman S, DiClemente R, Salazar LF, Vanable PA, Carey MP, Juzang I. Mass media as an HIV-prevention strategy: using culturally sensitive messages to reduce HIV-associated sexual behavior of at-risk African American youth. *American Journal of Public Health*. 2009; 99(12):2150–9. DOI: 10.2105/AJPH.2008.155036 [PubMed: 19833995]
- Smith JJ, Borgatti SP. Salience counts—and so does accuracy: correcting and updating a measure for freelist item salience. *Journal of Linguistic Anthropol*. 1998; 7:208–209.
- Sutton MY. HIV/AIDS knowledge scores and perceptions of risk among African American students attending historically black colleges and universities. *Public health reports (1974)*. 2011; 126(5):653.
- Sznitman S, Vanable PA, Carey MP, Hennessy M, Brown LK, Valois RF, Romer D. Using culturally sensitive media messages to reduce HIV-associated sexual behavior in high-risk African American adolescents: Results from a randomized trial. *Journal of Adolescent Health*. 2011; 49(3):244–251. DOI: 10.1016/j.jadohealth.2010.12.007 [PubMed: 21856515]
- Thomas PE, Voetsch AC, Song B, Calloway D, Goode C, Munday L, Heffelfinger JD. HIV risk behaviors and testing history in historically black college and university settings. [Comparative Study]. *Public Health Rep*. 2008; 123(Suppl 3):115–125. [PubMed: 19166095]
- Wingood GM, DiClemente RJ, Harrington KF, Lang DL, Davies SL, Hook EW, Hardin JW. Efficacy of an HIV prevention program among female adolescents experiencing gender-based violence. *American Journal of Public Health*. 2006; 96(6):1085–90. DOI: 10.2105/AJPH.2004.053595 [PubMed: 16670238]

**Table 1**

Descriptions of iMPPACS audio-visual and audio-only vignettes reviewed in focus group sessions

<b>Audio-Visual Vignettes</b>			
<b>Media Title<sup>a</sup></b>	<b>Context/Setting</b>	<b>Characters/Interactions<sup>b</sup></b>	<b>HIV prevention and risk perception/reduction content</b>
Spot 3 - Relationships	Outdoors (street, park)	Individual interviews: 2 young adult Black males, 2 young adult Black females	Sexual communication (partner); sexual pressure (partner); abstinence
He's Experienced	Transitional settings: From high school to health clinic	Dialogue between 2 young adult Black females (friends)	Condom negotiation; Sexual communication (partner, peer)
Class of 2008	Graduation ceremony: announcement of graduates	Spotlighting of several individual graduates; one young adult Black male referenced for popularity and STI infection	STI infection; influence of social popularity on sexual behavior
Check Yourself	Night club	Dialogue between young adult Black male/female	HIV disclosure; HIV stigma; condom negotiation; sexual communication (partner)
<b>Audio-only Vignettes</b>			
<b>Media Title<sup>a</sup></b>	<b>Context/Setting</b>	<b>Characters/Interactions<sup>b</sup></b>	<b>HIV prevention and risk perception/reduction content</b>
Best Friends	Telephone conversation	Dialogue between male and female	Condom negotiation; sexual communication (partner, peer); risk assessment
I've Got Mine	House party	Sexual encounter between male and female	Condom negotiation; sexual communication (partner); sexual trust; self-efficacy/respect
Girls Who Respect Themselves	Private (one-on-one)	Male seeks advice from another popular ( <i>referenced</i> ) male	Self-efficacy/respect; sexual communication (partner, peer); condom negotiation

<sup>a</sup>Retrieved from: <http://www.annenbergpublicpolicycenter.org/project-impacs-video-and-audio-exhibits/> on March 19, 2015

<sup>b</sup>Race/ethnicity could not be determined

**Table 2**

Media title, rank, salience, and relevant participant comments for each IMPPACS message

Audio-Visual Vignettes			
Media Title <sup>a</sup>	Rank <sup>b</sup> True (Calculated)	Salience <sup>c</sup>	Relevant Participant Comments
Spot 3 - Relationships	1 (1.96)	0.760	R1: "Had both guys and girls" R2: "This video was important because it wasn't scripted and it was the opinions of real people" R3: "Although honest in content and great for relationship, may not be suitable for getting tested"
He's Experienced	2 (2.25)	0.688	R1: "Tells you to be smart about sex" R2: "Pulling out does not stop women from contracting STDs, and does not always work in preventing pregnancies. That's where many women get it confused"
Class of 2008	3 (2.63)	0.594	R1: "Had the shock factor" R2: "It was interesting that the guy who played sports was the one with the STD. I find that to be realistic, especially in college - girls tend to flock to those type of men."
Check Yourself	4 (3.17)	0.458	R1: "Needs new language/words" R2: " I did appreciate the woman being upfront about her condition because many are not up front"
Audio-only Vignettes			
Media Title <sup>a</sup>	Rank	Salience	Relevant Participant Comments
Best Friends	1 (1.48)	0.841	R1: "Most realistic" R2: "Focused on getting serious in a relationship because it still requires safety" R3: "Good to have a nice friend like that, the male best friend is giving great advice (to the female friend) - safe sex is the best sex".
I've Got Mine	2 (1.95)	0.683	R1: "The way they talked to each other was kinda creepy" R2: "I like how he (the male) initiated condom use" R3: "The kissing and moaning (background sex sounds) was a little extra"
Girls Who Respect Themselves	3 (2.57)	0.476	R1: "Jimmy hat? It is outdated. Just say condoms" R2: "Needs less script"

<sup>a</sup>Retrieved from: <http://www.annenbergpublicpolicycenter.org/project-imppacs-video-and-audio-exhibits/> on March 19, 2015

<sup>b</sup>Rank: True and calculated degree of preference for each media category (i.e. true rank for audio-visual messages: 1 [most preferred] - 4 [least preferred]). Calculated rank is inversely related to salience index.

<sup>c</sup>Salience score: Average percentile rank of an item across all lists is the item's gross mean percentile rank. The psychological salience index of each media was calculated with an algorithm that considered the frequency, order, and number of media for each respondent. Media that was most preferred, and listed early in rank order, had the highest salience scores (which confers participant agreement in media choices). Participant comments provide insight into the psyche of respondents in support of preferred media. (Smith & Borgatti, 1998)

**Table 3**

Themes of appropriate HIV prevention media message content for Black college females

Major Themes	Sub-themes	Supporting Quotes
Social media	Use of current technology for HIV prevention message delivery (e.g. Twitter; Facebook; Instagram)	"I will honestly say that I am ignorant when it comes to world news...but if I see it on Twitter or on my Instagram then I'll take the time out to look it up"
Mirror Image	Commercials tailored specifically for Black college females (e.g. age and culture)	<b>R1:</b> "It might be better if you have a lot of short commercials with a black woman...like a down to earth person that's around the same age. Because I feel like that's who we listen to"; <b>R2:</b> "We need to see more people who look like us that we can relate to."
Visually Dynamic Advertisements	Graphic pictorial representations of HIV progression; Attractive audio/visual HIV prevention advertisements (e.g., animations, emojis)	"More visual and less like writing sometimes because we're very-our attention span is so short now. So more visuals"
The Real World	Real life examples of HBCU student experiences Honesty/transparency in sexual communication Use of age- and culturally-appropriate terminology/ vernacular	<b>R1:</b> "Sex is just promoted everywhere. So your mind is like flooded with sexual thoughts because the music that you listen to, the TV shows, that you watch. It's all sexually oriented...So if all you see is sex, sex, sex, and then the prevention-the little advertisement that you see are just watered down...you're going to look over that". <b>R2:</b> "It's hard to pinpoint a real reality with our age. A TV show is too much & ads are too little".
People, Place, Things (that provoke HIV risk behaviors)	Peer pressure Alcohol and drug abuse Parties	"It's hard especially in our age group or younger...I'll say from 17 to 26 or 27, it's hard to practice safe sex because, the relationships are so short for us. It's always in and out and then people always feel pressured or obligated to do certain things because sex is like all you see even growing up".
HIV Knowledge	Share notable statistics & symptoms (e.g., impact of the disease on Black women) Environments to facilitate HIV knowledge (e.g., sex education class, group discussions on sex)	"I feel like not only should you know the different STD's out there. I feel like females should know the statistics of these different STD's and how often people are getting them. People in your own community that you don't even know have these STD's. I feel like they need to be educated on the statistics."