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Sexual communication intervention for African American mothers & daughters

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ABSTRACT

Background: African American girls ages 13–19 comprised nearly 3 out of 4 new cases of HIV in 2009. The goal of this study was to deliver a theoretically-driven intervention to test the feasibility for recruitment and retention of mother–daughter dyads.
Methods: Twenty mother–daughter dyads were recruited from a community health center between February–April 2014. Comparisons were made between pre- and post-intervention scores using percent change.
Results: Twelve dyads (60%) completed the intervention. There were no demographic differences between completers and noncompleters. Notable post-intervention percent increases in scores were observed in the domains: Sexual knowledge (15%), confidence to talk (23.2%); and openness of sexual communication (26.4%).
Conclusion: Our small-sized study showed promise in the intervention. Increasing sexual communication between African American mothers and daughters is likely to be sustainable over time and across relationships, and thus have a greater impact on HIV-prevention behaviors later in life.

Although African Americans (AA) represent 14% of the US population, they accounted for 44% of all new HIV infections in 2009 (CDC, 2009). Among females 13–19 years of age, AA girls comprised nearly 3 of 4 new cases of HIV in 2009 (CDC, 2009), which is much higher than other female racial groups the same age. Reducing the number of HIV infections in adolescents is the highest priority on the national HIV agenda (CDC, 2012). In addition, one of the three primary goals of the National HIV/AIDS Strategy (White House Office, 2010) is to reduce the HIV-related health disparities by adopting community-level approaches in high-risk communities. It is critical to examine what factors could decrease AA girls' likelihood of becoming sexually active during early adolescence. Increasing sexual communication between mother and daughter is likely to be sustainable both over time and across other relationships, and thus have a greater impact on HIV-prevention behaviors later in their life.

Early adolescence is the developmental period associated with the initiation of other-sex friendships and greater intimacy. Researchers have historically identified a sequencing of behaviors that lead to sexual initiation (Cate & Koval, 1983), with a consistent progression once the sequencing of behaviors begins (O'Sullivan, Cheng, Harris, & Brooks-Gunn, 2007). Social skills needed for competent negotiation of these other-sex interactions are referred to as heterosocial competence (Grover, Nangle, & Zeff, 2005). This study is designed to delay the progression of these sequenced behaviors while providing opportunities to develop these social skills. A connected relationship with mother delays the progression of heterosocial risky behaviors of AA girls even during middle adolescence [14–18 years] (Aronowitz & Morrison-Beedy, 2004; Aronowitz, Rennells, & Todd, 2006). Additionally, instilling a future time perspective (FTP) and socializing with a sense of racial pride decreases risky behaviors (Aronowitz, 2005; Aronowitz & Eche, 2013). These findings suggest that initiating theoretically-based interventions with AA girls aged 12–14 may help avoid the higher rates of risky sexual behaviors noted among late adolescents.

Effective interventions are based on a conceptual framework. For this study, the conceptual–theoretical–empirical model (C-T-E) (Fawcett & Garity, 2009) was employed using Neuman's Systems Model (NSM) (Neuman, 2002) as the nursing conceptual framework and information, motivation, behavioral change (IMB) (Fisher & Fisher, 1992) as the mid-range theory (see Fig. 1).

Within the NSM, the client is viewed as an open system interacting with the environment (Neuman, 2002). The client system is composed of five interacting variables: physiological, psychological, sociocultural, developmental, and spiritual. The client system central core contains basic survival factors such as the variables contained within, innate or genetic features, and strengths and weaknesses of the system parts.

According to the IMB model, information targets the cognitive aspect of the model, which in this case would imply the acquisition and understanding of facts related to sexuality, sexual development, and infection prevention. Motivation addresses the affective domain which influences whether or not a person has the intent and will to act on his or her knowledge regarding initiation open sexual communication with mother/daughter. The behavioral aspect aligns with the psychomotor domain and refers to activities that are necessary to prevent STIs,

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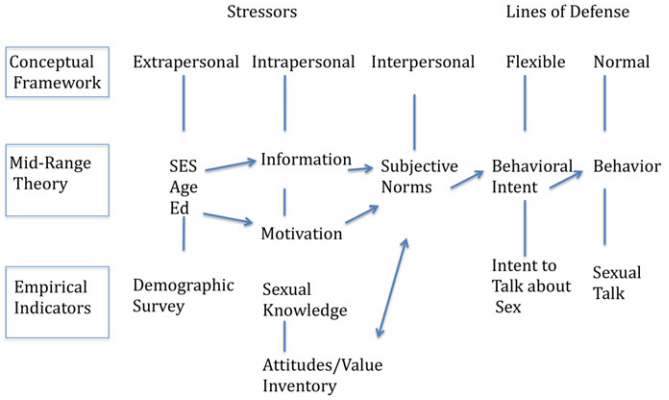

Fig. 1. C-T-E model for LUMBA.

including confidence in discussing condom use, negotiation tactics, and correct and consistent condom use (Fisher & Fisher, 1992).

As depicted in Fig. 1, a person's usual behavior represents the normal line of defense. Influencing factors or stressors that may have an impact on a mother/daughter ability to talk about sex are their personal beliefs. Belief-based measures evolve from the created environment and are therefore considered intrapersonal stressors. Intrapersonal stressors that evolve from the created environment are knowledge and motivation. Just as the created environment can be based on the individual's beliefs (Neuman, 2002), so can an individual's knowledge and motivation (Fisher & Fisher, 1992). IMB is a leading theory of HIV risk reduction, suggests that social–cognitive variables such as knowledge, attitudes, social norms, and interpersonal skills predict HIV-prevention behavior. The constructs in the IMB model have accounted for the majority of the variance explaining HIV-prevention behaviors that are modifiable and therefore form the foundation for many effective interventions with diverse populations (Fisher & Fisher, 1992). Aronowitz and Munzert (2006) redefined each construct within the IMB model expanding them in order to accommodate the behavioral outcome of increasing sexual communication with mother to delay heterosocial risky behaviors. The basic assumption that value transmission can occur within a mentored relationship (Vygotsky, 1978) supports the significance of facilitating a connected relationship between mother and daughter. The developed intervention guided by the IMB model, is entitled, Life Understanding Mothers Bonding with Adolescents (LUMBA, Swahili for a serious talk). The primary purpose of this study was to determine the feasibility and acceptability of LUMBA, an enhanced sexual communication intervention, among AA mother–daughter dyads.

1. Methods

1.1. Sample

IRB approval was obtained through UMass Boston and Dimock Health Center prior to commencing the study. The study included pre-assessment, participation in the LUMBA intervention and post-assessment to determine feasibility of recruitment and retention of the sample. The sample size of this study was determined by time constraints, feasibility, and practical consideration with a goal to determine background effect sizes for use in the future design of randomized control trial [RCT] study. This study sample size was not based on inferential or formal statistical power analysis. Focus groups were conducted after the intervention to assess developmental appropriateness of the measures and the intervention. We enrolled 20 mother–daughter dyads that met the following inclusion criteria: self-identified AA, girls between the ages of 12–14 years who identify as heterosexual and mother figures. Mother-figures gave written informed consent for the study, and girls provided written assent. Participant recruitment occurred at Dimock Health Center, Boston, MA. The dyads did not need to be clients at the center.

1.2. Recruitment procedure

The assessment was a self-administered questionnaire that contained demographic information and the measures. These assessments took place in private rooms at the site. One of the assessors was present to ascertain that the participant was comfortable and answered any question. There were barriers and adequate space between the dyads, so one participant (mother) cannot see another participant's (daughter) responses. Measures were written at the 6th grade reading level (Fry, 1977). Verbal assurance was given to the participants that responses were confidential. The assessors checked to make sure the data were complete before the participant left. The surveys were part of the research team's equipment that was stored in a locked cabinet at the PI's office. Confidential information cards for future tracking of participants were completed at the end of the assessment sessions.

1.3. Measures

1.3.1. Demographics

Data were obtained regarding the participant's date of birth, type of residence(e.g., apartment, house) and number of household members, employment status of mother, SES, marital status of mother, number of children in family, birth order of daughter, number of siblings who are teen parents, mother's level of educational attainment, and daughter's grade. We had previously pilot-tested all of instruments with AA mothers and 12–14 year old girls (Aronowitz & Munzert, 2006).

1.3.2. Information (assessed for both mother and daughter)

Sexual health knowledge assessment was measured by a 34-item multiple-choice questionnaire. It included questions about: adolescent physical development, adolescent relationships, adolescent sexual activity and sexually transmitted diseases. One point was given for each correct answer; the higher the total score, the greater the knowledge. This instrument has been pilot-tested and used to evaluate sexual education programs with adolescents. Cronbach $\alpha = 0.89$ was obtained (Kirby & Laris, 2009).

1.3.3. Motivation (assessed for both mother and daughter)

Motivation to increase open sexual communication and connectedness with mother/girl was assessed based upon the recommendations of Fisher and Fisher (1992). Several instruments measured this construct designed to: 1) assess the girl's intentions toward preventive acts; 2) assess her subjective norms of what her mother and peers think should be done (immediate behavior-focused motivation); 3) assess a participant's attitudes towards her future goals, 4) connectedness to mother, and 5) assess racial socialization.

1.3.3.1. Behavioral intentions. After reading details of a high-risk heterosocial situation, participants were asked to respond to an 8-item scale assessing how likely they (their daughter) would be to avoid a one-on-one potentially risky heterosocial situation. The 5-point Likert type responses range from 1 = definitely will not do to 5 = definitely will do. Versions of this scale have been used in previous studies, and adequate levels of reliability ($\alpha = 0.88$ to 0.93) as well as construct validity have been obtained (Prochaska & DiClemente, 1983). This particular version was developed for the proposed study to focus on heterosocial situations rather than condom use.

1.3.3.2. Social norms. The adolescent's perception of mother's and peers' attitudes towards sexual intercourse and use of condoms was measured by two 8-item scales. These items are rated ranging from 1 = strongly disagree to 5 = strongly agree with total scores for each scale ranging from 8–40. Examples of these items include: "Your mother (friends) thinks it is OK for teenagers to have sex if they protect themselves by