THE RELATIONAL BEHAVIOR SURVEY AS A PREDICTOR OF HIV-RELATED PARENTAL MISCOMMUNICATION: IMPLICATIONS FOR HIV, PREVENTION AND EDUCATIONAL SERVICES AT PRIMARY CARE HEALTHCARE FACILITIES

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Presented at ITT Technical Institute, DeSoto, Texas

Introduction to Psychology

August 2012

ABSTRACT

The study examined the relational-behavior survey (RBS) as a predictor of HIV-related parental miscommunication (HPM) among a voluntary sample 75 African American parents at a private healthcare facility located in the southwest region of the United States. A multiple

regression analysis indicated that there was significant marginal prediction of the RBS factors (subjective knowledge, knowledge deficiency, relational skills, HIV/STD stigmatization, community empowerment, health distrust) with HPM (R = .38, p =.09); R squared = .14. In an exploratory MRA backward elimination procedure of the RBS factors and contextual variables (parental age, gender, educational level, and the number of children in the household,) there was a significant prediction of HPM (R=.51, p <.01); R squared= .26. The backward elimination procedure further indicated that parental educational level and relational skills were the strongest predictors of HPM (R = .44, p <.01); R squared = .19. Based on the findings, the RBS may be useful in the development of family-life skills programs at primary healthcare facilities.

INTRODUCTION

Since the early 1980‘s, Acquired Immunodeficiency Syndrome (AIDS) has become one of the leading causes of death worldwide (CDC, 2009). AIDS is caused by a virus called the Human Immunodeficiency Virus (HIV), which impairs the immune system, making a person defenseless against infections. HIV is primarily transmitted by unprotected sexual intercourse and

intravenous drug use. The advancements in AIDS chemotherapies has improved the life expectancy of those living with HIV/AIDS (CDC, 2008a); however, there is not an effective vaccination for HIV infection at this time. In 2008, a total of 33.4 million people lived with HIV/AIDS worldwide. Recent epidemiological statistics reported the following: Africa reported an estimated 1.9 million people were infected with HIV; Asia and the Pacific Islands reported 395,000 people infected with HIV; the Caribbean estimated 20,000 people infected with HIV; Latin America reported 140, 000 people infected with HIV/AIDS; North Africa and the Middle East reported approximately 40,000 people infected with HIV; Eastern Europe and Central Asia reported 110,000 people infected with HIV; Western and Central Europe reported 27,000 people with HIV; and the United States reported 1.1 million people with HIV/AIDS (CDC, 2008b). Without a vaccination, HIV prevention has been the most effective method of reducing the AIDS pandemic (Oduro, 2012; Kaufman et al., 2012; Hardre et al., 2012; Nyamthi et al., 2012; Ha & Fisher, 2011; Helleve et al., 2011; Ahmed, 2011; Nyambedha at al., 2010; Fetene & Dimitriadis, 2010; Clark et al., 2010; Mueller et al., 2009; Price & Knibbs, 2009; Kashima et al., 2008; Lowe, 2008; Goto et al., 2008; Sileo & Silteo, 2008; Kiggundu & Castle, 2007)

Currently, HIV prevention has become a major health focus for adolescents and families in developing societies as well as for super power nations such as the United States (Bauman, 2012; Kogan et al., 2011; Chandwanti et al, 2011; Brown, 2010; Elkington et al, 2010; Goldstein et al., 2010; Harper et al, 2009; Monttapa et al, 2009; Gopalan et al, 2009; Ito et al, 2008; CDC, 2008b, Morrison et al, 2007; Robinson, 2007; Pinto & Mckay, 2006). Since the 1990's, psychological studies have revealed parent-adolescent communication (PAC) reduced HIV-

related risk behaviors of U.S. adolescents (Dutra, Miller & Forehand, 1999; Kaiser, 1999; Kotchick, Dorsey, Miller & Forehand, 1999; Miller & Whitaker, 1998; Miller & Whitaker, 2000; Whitaker, Miller & Levin, 1999). In addition, research on PAC was conceptualized two distinct areas: parental PAC and adolescent PAC. Parental PAC refers to the parents' ability to communicate with their adolescents about safe sex practices. Adolescent PAC refers to the adolescents' ability to communicate with their parents about safe sex practices (Miller & Whitaker, 2001). For example, Sales, Milhausen, Wingwood, DiClemente, Salazar, and Crosby (2006) suggested that adolescent PAC was based on perceived parental knowledge and family support. In other words, adolescents who internalized verbal cues, values, and messages of parental PAC, reduced risk-taking behaviors (Miller & Whitaker, 2000). The effects of adolescent PAC were well documented in developmental psychological literature. For example, seminal studies by Steinberg (1998) suggested that the lack of parental PAC or family distance was associated with negative emotional and physiological changes in the adolescent years.

The psychological studies on the measurement of PAC have been significant to HIV prevention in recent times (Sales et al, 2008). According to Behavioral Pediatrics (Howard, 2009), adolescents who experienced parental divorce (decreasing PAC) suffered more from psychological maladjustments and increased HIV risk-taking behaviors (e.g. substance use and promiscuity). In align with Mary Ainsworth's attachment theory, the first two years of life provided the ground rules for social bonding, which influenced PAC during the adolescent years (Kail & Cavanaugh, 2007). In theory, adolescents who developed trust and compassion during the

infant-parent bonding process, developed a secure attachment. This secure attachment was evident later as the successful parent-child communication translated into risk reduction practices during the adolescent years (e.g., low-risk HIV-related behaviors with peers). In turn, adolescents who experienced insecure attachment during infancy had difficulties socially; and had fewer quality friendships that increased at-risk HIV-related behaviors (CDC, 2008).

Early and Current At-Risk Groups of HIV Prevention

Over the past three decades, HIV prevention in the U.S. has focused on educating "high-risk" populations about HIV/AIDS (Kegeles et al., 2006). Historically, HIV prevention has focused on men having sex with men (MSM) and intravenous drug users (IDU) (Chandler, 1999). Coates, McKusick, Kuno, and Stites (1988), based on a sample of 64 MSM that HIV educational programs reduced the number of sexual partners after a two month follow-up. Valdisseri et al. (1989) found with a sample of 584 MSM that HIV education reduced unprotected anal

intercourse after a 12 month follow-up. Kelly, St. Lawrence, Betts, Bransfield, and Hood (1989) found with a sample of 102 MSM that HIV education reduced unprotected anal intercourse after a four month follow-up. Similar seminal findings with IDUs. Stephens, Feucht, and Roman (1991) found with a sample of 322 IDUs that HIV education reduced needle sharing after a five month follow-up. Calyson, Meinecke, Saxon, and Staton (1992) suggested with a sample of 103 IDUs that HIV education increased condom use after a four month follow-up. In 1992 McCusker et al. concluded, based on a sample of 567 IDUs, that HIV educational workshops reduced drug injection use and unprotected sexual intercourse after a four month follow-up. Des Jarlais, Friedman, and Rosenblum (1992) found with a sample of 104 IDUs that group HIV education decreased drug injection use after a 21 month follow-up.

Despite the focus on MSM and IDUs, HIV prevention was needed among heterosexual youth. In the U.S. (Jones et al., 2010; Weiss et al., 2010; Holman et al., 2008; Cole et al., 2008). Seminal research by Dorman and Rienzo (1988) found that numerous college students had factual knowledge about AIDS, but only half were concerned with contracting HIV. Other seminal studies such as MacDonald, Wells, Fisher, Warren, King, and Bowie (1990) surveyed 5,514 sexually active college students and found only 24% of the males and 15% of the females used condoms consistently. In addition, DuBuono, Zinner, Daamen, and McCormack (1990), also reported sexual behaviors of college women in the pre-AIDS and post-AIDS eras (1975, 1985,

1989) and revealed equal proportions of women had multiple sex partners and unprotected sexual intercourse. The transmission of HIV through sexual contact led experts to re-examine HIV/AIDS prevention models (Chandler, 1999). Foster, Phillips, Belgrave, Randolph, and Braithwaite (1993) suggested that "traditional models" failed to address the cultural and contextual issues associated with safe sex practices. Foster et al. (1993) felt that possessing safe-sex practices was beyond the individual's cognition. It was theorized to be a process that involved sociocultural and psychological components. In terms of ethnicity, African Americans were disproportionately affected by AIDS. In 1997, African Americans represented over 30% of the U.S. AIDS cases while representing only 11% of the U.S. population (Centers for Disease Control, 1997). Specifically, African Americans represented over 50% of the U.S. AIDS cases for women and over 60% of the U.S. AIDS cases for children.

The impact of AIDS in the African American community has reduced the life expectancy for African American males between the ages of 18 and 59 (Lai, Tsai, & Hardy, 1996). Early estimates also indicated that African American males were three times more likely to contract AIDS than White males; African American females were 13 times more likely to contract AIDS than White females; and African American children were 12 times more likely to contract AIDS than White children (Jenkins, Lamar, & Thompson, 1993).

According to the World Health Organization (WHO), approximately 50% of HIV infections occurred worldwide among adolescent populations; and 25% of those HIV infections occurred among U.S. adolescents (WHO, 2011). HIV/AIDS was one of the leading causes of

death for U.S. adolescents during the late-1990's (Cooksey, Rindfuss, & Guilkey, 1996; Cannistra & Niloff, 1996; Parcel, Banspach, Engquist, Coyle & Kirby 1999; CDC, 2006).

Health experts have concluded that unprotected sexual activity was the most significant risk factor for HIV infection among adolescent populations. Moreover, this risk factor was determined higher among sub-group adolescent populations (e.g. runaways, homeless, and ethnic minority adolescents) than the general adolescent population. Specifically, the HIV positive status rates for the combined runaway and homeless sub-group adolescent population was six to 10 times higher than the general adolescent population (Lightfoot & Borus as cited in Peterson & DiClemente, 2000).

Specifically, runaway and homeless adolescents accounted for two to 17% of the HIV-positive adolescents. These research findings also coincide with earlier findings. For example, Sugerman, Hergenroeder, Chacko and Parcel (1991) 33% of runaways and homeless adolescents reported engaging in unprotected sexual activity or infrequent condom use. Aside from the lack of parental guidance, the risk factors for this sub-group included unprotected survival sex, multiple partners, and the use of alcohol or drugs. Stricof, Novick, and Kennedy, (1990), suggested that increased risks of HIV exist for homeless youth based on the lack of family support and the gravitation of youth to environments that contain seropositive sex partners and IV drug users.

According to the CDC, African American adolescents were one of the highest at-risk groups for

HIV/AIDS in the United States. Among African Americans ages 15 to 24, 25% were at risk for HIV infection (CDC, 2008b). Governmental research has also suggested that the rate of HIV infection among African American adolescents was increasing daily, with an estimation of one African American adolescent infected every hour (CDC, 2008b). Valleroy, Hader, Smith, Moore and Holmberg (2001), suggested that African American adolescents were at-risk for HIV infection through heterosexual contact and from the lack of guidance in partner selection. The Advocacy for Youth Study (2005) reported that 87% of sexually active African American youth inconsistently used condoms, and 39% reported no condom use in their most recent sexual experiences.

Theoretical Orientations of HIV Prevention

Historically, HIV prevention models were utilized to conceptualize the psychological and behavioral patterns of at-risk populations. There are two main categories of HIV prevention theories. The first category emphasizes what is known as the stage models. Stage models focused on change as a process, essentially, a decision-making process that resulted in several outcomes (Fisher & Fisher, as cited in Peterson & DiClemente, 2000). These models of stage change included the Health Belief Model (HBM), Transtheoretical Model (TM), and AIDS Risk Reduction Model (ARRM). The HBM was one of the first models used to assess behavioral

change and may have been used more than any other model. The HBM was first developed in the 1950s and is considered the grandfather of all health behavioral change models. Consequently, the HBM has undergone several revisions for example in 1988 self-efficacy was added to the HBM model as a way of increasing its credibility in HIV/AIDS prevention.

The HBM has been severely criticized for its failure to make a prediction of HIV preventative behavior and its failure to fully integrate a multivariate design. Both TM and ARRM are both stage models that involve a progression in the change process. Stage models have been beneficial and theoretically insightful in their view of "change as a process" rather than an outcome (Fisher & Fisher, as cited in Peterson & DiClemente, 2000). The second category of prevention models focused on "behavioral change with emphasis on psychological phenomena" (Fisher & Fisher, as cited in Peterson & DiClemente, 2000). These models included social cognitive theory (SCT), theory of reasoned action (TRA), theory of planned behavior (TpB) and the information-motivation-behavioral skills model (IMB). SCT is based on reciprocal

determinism, in which thoughts, behaviors, and the environment are constantly changing each other. Bandura believed that change most often occurred in a social context and based on social influence. In other words, Bandura (1998) suggested that people learn best and develop a greater sense of self-efficacy from exposure to role models similar to themselves. This is inclusive of gender, race, ethnic status, age or type of HIV risk behaviors. He also suggested that normative social influence can assist or detract from its initiation and maintenance of HIV prevention. However, a major criticism of SCT in HIV/AIDS risk reduction is that it fails to clearly define or formulate measurable constructs for targeting specific intervention needs of high-risk populations being focused upon. In contrast, the Theory of Reasoned Action (TRA) is well defined and a tested model of psychological constructs of volitional social behavior that has been widely used for understanding and promoting HIV risk reduction and behavioral change (Fisher & Fisher, as cited in Peterson & DiClemente, 2000).

TRA is critical in pointing out relevant beliefs and terms related to consequences of preventive acts that serve as important factors of influence for populations at focus. For example, TRA explains human behavior in terms of their psychological intentions about behaviors and perceived norms for practicing behaviors. According to Fisher & Fisher (as cited in Peterson & DiClemente, 2000), a major criticism of TRA is that it is fundamentally a motivational model that lacks the concept of HIV prevention. HIV prevention may not entirely be under the individual's volitional control, nor does it account for an individual's perceived control for HIV prevention. HIV preventative behavior such as feelings about sexuality, HIV-related information and HIV prevention behavioral skills, perceptions of vulnerability to HIV, sex and ethnicity remain critical

to consider. An extension of the TRA model was theory of planned behavior (TpB), which added "perceived behavioral control" as a variable to the model's original claims concerning intentions, attitudes, and norms as determinants of behavior. According to Kalichman (1998), TpB was an enhanced form of the TRA that intended to strengthen the TRA's ability to predict, understand, and change behavior in domains of action that were not entirely under volitional control (e.g., sexual arousal, gender-based power differentials, alcohol and drug use), Fisher & Fisher (as cited in Peterson & DiClemente, 2000).

The TpB found that perceptions of control can increase or influence attitudes, which standardize an individual's intent to engage in positive or negative acts of HIV prevention. However, a criticism of TpB is the assumption that HIV prevention intentions are a function of attitudes. In essence, the claim that HIV preventive behavior may be directly influenced by perceived control over such behavior has been subject to serious question. Fisher and Fisher (as cited in Peterson & DiClemente, 2000), suggested that the model's ability to predict HIV preventive behavior above the TRA was of limited value.

Lastly, the Information-Motivation-Behavioral Skills (IMB) Model was comprised of a three factor conceptualization of AIDS preventive behavior. This model assumes that information and motivation activate behavioral skills to ultimately enact risk reduction behaviors.

Subsequently, criticism of IMB centers on its approach to HIV risk reduction behavioral change in response to experimental intervention and research conducted with university students, minority adolescents, inner city minority women and chronically mentally ill individuals. Overall, IMB is a fairly new model first published in 1992, and it remains limited in its ability to generalize to diverse populations for HIV-risk (Fisher & Fisher, as cited in Peterson & DiClemente, 2000). In summary, weaknesses and criticisms of stage models (HBM, ARRM, TM) including SCT, are that the variables were too complex to test or to use to design specific HIV risk reduction interventions relative to targeted populations and that the relationship among constructs lacked the ability to test in an integrated multivariate fashion.

In comparison to stage models, other models that focused on behavioral change with emphasis on psychological determinants were TRA, TpB, and IMB. These models, contrary to the previous stage models were considered testable and clearly defined in terms of relationships and hypothesized factors of HIV-preventive behavior (Fisher & Fisher, as cited in Peterson & DiClemente, 2000). Comparatively, all of the above models have been theoretically useful and a successful guide to risk reduction behaviors. Nonetheless, these earlier models still failed to translate HIV risk-reduction interventions into a single, comprehensive intervention technique and only offer a list of objectives proposed for change. A Unified Theory of Behavior (UTB) was also conceptualized using five theories that included: TRA (Fishbein and Ajzen; 1980), SCT (Bandura, 1976), versions of HBM (Janz & Becker, 1984; Rosenstock, Stretcher, & Becker, 1988), Self Regulation Theories (SRT: Kanfer, 1975); and Theory of Subjective Culture (TSC:

Triandis, 1972). The UTB combined core constructs of using these theories mentioned above with addition of SRT and TSC, respectively. Core constructs examined using UTB were expectancies, social norms, self concept (that included self-image and self-esteem), emotions, and self efficacy which led to intentions that result in behavior.

The outcome variable consisted of frequency of parent-adolescent communication. Ramos, Dittus, Jaccard and Collins (2008), study included 668 participants inclusive of adolescents and parents recruited from middle schools located in the Bronx of New York City that consisted of a median household income below the State average and residents comprised 25% of new HIV cases. Overall, 623 families participated in data collection. Sample size and ethnicity consisted of 140 African Americans compared to 528 Latinos. The results of the study showed that higher levels of self-esteem are associated with higher levels of mother-reported communication; more positive images of mothers who talk with their children about not having sex are associated with higher levels of mother reported communication.

Ramos, Dittus, Jaccard & Collins (2008), reported positive and negative emotion variables that were statistically significant ($p<.01$) for communication outcome variables. Self efficacy variables were statistically significant when predicting mother-reported communication

(ease of talking, b = 0.19, B =0.25, p < .01; and perceived effectiveness in influencing sexual behavior, b = 0.08, B = 0.10, p< .01). In other words, the more the mother thought about talking about sex would not be difficult and the more she thought about it being beneficial, the more she engaged in talk with her child about not having sex.

Results of the integrated model showed significant in one of each of the core constructs except within social norms. Limitations of the study lacked cultural or contextual norms for parent-adolescent communication frequency. However, strengths consisted of statistical significance reported in self-efficacy and emotion variables that resulted in increased parent-adolescent communication.

According to the CDC (2005), there have been a signficant number of young men and women of color unconcerned about contracting HIV/AIDS, while other studies indicated the same population have adequate knowledge of HIV/AIDS transmission but fail to adopt risk reduction strategies to prevent infection. For example, Mancoske, Rountree, Donovan, and Neighbors (2006), in a cross-sectional survey of 238 students attending a Southern urban historically Black college examined 60 males' and 178 female students' self-reported knowledge, attitudes, and behaviors related to HIV/AIDS prevention.

According to Mancoske, et al., (2006), African American males were more knowledgeable about African American women contracting HIV. Subsequently, African American females reported substantially more influence by friendships in safer sex practices and condom use. Overall, more than 60% of students were influenced by friends relative to safer-sex practices. As a result, Mancoske et al. concluded that relationships were a vital connection between safer sex practices and condom use particularly for women than men.

According to Chandler (1999), there was a need to incorporate these sociocultural factors in HIV prevention models. In a study by Chandler (1999), 120 African American participants (ages 18-28) were examined with the following contextual and sociocultural factors: gender differences, personally knowing someone with HIV/AIDS, HIV objective knowledge, cultural distrust, internal health locus of control, external health locus of control, chance health locus of control, and attending an HIV/AIDS presentation with an African American speaker. A multiple regression analysis, revealed a significant prediction of safe-sex practices of African Americans. Specifically, the elimination procedure of the MRA indicated that gender, external health locus of control, and personal knowledge of someone with HIV/AIDS were the strongest predictors of safe-sex practices of African Americans [R= .59, F< .01]. In conclusion, a HIV/AIDS sociocultural prevention theory was proposed which later became known as the relational-behavior model (RBM).

HIV Prevention Measurement Tools

In HIV prevention, there has been various psychological and behavioral scales developed to measure the risk and protective factors of at-risk populations. For example, the relational-behavior survey (RBS) was developed to measure the sociocultural factors of the RBM. The RBS consisted of an 18-item questionnaire designed to assess at-risk African Americans (Chandler & Perkins, 2007). The RBS was designed to assess six factors of the RBM: subjective knowledge, knowledge deficiency (objective factual knowledge), relational skills, HIV/STD stigmatization, community empowerment, and health distrust. The syntonic factors (or protective factors) were delineated as subjective knowledge, relational skills, and community empowerment. The dystonic factors (risk or barrier factors) were delineated as knowledge deficiency, HIV/STD stigmatization, and health distrust. Based on a sample of 10 African Americans, (mean age was 22), the RBS subscales were analyzed. The participants were heterosexual, single and sexually active in the past six months. The income range was $10,000 to $40,000. An exploratory correlational analysis suggested the following: a modest relationship between gender and

relational skills (rho=.67, p<.05) and a modest relationship between gender and HIV/STD stigmatization (rho=.70, p<.05). In conclusion, the correlational analysis suggested that females were more likely to have HIV/STD stigmas than males and more likely to negotiate safer-sex practices. Future studies should consider the validation of RBS knowledge deficiency factor with other HIV knowledge measures. Although there are various knowledge measures, there were a limited number of measures psychometrically designed to assess at-risk populations.

In terms of measuring HIV knowledge, the AIDS Knowledge Test (AKT) has been developed by Koopman, Borus, Henderson, Bradley & Hunter (1990). The AKT is a 52-item measure of HIV/AIDS-related knowledge. The AKT assesses six domains: definitions, outcomes, risk behavior, transmission, prevention, and HIV testing. However, a factor analysis on the AKT was not completed to determine the validity of its factor structure. Moreover, a reliability analyses with the AKT domains indicated poor internal consistencies (Carey, et al., 1997). Another measure of HIV knowledge is the AIDS Risk Behavior Knowledge Test (ARBKT: Kelley, Lawerence, Hood, & Brasfield, 1989). The ARBKT is a 40-item measure that was developed specifically for gay men. A validation study of the ARBKT was based on gay men who attended AIDS educational seminars. Although the ARKBT has shown moderate psychometric qualities, its factor structure has not been replicated (Carey et al., 1997). In addition, the AIDS Knowledge, Feelings, and Behavior Questionnaire (AKFBQ) is a 107-item measure developed specifically for African American women. The weakness of the AKFBQ is

that there was no replication or rotation of factors reported and the validity of the knowledge subset (Dancey, 1991; Carey et al., 1997).

The HIV Knowledge Questionnaire (HIV-K-Q), is a combination of AKT, ARBKT, and AKFBQ. The HIV-K-Q was developed as a 62-item questionnaire concerning HIV/AIDS knowledge. Psychometrically, the HIV-K-Q was administered to 409 women and 227 men. An Item analysis resulted in the deletion of 17 items that did not correlate with the total score. A factor analysis was conducted on the remaining 45 items that resulted in a single factor labeled HIV knowledge. The generalizability of this item (HIV Knowledge) was confirmed with data from 285 women and 76 men. Reliability analyses revealed that the HIV-K-Q is internally consistent (alpha = .91) and stable over 1-week (r = .83), 2-week (r = .91), and 12-week (r = .90) intervals. Evidence for the validity of the HIV-K-Q was conducted using known groups and treatment outcome analyses.

Additional HIV-K-Q evidence revealed associations between scores and level of educational attainment. Carey et al, (1997) discriminate evidence was obtained through non-significant relationships between the HIV-K-Q and potential biasing constructs that included social desirability. As a result of examining these measures, the HIV-K-Q is a tested, reliable, valid measure suitable and understandable for individuals with low-literacy skills and appropriate

for adult populations regardless of gender, ethnicity, or sexual orientation. Carey et al. (1997), suggested the HIV-K-Q requires a sixth-grade education and takes seven minutes to complete.

In the past two decades, the measurement of self-efficacy has been an important factor in HIV/AIDS prevention. The most current version of self-efficacy and HIV prevention is the HIV Serostatus Disclosure and Safer Sex Self Efficacy Scale (HDSS). The HDSS was a scenario-based self-efficacy measure (Kalichman, et al., 2001). The HDSS assessed two domains: discussion to disclose HIV status to sex partners and negotiating of safer sex practices. According to Forsyth and Carey (1998), self-efficacy measures are often prone to ceiling effects. In turn, Kalichman et al., (2001), used four self-efficacy measures to compare distribution scores. As a result, the mean self-efficacy ratings for each scale exceeded the scale midpoints; mean ratings were 7.5 for both disclosure decision scales, 8.5 for the safer sex discussion scale, and 7.5 for refusal of unsafe sex. The scales showed relatively uniform standard deviations (2.2-2.9), and scores were skewed, ranging from -1.1 to -1.2. Moreover, scale intercorrelations were computed among the four self-efficacy scales separately for men, women and over the entire sample. The results showed significant intercorrelations (r's .29-.95) among the scales. However, intra domain correlations were substantially greater in magnitude (r's .59-.95) than correlations between functional domains (r's .29-.63). These results suggested a distinction between scales assessing self-efficacy for HIV status disclosure decisions and self efficacy for negotiating safer sex. According to Kalichman et al., (2001), self efficacy for negotiating safer sex correlated with

number of sex partners reported in the past 6 months, r(341) = -.20, p< .01, and percent of intercourse occasions protected by condoms for men, r(142) = .25, p< .01, and women, r(100) = .31, p<.01.

On the other hand, self-efficacy for refusing unsafe sex correlated with percent of intercourse occasions protected by condoms for men, r(142) = .35, p<.01, and women, r(100) = .30, p<.01. According to Kalichman et al. (2001), self-efficacy for negotiating safer sex scores with comparison of 102 participants who reported 100% condom use during the past 6 months to 140 persons who had intercourse without consistent condom use proved that persons who used condoms during every act of intercourse displayed greater negotiation of safer sex self efficacy than inconsistent condom users (M = 9.1 and M = 7.8), t (240) = 5.2, p < 01. Moreover, self efficacy for refusing unsafe sex with persons who use condoms during every act of intercourse showed greater negotiating safer sex self-efficacy than inconsistent condom users (M = 8.6 and M = 6.4, respectively), t(240) = 6.6, p<.01. Reliability analyses of HDSS showed internal consistencies for all four scales ranged from .92-.95. The reliability analyses showed effective disclosure decision at alpha =.94; knowing it is safe to disclose, alpha = .94; safer sex discussion, alpha .92; and risk refusal, alpha = .95. The self efficacy scale showed effective disclosure decisions, =.93; knowing it is safe to disclose, alpha = .90; bringing up the need to use condoms, alpha = .95; and unsafe sex refusal, alpha =.90. Finally, convergent and divergent validity suggested that self-efficacy scales were significantly related to intention items, with higher degrees of self-efficacy related to increased intentions to perform associated behaviors.

Kalichman et al., (2001), suggested there was a relationship between social support and self-efficacy scales for disclosure decisions, and self-efficacy for discussing condom use was associated with HIV symptoms. In conclusion the HDSS (self-efficacy scale) is a valid and reliable measure recommended by Bandura according to Kalichman et al., 2001. However, some of the scales limitations include the inability to distinguish between self-efficacy with HIV-positive and HIV negative partners, and behavioral domains assessed, development on convenience samples and ceiling effects.

In the past two decades, various studies have suggested parental guidance and communication as a significant measure of HIV prevention among at-risk adolescents (Whitaker & Miller, 2000; Ramos, Jaccard, Dittus & Collins, 2008, Hughes, 1998; Strauss & Corbin, 1990). For example, Jaccard, Dittus and Gordon (2000) examined mothers' reservations regarding HIV-related communications with their teens. Further empirical investigations on parent-adolescent communication have indicated five categories regarding HIV-related communication: pregnancy, STD, HIV/AIDS, condom use, and general information about sex (Sales et al., 2006). In addition, five focus groups of African American adolescent girls (N =40) were use to determine whether these topics were ever discussed with parents. Health care professionals were also used to examine appropriate use of five questions to subsequently develop the parent-adolescent communication scale (PACS).

Each of the five PACS questions was determined applicable to adolescent girls, and relevant for sexual communication and sexual health. Item analysis was conducted, and items that constructed parent-adolescent sexual communication correlating at .90 level or above were retained in PACS. Items that decreased the Cronbach's alpha were deleted. PACS was originally administered as a longitudinal evaluation study of HIV prevention for African American adolescent girls. Thus, repeated administration of PACS was administered on long intervals which coincided with data collection schedules. Intervention groups were used for internal consistency analyses as well as concurrent and discriminant construct validity.

Conversely, comparison groups were used for test-retest reliability and predictive validity (Sales et al. 2006). The University of Alabama at Birmingham Internal Review Board approved the study from December 1996 through April 1999. African American adolescent girls at four community health agencies were self-identified, recruited and screened for study inclusion criteria. Criteria of the study included being an African American female ranging in age from 14 to 18 and sexually active (vaginal intercourse within the past 6 months). Out of 609 participants 522 met eligibility criteria (n = 522). PACS showed satisfactory internal consistency (across multiple administrations) with acceptable test-retest reliability over a 12-month follow-up time-frame. Sales et al., (2006) utilized the Partner Communication Scale (PCS) to establish concurrent and discriminant construct validity of the PACS. PCS is a measure composed of five items that assess adolescent's frequency of communicating with a male sex partner (Milhausen et

al., 2006a).

The PACS test-retest reliability was assessed using the comparison sample and calculated by Pearson correlations between scores at the baseline of 6- and 12- month follow-up periods that included 243 and 242 participants within the control group. Concurrent and discriminant construct validity was assessed with the comparison sample by calculating Pearson correlations between the baseline scores of the PACS and PCS at 6- and 12- month assessments (Sales et al., 2006). Moreover, study readability was assessed based on Flesh-Kincaid assessment which indicated an individual should have a minimum of a fourth to fifth grade education to understand the written text. As a result, the PACS is a brief, self-administered scale of five-items that is suitable for low-literate samples. These results also suggest that PACS is a reliable measure and valid measure for parent-adolescent communication about sex with predictive utility.

Summary

According to Burns and Dillon (2005), the traditional behavioral models and psychological measures have failed to examine the sociocultural factors of HIV/AIDS prevention. The devastating impact of HIV/AIDS in the African American community has led researchers to examine the theories and measurements of HIV/AIDS prevention (Chandler, 1999; Burns, 1995; Carey et al, 1997; Carey et al, 2000; DiClemente et al, 1990; Ford & Goode, 1994; Johnson, Gilbert & Lollis, 1994). The RBM was developed based on empirical and theoretical integration. In theory, the RBM provided a measurable approach to identifying the cognitive, relational, behavioral, social, and community factors associated with HIV/AIDS prevention. Additional research investigations of the RBM among African American families and parents may be useful for healthcare professionals, and adjunctive service providers.

The Relational-Behavior Model

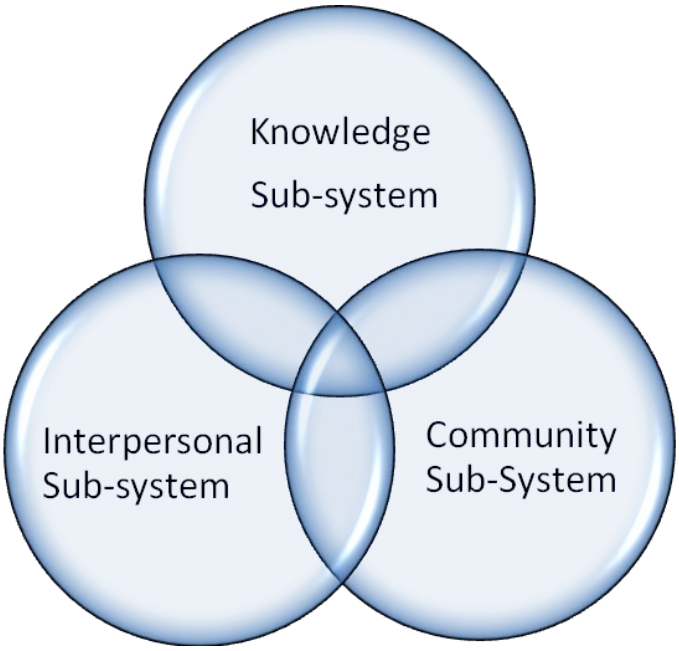
As an eclectic psychological theory, the relational-behavior model conceptualizes HIV/AIDS prevention as a preventive system. (Chandler & Perkins, 2007). This system contains collectivistic (relational) and individualistic (cognitive-behavioral) sub-systems. The RBM consisted of three major sub-systems: knowledge sub-system (KS), Interpersonal sub-system (IS), and community sub-system (CS). In theory, each sub-system contained sub-factors (or variables) that produced psychosocial energy throughout the preventive system. System efficacy referred to the system's overall ability to prevent HIV/AIDS. The RBM constructs are the following: Knowledge Sub-system (KS) focused on the individual's cognitive (knowledge) aspect of HIV/AIDS prevention. KS contained the subjective knowledge (S) and knowledge deficiency sub-factors. (S) was the syntonic sub-factor that emphasized an individual's personal awareness or knowledge of someone infected with HIV/AIDS. (K) was the dystonic sub-factor that emphasized the individual's lack of accurate knowledge about HIV infection (low objective

knowledge). Interpersonal Sub-System (IS) focused on the individual's relational-behavioral aspects of HIV/AIDS prevention. The interpersonal sub-system contained the relational communication and HIV/STD stigmatization sub-factors.

Relational skills (R) is the syntonic sub-factor that focuses on the individual's initiation or negotiations of safe-sex practices (cognitive-behavioral skills). HIV/STD Stigmatization (H) is the dystonic sub-factor that emphasizes the individual's stereotypes and stigmas associated with HIV/STDs (a cognitive component). Community Sub-System (CS) focuses on the individual's cognitive-behavioral-relational dynamic. Community sub-system contains community empowerment and health distrust sub-factors. Community Empowerment (C) is the syntonic sub-factor that emphasizes the individual's perceived community control and awareness of HIV/AIDS in their community (a cognitive-relational component). Health Distrust (D) is the dystonic sub-factor that emphasizes the individual's suspicion and distrust of health messages, including, HIV/AIDS prevention (a cognitive-relational component).

FIGURE 1

The Relational-Behavior Model: The Major Sub-Systems



Note: The RBM is an eclectic prevention theory. The RBM contains three sub-systems-the knowledge sub-system, the interpersonal sub-system, and the community sub-system. System efficacy refers to the system's overall ability to prevent HIV/AIDS. System efficacy was based on the difference between the syntonic energy and dystonic energy. Syntonic energy was defined as the sum of subjective knowledge, relational skills, and community empowerment. Dystonic energy was based on the sum of knowledge deficiency, HIV/STD stigmatization, and health distrust (Chandler & Perkins, 2007).

TABLE 1. The Relational-Behavior Model (RBM) Variables

Variables	**Concentration**	**Goal**
Subjective Knowledge	Personal, Families	Improve Personal Awareness of HIV/AIDS
Knowledge Deficiency	Families, Schools, Churches	Reduce misconceptions About HIV/AIDS

Relational Skills	Families, Relationships	Improve communication skills regarding safe-sex practices
HIV/STD Stigmatization	Families, Schools, Churches	Reduce stereotypes and Myths related to HIV/STDs
Community Empowerment	Families/Schools Churches/Government Politics	Improve community awareness regarding preventive resources.
Health Distrust	Families/Schools Churches/Government Politics	Reduce cultural distrust Regarding HIV/AIDS

Significance of the Study

According to the mission statement of the Ad Hoc Committee on AIDS and Psychology of the American Psychological Association (COPA), it was essential to provide behavioral research that provided linkages to medical professionals and community organizations that prevented HIV/AIDS among at-risk populations (American Psychological Association, 2009). This study attempted to determine predictors of HPM. This study also attempted to assist behavioral researchers, medical professionals, school systems and community organizations to identify and develop effective prevention programs for at-risk populations. Previous studies by the Centers for Disease Control indicated that HIV/AIDS became a significant problem for adolescents in the United States (CDC, 2008). Specifically, African Americans were the highest at-risk ethnic group in the United States for HIV/AIDS. In 2008, African Americans represented over 55% of all HIV infections in the United States, while consisting of only 13% of the U.S. population (CDC, 2008). Among U.S. adolescents with HIV, African Americans represented 70% of the cases between the ages of 13 and 14; and 81% of the cases between ages 15 and 24 (CDC, 2008).

Pilot Field Test Study on the RBS

A pilot field test of the RBS was conducted at a private healthcare facility in the southwestern region of the United States in 2010. A pilot sample of 18 females were used in the study (97% African-American and one percent White). The age range was 15-61 (77% were between the ages of 15-36). Majority of the sample was Medicaid eligible. The sample was generated within an inner city area located in a metropolitan city in Texas. The zip code's estimated population in 2009 was 20,945 residents. According to geographical statistics, a third of the residential population (34%) was African American; consisting of nearly half (45%) adult females less than 65 years of age. The median income is $41,000. Health department statistics in 2008 indicated the zip code region with moderate to high prevalence of HIV and other sexually transmitted diseases.

The relational-behavior survey (RBS) version two was used in the field test study (Chandler & Perkins, 2007). The RBS assessed six factors: subjective knowledge (i.e. personal knowledge of HIV), knowledge deficiency (i.e. low factual HIV knowledge), relational skills (I.e. HIV communication), HIV/STD stigmatization (i.e. HIV stereotypes and myths), community empowerment (i.e. community testing services), and health distrust. The scoring range for the RBS was 0-10. In this study, knowledge deficiency was reversed scored and reflected participant's accurate factual knowledge about HIV/AIDS. The RBS also included a risk behavior assessment which was defined as the use of alcohol/drugs, sexual activity, and condom use in the past six months. The CHOICES survey (approved by the Texas Office of Prevention of Developmental Disabilities for use) was also distributed as a measure of alcohol use and birth contraceptive use among the participants. A convenience sampling procedure was used at a private counseling center and pediatric clinic. A consent form was provided to all of the participants outlining the nature of the study, timeframe, debriefing procedures, and referrals. The debriefing and referral services were provided by the principal investigators. The medical director provided authorization for the

A descriptive analysis was provided for the RBS was provided on Charts 1-3. On Chart 1, an emotional and behavior profile was provided. Approximately 50% of the participants reported difficulties with anger; 21% reported problems with drugs/alcohol (22% reported four or more standard drinks in one day; and five percent reported eight or more standard drinks in one day); 78% reported problems with depression or sadness; 48% reported problems with anxiety; 65% reported arguments and fights with others; and 55% reported problems with family members. On Chart 2, the CHOICES survey results indicated the contraceptive use among the participants. Majority (16%) reported their tubes were tied as form birth control. The lowest (less than six percent) reported their ovaries were removed as a form of birth control. The results of the RBS indicated the profile average of each of the following RBM factors: subjective knowledge (mean=7), relational skills (mean=5), HIV/STD stigmatization (mean=6), community empowerment (mean=5), health distrust (mean=6) and risk behaviors (mean=2). A Spearman rho analysis indicated a modest positive relationship between sexual activity in the past three months and subjective knowledge [biserial coefficient = .498]. In addition, the analysis indicated a modest negative relationship between risk behaviors and subjective knowledge [biserial coefficient =-.572]; and modest positive relationship between HIV/STD stigmatization and community empowerment [rho = .537].

Conclusion to Field Test Pilot

In the past, the relational-behavior survey (RBS) has been useful in the assessment at-risk HIV-related behaviors among African Americans in non-medical settings (Chandler & Perkins, 2007a). However, based on the results of this pilot study, the RBS can also be useful in medical or healthcare facilities. Future studies with the RBS should consider the procedural guidelines of this pilot study to ensure human protection of participants. Moreover, future studies should note that the use of the RBS qualifies as exempted survey research with no more than minimum risks to voluntary participants if properly administered (Chandler, 1999). However, to ensure the protection of human participants, RBS responses in future research should be recorded and stored in a manner that does not directly or indirectly identify the participants. Also, when a researcher utilizes the RBS in medical entities, the medical director and participants/patients should be provided written authorization to outside sponsoring entities and/or researchers to review the data collection process.

Chart 1. RBM Pilot Study: Emotional and Behavioral Profile of Women

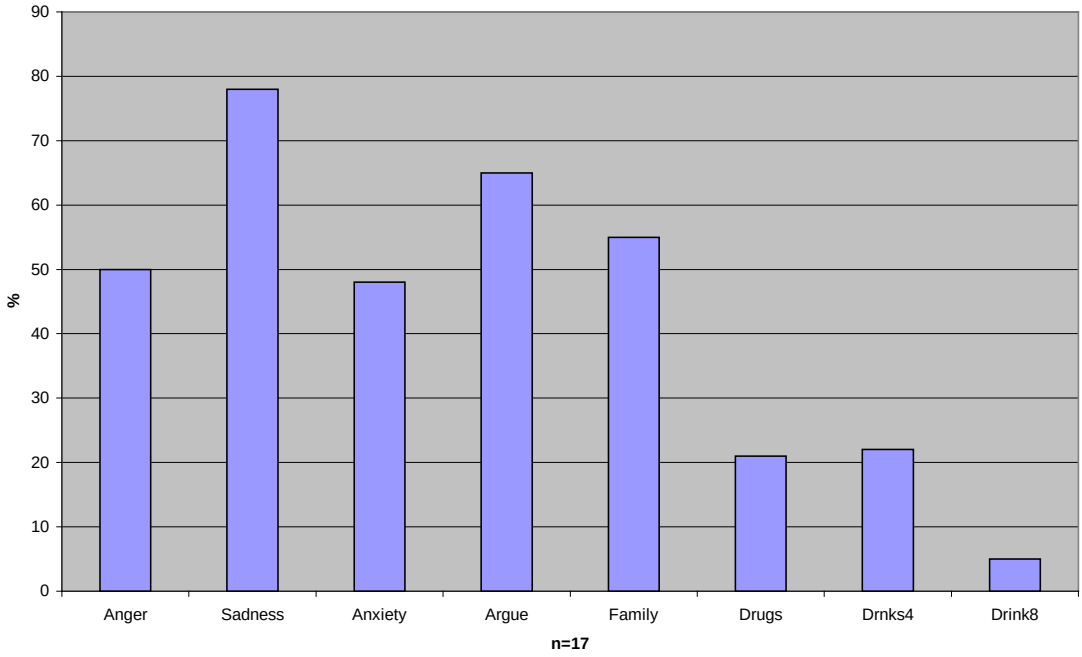
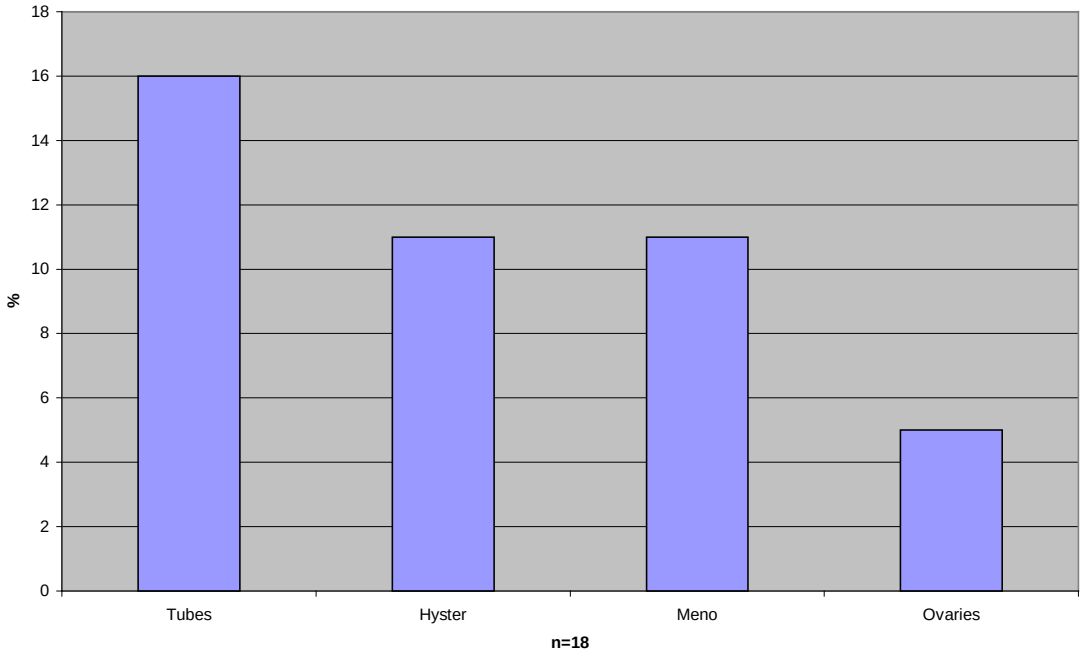


Chart 2. Contraceptive Use Among At-Risk Women



Statement of the Problem

Despite the use of the RBM, additional empirical research was recommended to determine the predictors of parental PAC (Miller & Whitaker, 2000). In theory, low factual knowledge, high HIV/STD stigmatization, low community empowerment, and high health distrust may negatively impact parental PAC producing what can be sub-classified as HIV-related miscommunication (HPM).

Purpose of the Research

The purpose of this research was to explore the relational behavior model (RBM) as a predictor of HPM among African American parents. Since the beginning of the AIDS epidemic, various preventive constructs and variables were used to predict HPM (Peterson & DiClemente, 2000); however, it can be argued that traditional constructs failed to predict HPM of African American parents in the United States (Burns & Dillon, 2005). The RBM identifies the cultural and contextual constructs or factors of HIV/AIDS prevention (Chandler & Perkins, 2007). Specifically. The RBM contains the following six measurable variables: knowledge deficiency, subjective knowledge, relational skills, HIV/STD stigmatization, community empowerment, and health distrust. Knowledge deficiency refers to lack of HIV/STD factual knowledge. Subjective knowledge refers to personal experiences or knowledge of someone with HIV/STDs. Relational skills referred to the family or intimate communication about HIV/STD prevention. HIV/STD stigmatization referred to the stigmas and stereotypes about HIV/STDs. Community empowerment referred to community resources and networks relative to HIV/AIDS prevention. Health distrust referred to the suspicion or distrust of HIV/STD preventive resources.

Expected Findings

A pilot study by Chandler, Jamshidi and Perkins (2007) suggested that the RBM was useful in determining the preventive needs of African Americans in educational settings. It was also the expectation of this study that the RBM can be useful in other professional settings (e.g., pediatric and other healthcare clinics). Moreover, the results of this study were expected to yield significant contributions to the field of psychology because of its ability to assist behavioral researchers in the identification and development of effective prevention programs.

METHODOLOGY

Methodological Assumptions

The constructs of the relational-behavior model (RBM) were assumed to exist psychologically in nature. The researchers also assumed that the research questions and hypotheses based on the RBM were measurable constructs and/or variables based on previous peer reviewed psychological research (Chandler & Perkins, 2007). In addition, it was assumed that data analysis would be interpretable to make conclusions relative to the hypotheses tested. Relative to a voluntary sampling procedure, the researchers assumed that participants would answer the questions with honesty and to the best of their knowledge. The researchers also

assumed that study measurements and modification relative to the data analysis effectively measured what each was designed to measure. According to the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1979), it was essential to ethically consider the autonomy of each participant in the study. In order to preserve autonomy; participants were fully informed about a study before it began. In addition, the method of collecting data will be safeguarded in respects to confidentially and sensitive information (i.e., communicable diseases, demographics). For the purpose of the study, ethical considerations were made in order to maintain respect and privacy rights for each volunteer participant. A consent form were designed outlining the nature of the study, timeframe, risk, and benefits, and debriefing procedures. Privacy rights and confidentiality will also maintained by storing surveys, measures, and demographic information separately from each signed consent form in a locked filing cabinet.

Another ethical consideration w the inclusion of women and minorities in the study population. The study adhered to federal regulations through the inclusion of African Americans as its target population and development of the research design (NIH, 2000). The research investigators recruited African American parents utilizing posted flyers (outlining the nature of the study) distributed in an authorized and approved medical clinic located in the southwest region of the United States. The research investigators also screened and interviewed each potential volunteer participant to determine eligibility. Due to the specifics of the study the researchers did not foresee, anticipate, or observe significant risk factors that would cause moderate or severe distress, mental or emotional harm to the participants. In addition, the discomforts of the research did not produce greater than those ordinarily encountered in daily life

or during the performance of routine physical or psychological examinations or tests (45 CFR 46 (i)). Methodological risks of the participants were ale controlled by following prior methodological and procedural steps in HIV prevention survey research (Chandler, 1999). For instance, the instruments and/or questionnaires utilized in the study may have produced unpleasant emotional and cognitive states of the participants (i.e., memories of past experiences or association of stigmas). Based on observations, if any discomforts exist, they were temporary and dissipated by the end of the study. However, in an effort to reduce these risks, 15 minutes at the termination of the study would be given for debriefing, referrals and resources for participants needing health-related resources associated with the research.

Operational Definitions

1. Subjective Knowledge: Referred to the parent's personal awareness or knowledge of someone HIV/AIDS (Chandler & Perkins, 2007a).
2. Knowledge Deficiency: Referred to the parent's lack of accurate knowledge of HIV/AIDS (Chandler & Perkins, 2007a).
3. Relational Skills: Referred to the parent's ability to initiate and to negotiate safe sex practices (Chandler & Perkins, 2007a).
4. HIV/STD Stigmatization: Referred to the parent's stereotypes and stigmas associated with HIV/STDs (Chandler & Perkins, 2007a).
5. Community Empowerment: Referred to the parent's perceived community control and awareness of HIV/AIDS in their community (Chandler & Perkins, 2007a).
6. Health Distrust: Referred to the parent's suspicion and distrust of health messages including HIV/AIDS prevention (Chandler & Perkins, 2007a).

7. HIV-Related Parental Miscommunication (HPM): Referred to parental miscommunication about HIV-related risk behaviors to their children and/or adolescent (Sales et al., 2006). As a uni-dimensional construct it was used interchangeably with low levels of parental-adolescent communication (PAC).
8. HIV Self-Inefficacy: Referred to a parent's perceived inability to prevent and disclose HIV infection (Kalichman at al., 2001).
9. System Efficacy: Referred to a preventive system's ability to prevent HIV/AIDS (Chandler & Perkins, 2007a).
10. HIV Knowledge: Referred to a parent's accurate knowledge of HIV-related issues (Carey, Morrison-Beedy & Johnson, 1997).

Research Questions

Utilizing the RBM, the following research questions (RQ1-RQ7) were examined:

RQ1. Is there a relationship between parental subjective knowledge of HIV/AIDS and HIV-related parent miscommunication (HPM)?

RQ2. Is there a relationship between parental knowledge deficiency and HPM?

RQ3. Is there a relationship between parental relational skills and HPM?

RQ4. Is there a relationship between parental HIV/STD stigmatization and HPM?

RQ5. Is there a relationship between parental community empowerment and HPM?

RQ6. Is there a relationship between parental health distrust and HPM?

RQ7. Is there a combined prediction of subjective knowledge, knowledge deficiency, relational skills, HIV/STD stigmatization, community empowerment, health distrust, and HPM?

Hypothesis

Based on the above research questions, the following hypotheses (H1-H7) were tested using correlations and a multiple regression analysis (MRA) at the .05 level of significance:

H1: There is a significant negative relationship between subjective knowledge and HPM.

H2: There is a significant positive relationship between knowledge deficiency and HPM.

H3: There is a significant negative relationship between relational skills and HPM.

H4: There is a significant positive relationship between HIV/STD stigmatization and HPM.

H5: There is a significant negative relationship between community empowerment and HPM.

H6: There is a significant positive relationship between health distrust and HPM.

H7: There is a significant prediction of the RBM factors (subjective knowledge, knowledge deficiency, relational skills, HIV/STD stigmatization, community empowerment, health distrust) with HPM.

Participant s

Seventy-five African American adults volunteered (56 females, 18 males, and one unidentified) to participate in the study. The age categories were the following: 25 and less were five percent; 25-35 were 27%; 36-45 were 21%; 46-55 were 25%; and more were 21%. In terms of marital status, 65% were not married. Fifty-one percent were employed and 41% reported a household income of $10,000 or less. Sixty-seven percent were obtaining some level of college or vocational training.

Procedures

A quantitative (non-experimental) research design was used in the study. A convenience sampling procedure was used to obtain a volunteer sample of African American parents at a private medical facility in the southwest region of the United States. For recruiting volunteer participants, a flyer was posted throughout the medical facility for community outreach. The flyer outlined the nature of the study, and the criteria for participation. Each participant was screened

by the researcher to determine sample eligibility. The contact information regarding the study and the investigators were also provided on the flyer. The research procedures were reviewed and approved by the medical director at the data collection site prior to the initiation of the study. The medical director was an affiliate of a majority medical university that approves research investigations on human participants. The research investigation qualified as expedited and imposed no more than minimal risk to participants.

To address the issues of sample vulnerability (e.g. cultural distrust), the recruitment, screening and surveys were reviewed by culturally competent healthcare professionals prior to the initiating the study (Chandler, 1997). After screening, each eligible volunteer participant was provided a consent form outlining the nature of the study, the timeframe of the study, and debriefing procedures.

Measures

As noted previously, the HIV Knowledge Questionnaire (HIV-K-Q) was used as a measure of HIV knowledge (Carey, Morrison-Beedy & Johnson, 1997). The Relational BehaviorSurvey (RBS) was used to assess the six constructs of the RBM: subjective knowledge, knowledge deficiency, relational skills, HIV/STD stigmatization, community empowerment and health distrust (Chandler & Perkins, 2007a). Based on the significant of the study, a modified HIV Serostatus Disclosure and Safer Sex Self Efficacy Scale (HDSS) was used to measure HIV self-inefficacy (Kalichman et al,). Lastly, based on the significance of the study, a modified Parent-Adolescent Communication Scale (PACS) was used to measure HIV-related parental

miscommunication (HPM) (Sales, et al, 2006)..

Data Analysis

Based on Chandler (1999), a power analysis estimate was conducted on the sample. The results of the analysis indicated that the sample consisted of over 60% power for rejecting a false null hypothesis. In terms of measurements, scaling modifications were provided to meet descriptive and statistical interpretations. The RBS scaling was modified to provide an index of the subscales from 0-3. The higher subscale scores indicated a higher degree measurement of the RBS subscales constructs (e.g. higher levels of subjective knowledge, knowledge deficiency, relational skills, HIV/STD stigmatization, community empowerment, and health distrust).

For scaling purposes, 13 HIV-K-Q true response items were utilized as an index to measure HIV-Knowledge.

The modified HIV-K-Q index consisted of the first 13 true response items. The index of the 13 items indicated that a higher score resulted in a higher degree of HIV knowledge. The HDSS was also modified and indexed for statistical purposes to measure HIV-Self-Inefficacy. The HDSS scoring range for each HDSS item was 1-4. To measure HIV-Self-Inefficacy the scoring range on the HDSS items 2-4 were re-coded as 0. The modified HDSS index indicated that a higher score resulted in higher HIV self inefficacy. Lastly, the PACS was modified to measure parental miscommunication. The PACS was also modified and indexed for statistical purposes to measure parental HIV-related miscommunication. The PACS scoring range for each PACS item was 1-4. To measure parental HIV-related miscommunication the scoring range on PACS items 2-4 were re-coded as 0. The modified PACS index indicated that a higher score resulted in a higher degree of parental HIV miscommunication. Educational level and household with children were calculated as ordinal and ratio data respectively. Pearson, Spearman Rho, Biserial and Point Biserial correlations were calculated at the .05 level of significance to test each hypothesis noted in Chapter One. A multiple regression analysis (backward elimination procedure) was conducted utilizing the following variables: gender, age, education, household capacity, and RDM factors.

RESULTS

Description

Seventy-five African American adults volunteered (56 females, 18 males, and one unidentified) to participate in the study. The age categories were the following: 25 and less were five percent; 25-35 were 27%; 36-45 were 21%; 46-55 were 25%; and more were 21%. In terms of marital status, 65% were not married. Fifty-one percent were employed and 41% reported a household income of $10,000 or less. Sixty-seven percent were obtaining some level of college or vocational training.

Summary of Results

To determine the validation of the RBS in this study a correlational analysis was conducted utilizing the modified HIV-KQ, and the modified HDSS. The results of the psychometric analysis indicated the following: There was no significant relationship between the RBS subjective knowledge subscale and the modified HIV-KQ *($r = .11$, $p > .05$)*. There was no significant relationship between the RBS knowledge deficiency subscale and the modified HIV-KQ *($r = -.02$, $p > .05$)*. There was no significant relationship between the RBS relational skills

subscale and the modified HIV-KQ *(r = .02, p > .05)*. There was no significant relationship between the RBS HIV/STD stigmatization subscale and the modified HIV-KQ (r = -.44, p >.05). There was no significant relationship between the RBS community empowerment subscale and the modified HIV-KQ *(r = -.06, p > .05)*.

Lastly, there was no significant relationship between the RBS health distrust subscale and the modified HIV-KQ *(r = -.05, p > .05)*. The results of the psychometric analysis of the RBS subscales and the modified HDSS indicated the following: There was no significant relationship with the RBS subjective knowledge subscale and the modified HDSS *(r = -.14, p > .05)*. There was no significant relationship between the RBS knowledge deficiency subscale and the modified HDSS *(r = .04, p > .05)*. There was a significant relationship between the RBS relational skills subscale and the modified HDSS *(r = -.23, p < .05)*. There was no significant relationship between the RBS HIV/STD stigmatization subscale and the modified HDSS *(r = -.004, p > .05)*. There was a significant relationship with the RBS community empowerment subscale and the modified HDSS *(r = -.33, p <.01)*. There was no significant relationship between the RBS health distrust subscale and the modified HDSS *(r = -.03, p > .05)*.

A test of multicollinearity was conducting on the RBS. The results of the multicollinearity analysis indicated the following: There was a significant relationship between subjective knowledge subscale and the knowledge deficiency subscale *(r = .26, p < .05)*. There was a significant relationship between the subjective knowledge subscale and the relational skills subscale *(r = .44, p < .01)*. There was a significant relationship between subjective knowledge

subscale and the HIV/STD stigmatization subscale *(r = .26, p < .05)*.

There was a significant relationship between subjective knowledge subscale and the community empowerment subscale *(r = .44, P < .01)*. There was a significant relationship between subjective knowledge subscale and the health distrust subscale *(r = .32, p <.01)*. In addition, there was a significant relationship between the knowledge deficiency subscale and the relational skills subscale *(r = .33, p < .01)*. There was a significant relationship between the knowledge deficiency subscale and the HIV/STD stigmatization subscale *(r = .42, p < .01)*. There was a significant relationship between the knowledge deficiency subscale and the community empowerment subscale *(r = .23, p < .05)*. There was a significant relationship between the knowledge deficiency subscale and the health distrust subscale *(r = .32, p < .01)*. There was a significant relationship between the relational skills subscale and the HIV/STD stigmatization subscale *(r = .28, p < .05)*. There was a significant relationship between the relational skills subscale and the community empowerment subscale *(r = .57, p < .01)*. There was a significant relationship between the relational skills subscale and the health distrust subscale *(r = .24, p < .05)*. There was a significant relationship between the HIV/STD stigmatization subscale and the community empowerment subscale *(r = .41, p < .01)*. Lastly, there was a significant relationship between the community empowerment subscale and the health distrust subscale *(r = .35, p < .01*.

Details of Analysis and Results

The results of the tested hypotheses (H1-H7) were noted as the following:

H 1: The test of hypothesis one indicated that there was no significant negative relationship between subjective knowledge and HPM (r = -.19, p > .05); H 2: The test of hypothesis two indicated that there was no significant positive relationship between knowledge deficiency and HPM (r = -.10, p > .05); H 3: The test of hypothesis three indicated that there was significant negative relationship between relational skills and HPM (r = -.30, p < .01); H 4: The test of hypothesis four indicated that there was no significant positive relationship between HIV/STD stigmatization and HPM (r = -.18, p > .05); H 5: The test of hypothesis five indicated that there was no significant negative relationship between community empowerment and HPM (r = -.13, p > .05); H 6: The test of hypothesis six indicated that there was no significant positive relationship between health distrust and HPM (r = .012, p > .91); and H 7: There was a marginal significant prediction of the RBM factors (subjective knowledge, knowledge deficiency, relational skills, HIV/STD stigmatization, community empowerment, health distrust) with HPM (R = .38, p =.09); R squared = .44. In an exploratory MRA backward elimination procedure of the RBM factors and contextual variables (parental age, gender, educational level, and the number of children in the

household, there was a significant prediction of HPM (R=.51, p <.01); R squared= .26 The backward elimination procedure further indicated that parental educational level and relational skills were the strongest predictors of HPM (R = .44, *p* <.01); R squared = .19.

DISCUSSION

According to the CDC (2009), African Americans represent over 55% of all HIV infections in the United States. Seventy percent of African American adolescents (ages 13 to 14) are at risk for HIV infection. Miller and Whitaker (2001) and other subsequent research studies have suggested that PAC had increased safe sex practices of U.S. adolescents. Despite these research findings, there is a limitation in identifying cultural and contextual predictors of HPM within the African American community.

The RBM is a HIV/AIDS prevention theory that utilizes specific cultural and contextual factors (Chandler & Perkins, 2007a). The RBM conceptualizes HIV/AIDS prevention as a preventive system containing three primary subsystems: a knowledge sub-system (KS), an interpersonal sub-system (IS), and a community sub-system (CS). Each subsystem contains two types of psychosocial energy states. Syntonic factors measure the positive or protective factors of HIV/AIDS prevention, and dystonic factors measure the negative or risk factors of HIV/AIDS prevention. KS contains subjective knowledge (syntonic), knowledge deficiency (dystonic); IS contains relational skills (syntonic), HIV/STD stigmatization (dystonic); and CS contains community

empowerment (syntonic) and health distrust (dystonic). According to the RBM, system efficacy was defined as the preventative system's overall ability to prevent HIV/AIDS. System efficacy described a participant or sample as either primarily syntonic or dystonic.

Discussion of Results

The results of this study indicated that there was a moderate degree of risk within the sample's preventative system and that the participants would benefit from additional HIV/AIDS prevention services focusing on the reduction of HPM. The confirmation of the sample's dystonic pattern was revealed through the negative relationship between the sample's syntonic factors and HPM. Nonetheless, the results indicated that the RBM factors in combination significantly predicted HPM among African American parents. The strongest predictors of HPM in combination were relational skills and education. Specifically, as relational skills increased, HPM decreased. However, as educational levels increased, the HPM increased. In further examination, there was a relationship between relational skills and HIV/STD stigmatization. In other words, as relational skills increased among African American parents, HIV/STD stigmatization also increased. In regards to relational skills, the results suggested that, as African American parents' educational levels increased, HIV/STD stigmatization increased. Thus, African American parents with more education communicated more stereotypes and myths regarding

HIV/STD transmission than African American parents with less education.

Limitations

To improve generalizability, future studies should examine the RBM and HPM of African American parents throughout the United States. Increases in sample size and the standardization of the RBS would be useful in reducing the threats to internal validity in subsequent studies.

Recommendation for Future Interventions

The results of the study contributes to the existing HIV prevention programs (Murry et al, 2011; Hosek et al., 2011; Warren-Jeanpiere et al., 2011; Donenberg et al., 2011; Dolcini, 2010; Viosin & Bird, 2009; Baldwin et al., 2008; Milhausen et al., 2008; Tieitchman et al, 2008; Spitalnick et al., 2007). According to McWhirter et.; (1998), there are specific positive and negative factors associated with risk-taking behaviors among African American adolescents. The positive factors, also called "protective factors," include a stable family unit that facilitates parent-child communication; adequate school or formal education about high-risk behaviors; and prosocial peer interactions. In turn, the negative factors, also called "risk factors," include a dysfunctional family unit that produces poor parent-child communication; poor school or educational resources; and negative peer interactions that promote juvenile delinquency.

Four major approaches address risk-taking behaviors among African American adolescents—school peer mediation, peer tutoring, peer facilitation, and life-skills training (McWhirter et al., 1998). School peer mediation is a method of conflict management that involves students or peers for the purpose of resolving conflicts, including risk-taking behavior. Peer tutoring refers to students who teach other students in formal and informal learning situations that are delegated, planned, or directed by an educator. Thus, peer facilitation refers to the use of trained and supervised students who utilize interpersonal and counseling-related techniques to reduce peer or student problems. Lastly, the life-skills model emphasizes teaching life skills that are typically provided by professionals but could also include parents or trained family members.

The implementation of a RBM family life-skills program in healthcare facilities can be useful based on the results of this study. The family life-skills program can be divided into four phases—the initial phase, the screening phase, program delivery phase, and program completion phase. During the initial phase, an overview of the program will be provided to African American parents. After the overview of risks and benefits of the program, parental consent will be obtained for each African American family to participate. Upon acceptance into the program, the screening phase will begin. The screening phase will involve the use of the RBS to assess each family's knowledge and interpersonal and community functioning.

Specifically, the stage of change (SOC) survey and the RBS can be used to measure relational skills and HIV/STD stigmatization in the reduction of HPM. During the program delivery phase, the risk reduction program can be based on the completion of six RBM goals with African American families. For example, RBM Goals for African American Families are described below:

1. *Improve personal and family awareness of the consequences of high-risk sexual activity.*
2. *Reduce knowledge deficiency or inaccuracy about high-risk sexual activity (e.g., unprotected sexual intercourse, sexually transmitted diseases, etc.).*
3. *Improve relational skills (e.g., communication about sex and refusal skills) relative to safe-sex practices among adolescents.*
4. *Reduce parental stigmas and stereotypes about HIV/STDs and safe-sex practices.*
5. *Improve community resources and networks that promote safe-sex practices.*
6. *Reduce cultural distrust and noncompliance (e.g., maintenance) of safe-sex practices*

Based on the findings in this study, the life-skills model would be the most effective method to emphasize the improvement of the parent-child relationship and the reduction of HPM for at-risk African American families. The life-skills model involves a five-step process in relation to high-risk behaviors—instruction, modeling, role playing, feedback, and homework (McWhirter, 1998). Based on the results of this study, parental teaching that involved an explanation of high-risk and low-risk behaviors were recommended. The modeling process should involve parental illustrations of a specific negative or high-risk behavior without utilizing stereotypes or myths about HIV/STD infection (e.g., a gay disease, a drug user's disease, etc.). In turn, family role-role playing should involve the adolescent's imitation of positive relational skills. In addition, the parental feedback process should involve instructional coaching or refinement of protective skills. Lastly, homework phases should involve the parental evaluation of skill performance. Future studies should consider the use of the RBM in HIV/AIDS prevention programs for African Americans.

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