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Sexual Health Knowledge Questionnaire for HIV+ MSM

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Most conceptual models of sexual risk behavior identify knowledge about HIV and STDs as an important determinant of risk behavior (e.g., Fisher & Fisher, 1992). Moreover, effective interventions to reduce risks for contracting HIV include modules that focus on improving HIV-related knowledge as part of broader strategy to motivate behavior change (e.g., Johnson, Carey, Marsh, Levin, & Scott-Sheldon, 2003). Although a few validated measures of HIV- and STD-related knowledge exist for use in primary prevention contexts (e.g., Carey & Schroder, 2002), there are no published measures to assess knowledge of specific relevance to sexual risk reduction for persons living with HIV. In this report, we describe reliability and validity data for the Sexual Health Knowledge Questionnaire (SHKQ) for HIV+ men who have sex with men (MSM), a measure developed to assess prevention-related knowledge pertinent to risk reduction among HIV+ MSM. Interventions to promote knowledge of health risks associated with sexual behavior among HIV+ MSM are an important public health priority (Vanable & Carey, 2006).

The SHKQ was developed as part of a program of research to evaluate a sexual risk reduction intervention for HIV+ MSM (Vanable et al., 2009). Knowledge domains assessed by the SHKQ correspond to core knowledge modules that were included in our sexual risk reduction curriculum. Reliability and validity information for the SHKQ are derived from baseline and 3-month follow-up data collected among HIV+ MSM who participated in our pilot intervention trial (Vanable, Carey, Brown, Bostwick, & Blair, 2008).

Description

The SHKQ consists of 18 true-false questions that assess prevention-related knowledge relevant to risk reduction among HIV+ MSM. The SHKQ focuses on health risks associated with sexual behavior rather than knowledge about medical aspects of HIV. In particular, items assess knowledge regarding the impact of STD co-infections on HIV infectivity and disease progression, health risks related to unprotected sex involving two HIV+ partners, the relationship of HIV viral load to infectivity, differences in HIV transmission risks associated with being the receptive or insertive partner for anal sex, and STD and HIV transmission risk associated with oral sex. The measure also includes items that assess knowledge of specific STDs that can affect the health of HIV+ MSM.

Response Mode and Timing

For each item, respondents are asked to indicate whether the statement is True or False. If they are unsure whether the statement is true or false, respondents are instructed to select Don’t Know, rather than guessing. The scale takes approximately 5 minutes to complete.

Scoring

For each item, responses are coded to indicate whether the respondent provided a correct or incorrect answer. Correct responses are assigned a value of one, whereas selection of an incorrect response or Don’t Know is assigned a value of zero. For the following items, true is the correct response: 1, 2, 3, 4, 6, 9, 11, 13, 15, 17, 18. False is the correct response for these items: 5, 7, 8, 10, 12, 14, 16. A total score is calculated by summing the number of correct responses across the 18 items. Higher scores indicate greater sexual health knowledge.

Reliability and Validity

African American (26%) and White (63%) HIV+ MSM were recruited from an infectious disease clinic in upstate New York to participate in the sexual risk reduction program (N = 80). Participants’ ages ranged between 22 and 62 (M age = 40.6, SD = 8.0). Participants had been infected with HIV for 9.0 years, on average (SD = 5.6). Participants were randomly assigned to an immediate intervention condition (n = 40) or a time-delayed intervention control condition (n = 40).

Test-Retest Reliability

Test-retest reliability data for the SHKQ were obtained using baseline and 3-month follow-up data among participants in the delayed intervention control condition. A total of 35 respondents in the delayed intervention condition completed the SHKQ both at baseline and at a 3-month follow-up. Test-retest reliability for SHKQ for this subsample was .78, p < .001. Based on established benchmarks.
Validit y
To provide evidence of convergent validity, the correlation between participants’ SHKQ scores and responses to five items assessing medical knowledge related to HIV (e.g., “A low CD4 count indicates that an HIV+ person has minimal damage to the immune system”) and five items assessing attitudes toward condom use (Sacco, Levine, Reed, & Thompson, 1991) was calculated. SHKQ scores were positively correlated with higher levels of medical knowledge related to HIV ($r = .34, p < .005$) and positively associated with having more favorable attitudes toward condom use ($r = .24, p < .05$). SHKQ scores also correlated positively with participants’ education level ($r = .23, p < .05$).

We conducted analyses to determine whether the SHKQ was sensitive to changes in knowledge following participation in a two-session group intervention to promote sexual risk reduction among HIV+ MSM. Our results demonstrated that knowledge scores improved from baseline ($M = 9.3, SD = 3.3$) to follow-up ($M = 10.7, SD = 2.4$) among participants in the immediate intervention condition who attended at least one intervention workshop, whereas knowledge showed no improvement from baseline to 3-month follow-up among participants in the delayed intervention condition who attended no intervention workshops. To examine whether there was a similar pattern of results for the delayed-intervention participants after receiving the intervention, we conducted paired t-tests evaluating change from the pre-intervention assessment to the 3-month follow-up. Delayed-intervention participants reported greater HIV transmission knowledge at the 3-month assessment ($M = 12.0, SD = 2.1$) than before receiving the intervention ($M = 10.1, SD = 2.4$), $t (23) = -4.8, p < .001$. Using these data, we suggest that our scale is sensitive to change in sexual health knowledge following participation in a two-session intervention program designed to address the unique health risks posed to HIV+ MSM.

Other Information
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References


Exhibit

**Sexual Health Knowledge Scale**

*Directions: For each statement, please tell us whether the statement is “True” or “False.” If you do not know the answer, please do not guess: please say “Don’t Know.”*

1. Having an undetectable viral load reduces the risk of transmitting HIV. 
   - True 
   - False 
   - Don’t Know

2. Having another STD makes it easier for an HIV+ person to give HIV to a
   - True 
   - False 
   - Don’t Know

3. Infection with another STD can speed up HIV disease progression for a person who is HIV+. 
   - True 
   - False 
   - Don’t Know

4. Human Papillomavirus (HPV) sometimes leads to rectal cancer in gay men. 
   - True 
   - False 
   - Don’t Know

5. Having an undetectable viral load eliminates the chance that a person with HIV will infect a sexual partner. 
   - True 
   - False 
   - Don’t Know

6. Among gay men, Hepatitis A is transmitted through rimming (oral-anal contact). 
   - True 
   - False 
   - Don’t Know

7. Doctors have now proven that reinfection with another strain of HIV worsens the health of an HIV+ person. 
   - True 
   - False 
   - Don’t Know

8. Unlike HIV, most other viral STDs can be cured. 
   - True 
   - False 
   - Don’t Know

(Cicchetti, 1994), our findings provide evidence of moderate to excellent test-retest agreement.
9. A person can get an STD through oral sex. True False Don’t Know

10. An HIV+ person is less likely to transmit HIV to a sexual partner if he is the insertive partner (top) than if he is the receptive partner (bottom). True False Don’t Know

11. Transmission of drug-resistant HIV to HIV-negative sexual partners is more common than transmission of drug-resistant HIV to HIV+ partners. True False Don’t Know

12. If you’re HIV positive, infections like gonorrhea and chlamydia in your penis can decrease the amount of HIV in your semen. True False Don’t Know

13. Syphilis is a bacterial STD. True False Don’t Know

14. It is a good idea to use Vaseline or baby oil with latex condoms. True False Don’t Know

15. Gonorrhea can be found in the throat. True False Don’t Know

16. For two HIV+ partners, STDs are less of a concern than contracting drug-resistant HIV. True False Don’t Know

17. HIV can be transmitted through oral sex, but the risks are much lower than for anal or vaginal sex. True False Don’t Know

18. An HIV+ person who has sex with another HIV+ person should still use a condom to avoid new health problems. True False Don’t Know

Adolescent AIDS Knowledge Scale
GREGORY D. ZIMET,1 Indiana University School of Medicine

The Adolescent AIDS Knowledge Scale (AAKS) was developed as part of a comprehensive questionnaire to evaluate adolescents’ knowledge, beliefs, and attitudes about acquired immunodeficiency syndrome (AIDS; Zimet et al., 1989). The knowledge scale was developed with two principal issues in mind. First, we wanted to ensure that the scale covered relevant material. To accomplish this goal, item content was derived from a 1988 informational brochure distributed to every household by the U.S. Government (Centers for Disease Control, 1988). As a result, the scale addresses multiple AIDS-related domains, including modes of transmission, high-risk behaviors, mortality, the existence of a cure, prevention of transmission, and the appearance of persons with AIDS (PWAs).

A second issue considered during scale development was that most existing AIDS knowledge scales confounded knowledge (i.e., awareness of scientific facts about AIDS) with beliefs. It seemed likely that a person might “know” the facts according to experts, but not believe them. In considering the design of AIDS education interventions, it appeared particularly important to assess AIDS awareness/knowledge separately from AIDS beliefs. To address this issue, each item on the AAKS was constructed to begin with the phrase “Do most experts say . . . ?” A separate but parallel AIDS Beliefs scale was developed to evaluate the extent to which adolescents believed what experts were saying.

Description
The AAKS has 22 items. Each item takes the form of a question (e.g., “Do most experts say you can get AIDS by giving blood?”). Transmission-related items cover true modes of transmission (e.g., sharing needles), low- or no-risk behaviors (e.g., sharing a glass of water), behaviors that increase risk of transmission (e.g., prostitution), and transmission of human immunodeficiency virus (HIV) without clinical AIDS. Two protection items address effective (i.e., condom use) and ineffective (i.e., eating healthy foods) protective behaviors. Finally, single items cover such topics as the mortality associated with AIDS, whether there is a cure for AIDS, and whether it is possible to determine if someone has AIDS by looking at him or her.

Response Mode and Timing
To each question, respondents are asked to circle yes, no, or don’t know. Response times vary, but typically the scale requires less than 5 minutes to complete.

Scoring
A correct response receives a score of 1. An incorrect answer or a don’t know response each receives a score of 0. For the following items, no is the correct response: 1, 3,

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