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Understanding Low-Income, Minority Older Adult Self-Perceptions of HIV Risk

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Abstract

The number of people ages 50 or older living with HIV in the United States is increasing. Yet few older adults see themselves at risk of infection. This study examines the heuristic reasoning that low income, minority adults, ages 50 and older, use in calculating the likelihood of infection. The data are drawn from face-to-face interviews with a sample of 134 African American and Latino residents, ages 50–86, living in low-income housing in Chicago, Illinois, and Hartford, Connecticut. Results show that nearly half of the study's participants saw themselves to be at some level of risk for HIV. In self-assessing their risk, they relied on 7 heuristic categories: self-imperilment, social imperilment, fate, incidental contact, situational safety, medical iatrogenesis, and self-protection. These findings extend our understanding of how individuals make sense of their likelihood of experiencing a major health threat and provide insight into more effective HIV prevention programming for older adults.

Keywords

heuristics; HIV risk; low-income; minorities; older adults; risk perception

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Evidence shows that misconceptions about the risk and transmission of HIV lull some risk-taking older adults into feeling safe from infection, while encouraging others who are at little or no risk to overestimate or worry needlessly about acquiring the virus (Ward, Disch,

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Levy, & Schensul, 2004). Members of minority populations are especially vulnerable to these misconceptions (Centers for Disease Control and Prevention [CDC], 2007). The mismatch between subjective belief and actual risk is significant for prevention efforts for people older than age 50 because the prevalence of HIV among older adults continues to rise (CDC, 2007). Effective prevention education for older populations rests in part on countering the misconceptions about HIV transmission that place them at risk (Savasta, 2004) while also educating them about HIV to reduce unnecessary worries. Little research, however, has explored how older persons think about HIV risk exposure or assess their own likelihood of becoming infected.

In this paper, we address this gap by examining the heuristics, or mental shortcuts, that older persons use to assess the likelihood of contracting the virus. By heuristics, we mean the educated guesses, intuitive judgments, and/or common sense understandings that people employ when calculating the unknown odds of an event occurring (Gilovich, Griffin, & Kahneman, 2002; Kahneman, Tversky, & Slovic, 1982). The data are drawn from a larger mixed methods study (R01-AG16564) of older, low-income African American and Latino adults living in senior private or public housing in Chicago, Illinois, and Hartford, Connecticut.

Although the majority of Americans ages 57 and older are sexually active and regard sexuality as an important element of life, physicians typically do not ask older adults about their sexual activity and health, as only 38% of men and 22% of women reported having discussed sex with a physician since the age of 50 (Lindau et al., 2007). Furthermore, many primary care physicians fail to assess HIV risk in older adults (Savasta, 2004).

Minority Older Adults and HIV

A number of factors critically underscore the need to study issues related to HIV among older adults (Myers, Javanbakht, Martinez, & Obediah, 2003; Savasta, 2004). First, the size of the older adult population is increasing in the United States relative to younger age groups. This trend reflects the baby boom generation's shift into retirement and a general decline in postindustrial society birth rates. Second, from 2005 to 2035, the population of African Americans older than 50 is expected to increase by 95% and the number of Hispanics will grow by 230%, while the population of non-Hispanic Whites of the same age will increase by only 30% (U.S. Census Bureau, 2004). Thus, as older Americans move toward comprising an increasingly larger proportion of the total U.S. population, over time, the older American population will also reflect this demographic shift in ethnic/racial membership.

Together, these factors will produce a *graying of the HIV epidemic*, with increased representation among minority adults (Levy, Ory, & Crystal, 2003). Currently, Latino/White and Black/White disparities in HIV incidence are significant, and disparities are even greater in the older adult population. In 2005, the rate of new HIV diagnoses was 5 times greater among Latinos and 12 times greater among Blacks than among Whites (Linley, Hall, & An, 2007). The CDC's latest estimates revealed that individuals ages 50 and older constituted more than 15% of new HIV diagnoses and 29% of people living with AIDS (CDC, 2007; Jacobs & Kane, 2009). The CDC estimates that by 2015 half of all persons living with HIV in the United States will be older than 50. The nexus of these demographic and epidemiological trends highlights the need to better understand how older minority adults are assessing and coping with perceptions of heightened risk of HIV exposure in their lives.

Risk Perception

Evidence from various studies suggests that perceived risk of HIV infection influences both HIV transmission and preventive behaviors (e.g., Corby & Wolitski, 1996; Gerrard, Gibbons, & Bushman, 1996). Nonetheless, the literature falls short on investigations into what factors shape risk perception itself, especially in non-majority populations (Schensul, Levy & Disch, 2003; Smith, Lillie, & Latkin, 2007; Ward et al., 2004). Furthermore, despite an expansion of research addressing risk perception for HIV, some scholars have observed that the constructs that help to shape risk perception are still not well understood and may be unknown (Brown, Outlaw, & Simpson, 2000; Kowalewski, Henson, & Longshore, 1997; Prohaska, Albrecht, Levy, Sugrue, & Kim, 1990). Various factors have been reported to predict or be associated with risk perception. However, findings often conflict across studies, presenting incongruous and inconclusive results that so far have precluded effective synthesis. Kowalewski et al. (1997) attributed this lack of consensus to: (a) measurement inconsistencies across studies that prevent cross-study comparisons, (b) subpopulation and behavioral differences among subjects that are inadequately addressed in study design and implementation; and (c) critical contextual factors shaping perceived risk that remain unexamined.

Using Heuristics to Calculate Risk

Most find it daunting to consider the prospect of mathematically calculating the likelihood of a low probability occurrence such as experiencing an airplane accident or contracting HIV infection (Gilovich et al., 2002). Consequently, a heuristic approach is an easier way to grasp the meaning of risk and likelihood of experiencing various risk exposures. Heuristics are mental shortcuts or rules of thumb based on personal experience or other factors that people may use to simplify decision-making involving complex problems or incomplete information (Kahneman et al., 1982). The danger is that such shortcuts or intuitive tools can lead to systematic errors or biases in judgment (Gilovich et al., 2002).

Scholars have begun to use heuristics to explain risk perception (Bailey & Hutter, 2006; Katapodi, Facione, Humphreys, & Dodd, 2005; Kowalewski et al., 1997; Prohaska et al., 1990). In doing so, they underscore the mediating role of sociocultural factors in people's social construction of reality and in their lay interpretations of health and illness. Katapodi et al. (2005), for example, found that in assessing their risk for breast cancer, women made use of several heuristics that have been previously studied by other researchers: the affect, availability, representative, simulation, and perceived control heuristics. Bailey and Hutter (2006) found that migrant men in an Indian city relied upon heuristics related to visual cues, gender roles, vigilance, and trust when assessing their risk of HIV infection from a variety of sexual partners. Kaler's (2004) work in Malawi pointed to the influence of fatalist cultural notions on perceived risk of HIV among Malawian men.

HIV Heuristic Use Among Older Adults

The present study extends our nascent understanding of the use of heuristics in assessing risk of HIV infection. In particular, it expands our understanding of such use among a population expected to grow in vulnerability to HIV in the coming decades: low-income African American and Latino older adults. Our analysis builds upon and extends findings from a study of HIV risk among older urban-senior-housing residents that focused on the identification of social, contextual, network, and individual factors exposing older adults in senior housing to HIV risk. We viewed perception of risk as a key factor in motivating risk avoidance as well as introducing behavioral change interventions. In an earlier analysis, we used logistic regression to identify those factors that influenced older minority adults' beliefs in the possibility that they might acquire the virus (Ward et al., 2004). Results showed that our informants used notions of personal and group identity in constructing their

risk assessments. Being younger, being male, and worrying about contracting HIV predicted higher likelihood of perception of risk (of exposure or of infection or both). For our current analysis, we turn from our initial quantitative analysis identifying objective indicators in the data to examining qualitative data that reveal respondents' subjective views of what they think affects their risk exposure.

Method

Sample and Procedures

The data for this analysis derive from our larger study that investigated the relationship between socio-spatial environment and HIV-related knowledge, attitudes, and behavior among older adult residents of senior housing buildings in Hartford, Connecticut, and Chicago, Illinois. Initial ethnographic observations verified that commercial sex workers, drug distributors, and drug users often visited some residents in the nine buildings, thus potentially exposing them to risk of infection.

Permission was obtained from the building managers to recruit volunteers for the study from among the buildings' residents. Prior to beginning recruitment, the research team posted flyers and hosted gatherings to introduce the study to potential participants. To build rapport with the residents, research staff provided interactive educational sessions on medications, nutrition, social security, and other topics of interest as well as bingo games for residents. Most of the interviews were conducted in the informants' apartments. Research staff who conducted the interviews in each of the buildings were selected, in part, because of good interpersonal communication skills and were of the same racial/ethnic group as that of the informants being interviewed in that building. Furthermore, 87% of the interviews conducted with Latino informants were conducted in Spanish at the request of the informant. In such ways, we ensured that cultural sensitivity was an integral part of the interviewer approach to participants.

The study included: (a) ethnographic observations of building environments and their residents, concentrating on observed behavioral and material evidence of drug and sexual risk behaviors; (b) informal interviews with residents to determine possible structural features of the buildings that might encourage and/or enable risky behavior; and (c) face-to-face semi-structured interviews with residents about their personal backgrounds, social network affiliations, and possible sex and drug-related HIV risk behaviors. Participants also were asked to assess their self-perceived risk for HIV as well as to explain why they calculated risk as they did. This latter information forms the basis for this analysis.

Eligibility criteria for the study included living independently (that is, without conservators or live-in formal assistance) and building residence. All residents were approached for participation in the study and given the informed consent form. The study was approved by the institutional review boards of the School of Public Health at the University of Illinois and the Institute for Community Research. Building participation rates ranged from 62% to 80%.

For these analyses, the sample consisted of 134 residents ages 50–86, with a mean age of 64 years (see Table 1). The participants were residents of the last two of nine building sites in which the study collected data—one large complex in Hartford and another in Chicago. As we neared the end of the study, we decided that it would be important to ask a question about why participants had assessed their HIV risk at whatever level of risk they had chosen.

Measures

Perceived HIV Risk was measured with a single item that asked: On a scale from 1–5, how likely do you think you are to become infected with HIV? Would you say that you are: 1) *not at all likely*, 2) *unlikely*, 3) *somewhat likely*, 4) *very likely*, or 5) *certain to become infected*? *Explanations of Perceived HIV Risk*, the foci of this analysis, were measured with a single, open-ended item that asked, *Why do you think you are at the _____ level of risk?* The responses of participants were recorded verbatim by the interviewers and ranged in length from three words to five sentences.

Data Coding and Analysis

We used a grounded theory approach (Strauss & Corbin, 1998) to develop a preliminary coding scheme based upon the heuristic themes that emerged from participant responses as to why they had answered as they did. Two of the authors independently coded the 134 cases using the coding scheme. To check for construct validity and inter-rater reliability, the coders discussed the 27% of cases for which discrepancies existed with respect to the code assigned. Based upon the discussion, these were either coded consensually according to an existing category or the investigators altered the coding scheme and recoded the data using the revised coding criteria. All of the data were then independently recoded a second time by one of the investigators and a “naïve” coder who had not previously seen the data or coding scheme. The final inter-reliability was 98%, and final consensus was reached for the remaining differences. This process produced seven heuristic categories: self-imperilment, social imperilment, fate, incidental contact with the virus, situational safety, medical iatrogenesis (adverse inadvertent effects or complications resulting from medical treatment, or advice) and self-protective behavior.

Results

Of the 134 respondents included in our sample, 48% ($n = 64$) perceived themselves to be *not at all likely* to contract HIV. The remaining 52% ($n = 70$) saw themselves at some level of HIV risk, although most perceived infection as possible but unlikely. Of these 70 informants, 46 (34%) perceived their risk of becoming infected as *unlikely but possible*, 19 (14%) as *somewhat likely*, and 5 (4%) as *very likely*. None reported certainty of infection. The overall mean was 1.74, meaning that the perceived risk was very low. When asked to explain why they had answered in the way that they did, 97 (72%) cited one, 36 (27%) cited two, and one person cited three heuristics that were used in considering the likelihood of occurrence. Overall, the 134 participants responded with a cumulative total of 172 heuristic reasons.

Two Diverging Paths of Risk Assessment

Participants calculated their risk for HIV based on one of two paths. Those who saw themselves at ANY level of risk (from *unlikely to very likely*) responded with heuristic reasoning as to *why they might* become infected. In contrast, informants who deemed themselves not at all likely to contract HIV replied with heuristic notions based on *why they would not* contract the virus. The same heuristic might be used in arriving at either end. For example, using the concept of “sleeping with someone” as a heuristic device in assessing her risk, one African American female judged herself to be at high risk of contracting the virus because it could occur “if I sleep with someone and don’t know if he is infected.” Yet, another respondent using the same “sleeping with someone” heuristic to determine her likelihood of infection concluded that she was not at all likely to acquire HIV because “I’m not sleeping around.” In examining the heuristic categories that our informants used, we took into account that a particular heuristic was associated with either a risk or no risk

conclusion based on the perceptions, beliefs, and/or behaviors of the older adults who employed it and how they applied the heuristic to themselves.

Heuristic Categories Informing Perceptions of Risk

Whether or not they saw themselves at risk, we found that the older adults in our study drew upon one or more of seven heuristic categories to derive their risk calculations. Of 172 total responses, 6% were coded as self-imperilment, 9% as social imperilment, 5% as fate, 6% as incidental contact, 9% as situational safety, 6% as medical iatrogenesis, and 59% as self-protective behavior.

Self-imperilment—Self-imperilment is defined as the act of putting oneself into possible danger, constitutes a heuristic domain that assigns some level of HIV risk to having actively exposed oneself to the virus through risky behavior. Use of self-imperilment as a cognitive device suggests a sense of self-agency in choosing to commit a personal act that carries health consequences. For example, when asked why he believed himself to be very likely at risk for HIV, one 65-year-old Puerto Rican male replied, “Because I drink, and I don’t know what I do then.” In contrast, a 70-year-old Black woman saw herself as not having imperiled herself since in her own words, “I ain’t doing nothing.”

Social imperilment—Social imperilment is defined as assigning personal vulnerability for HIV based on someone else’s risky behavior. Respondents were keenly aware that what others do has an impact on them. Thus, those who perceived themselves to be at no risk of HIV because of their own acts might nonetheless rate themselves as at some level of risk due to the behaviors of those with whom they maintained a social relationship, whether of a social, sexual, drug, or other nature.

For those respondents who were sexually active (40% of the total sample in the previous 6 months), the partner’s sexual behavior outside of the relationship was a possible source of social imperilment for HIV infection. Informants’ risk calculations based on a partner’s perceived honesty reflected general awareness of the hazards that unspoken sexual transgressions could play in facilitating HIV transmission. Informants who used their partners’ sexual behaviors as a heuristic in assessing their own risk recognized that their partners’ infidelity could introduce HIV into an otherwise virus-free relationship. A 50-year-old divorced Black male who perceived himself to be highly likely to get HIV used this heuristic when he explained, “I trust my partner, but trust can only go so far.” As a common-law-married, 61-year-old African American male explained about the dangers of sexual infidelity, “Suppose my partner gets out and messes around on me. If she did that, then I’m caught.”

While not fully trusting a partner can introduce a sense of susceptibility into personal risk calculations, belief in a partner’s sexual loyalty helps to allay such thoughts. For example, a 51-year-old, unmarried African American male with a steady female partner perceived himself to be only somewhat at risk because, “We don’t sleep around and we don’t do no drugs.”

Informants also pointed to the potential perils of acquiring HIV through associating socially with the wrong acquaintances, such as the male who noted quite ambiguously that, “I have a lot of good friends that I am close with and something could happen inadvertently.” On the other hand, having the “right” circle of friends (that is, friends not involved in behavior understood to be risky) could produce a sense of safety. As one man explained “I am not in that environment. I am not involved with people who might have AIDS, I don’t run around. I live at a very slow pace.” As found in other studies (Burkholder, Harlow, & Washkwich,

1999; Organista et al., 2000), knowing someone with HIV could either heighten or reduce informants' perceptions of acquiring the virus, depending on other personal factors.

Fate—Fate is defined as calculation of personal risk for HIV based on the likelihood of being or of having been exposed to the virus through events or external forces over which the individual has little or no control. Unlike heuristics based on self or social imperilment, both of which acknowledge some level of human responsibility for a likely outcome, HIV risk calculations based on fate assume no personal culpability. To become HIV infected (or not) is to succumb to the forces of personal destiny, luck, or grace that are beyond individual control. A single, 68-year-old Hispanic female epitomized the use of this heuristic when explaining that she was somewhat likely to get HIV “because we really don't know what the future has in store for us. One never knows.” Fate also could enter into a respondent's sense of HIV invulnerability for reasons unknown, as with one respondent who explained, “I just know I won't get it.”

Incidental contact with the virus—Despite the fact that HIV is not food-borne or ambient, and that it does not live long outside the body, incidental contact as a category of heuristics reflects the continued perception that what people touch, eat, or do in their daily existence can put them at risk for acquiring the virus. This heuristic stems from the belief that the interpersonal contacts and material objects of everyday life can become agents of infection. Bathroom facilities, including toilets, showers, sinks, or other sanitation-related fixtures, were cited as particularly suspect. Lack of cleanliness was also perceived as a condition potentially harboring the virus. For example, one woman posited that she could get HIV, “if I sit on a toilet [or through] sitting on a warm chair where there are germs. Restaurants don't properly clean utensils.” A 55-year-old single Hispanic male perceived himself to be at high risk of HIV infection because someone might “come in and use my bathroom, take my shaver purposely, use it, and I could get infected.” For individuals who use incidental contact as a heuristic in deriving a risk assessment, the physical environment can seem potentially dangerous. One 74-year-old African American female informant said, “I might go out and accidentally step on a dirty needle.” Another informant, an 86-year-old widowed Black woman, maintained that you “could pick it up from someone's household who has it.”

Situational Safety—Lack of perceived exposure to risky situations could convey a sense of safety from HIV. Such situational security was not necessarily due to a deliberate effort to avoid contracting HIV. “I'm just not out there” when it comes to exposure to HIV was one respondent's answer. In addition, 24% of our informants were widows or widowers. Lack of a marital partner or significant other translated into lack of sexual opportunity. One female respondent explained, “I am a widow; I don't have sex.” Another older adult remarked, “I haven't had a man since my old man died.”

Medical iatrogenesis—Medical iatrogenesis refers to risk calculations based on heuristic perceptions of possible HIV exposure through contact with the health care system. As one informant explained, “I always go to the hospital, and they are always putting all kinds of equipments and things on me, and you never know.” Similarly, a 58-year-old African American woman who saw herself somewhat at risk related, “I am worried about getting it at the dentist office.” Although it was the leading cause of HIV among adults older than age 50 in the early days of the epidemic, HIV transmission through blood transfusion related to medical procedures is now relatively rare. One respondent, a 76-year-old African American woman, noted that “they test all blood now” to help rule out this possibility. Nonetheless, an older woman who reported trying to kick addiction to snorting heroin described herself as somewhat likely to get HIV not because of her drug use but because, she contended, “You

never know what might happen if I have to have a blood transfusion or something. You never know.”

Self-protective behavior—Self-protective behavior is defined as taking deliberate actions to protect against the possibility of HIV infection. The heuristic was employed by participants who viewed themselves as knowledgeable about HIV and therefore able to protect themselves from risk. A 69-year-old Puerto Rican woman who saw herself as not at all likely to contract HIV drew upon this heuristic when she confessed, “I take care of myself, and I am smart and aware of the disease. My daughter died of AIDS.”

Maintaining a healthy and safe lifestyle was seen as providing protection against HIV infection. One 71-year-old Black male explained, “If I keep doing the right things, then I will be safe. I keep practicing safe living habits.” And another informant reported self-protective behavior based on avoiding social imperilment: “I take care of myself. I am particular on who I keep myself around. I know who I am dealing with.” Maintaining a healthy lifestyle also could include learning one’s HIV status and acting accordingly. A man who saw himself at no risk for HIV reported that, “I was tested 3 months ago. The results were negative.”

Safer sex practices as a protective strategy also enter into personal risk calculations. Respondents mentioned condom use as the most commonly reported barrier method used to thwart biological transmission of the virus. One female informant explained, “I always use protection when having sex. I have never left my protection up to someone else.” Nonetheless, a 76-year-old African American man reported his own possibly unique prescription for stopping the virus. Although sexually involved with six sex workers, he stated he knows he’s “safe” as long as he pours Jack Daniels on his genitals immediately after sex.

Perceived safe partnering practices could be viewed as conveying a sense of invulnerability. Partner screening, in which the participant carefully gauges whether or not partners are “safe” using a set of personal criteria, was viewed as an effective means of reducing risk. Criteria included perceived hygiene, physical characteristics, and personal behavior and varied with the respondent. For example, a 54-year-old Puerto Rican male viewed himself as not likely to get HIV “because I’m not going to indulge in any activity with any suspicious person: people who smoke weed, prostitutes, people who seem like their skin color has changed over time, etc.” Another respondent reported, “I don’t fool around with females that do not look clean or have dirty houses.” Others looked to the safety of avoiding casual sex with multiple partners. As a female informant explained, “I don’t sleep around with men. I don’t bring men in from the streets. I never sold my body for drugs.”

Monogamy and celibacy were also seen as conveying protection. As one woman explained, she did not see herself at risk, “because I have only had sex with one person for the last 32 years.” Some participants who saw themselves as at no risk for HIV attributed this to celibacy as a protective tactic either because they had no sexual partner or had explicitly chosen to renounce sex to avoid this threat. A single 50-year-old African American woman with two children explained that she was not at all likely to get HIV “because at this point I’m not planning to have sex again. AIDS is too scary! I want to live to a nice old age, like my parents.”

Discussion and Conclusion

Overall, we found that our informants used one or more of seven heuristic categories to calculate their risk: self-imperilment, social imperilment, fate, incidental contact, situational

safety, medical iatrogenesis, and self-protection. These categories are not mutually exclusive and an individual might use heuristics from more than one of the seven categories. In addition, two people might apply the same heuristic device to their own situations, yet come to different conclusions about risk based on differing perceptions of how it affected them. For example, with respect to friends and social imperilment, our data showed that having the wrong friends was seen as potentially dangerous in terms of hazardous exposure to the virus, but having the right friends imparted some degree of personal safety.

Of course, what people perceive to personally know about a disease may in fact appear inaccurate or false when viewed from other perspectives, as when some of our informants used heuristics to make risk assessments that conflicted with prevailing scientific evidence. Such is the case, for instance, for risk calculations that heuristically relied upon visually screening sexual partners to determine who was infected. From a public health standpoint, inaccurate heuristics can prove dangerous or ineffective when people rely on them to protect their health (Kaler, 2004).

In analyzing our data, we were struck with how personal views of risk conflicted with public health perspectives. For example, the woman who mentioned addiction to heroin did not report that her drug use might make her vulnerable to infection despite considerable scientific evidence attesting to the high odds of possible drug-related transmission. Instead, she focused on blood transfusions and fate as the reason why she might be at risk. Such discrepancies, many of which have persisted since the beginning of the HIV epidemic, remind us of the importance of addressing people's perceptions and not merely transmitting facts when designing HIV educational programming. We must continue to do so both with new populations and the same populations over time.

Our findings about heuristics prevalent in minority populations were supported by other research including, for example, Rodgers-Farmer's (1999) study of 745 African Americans ages 55 and older. Among participants, 40% were uncertain about the effectiveness of condoms in preventing HIV, 35% felt they were somewhat effective, and only 15% knew that oil-based lubricants debilitated latex condoms. Moreover, 98% saw themselves at little or no HIV risk, yet 80% believed that HIV could be transmitted through eating in a restaurant with an HIV-infected cook, using eating utensils after a person with AIDS, or using a public toilet. Furthermore, 70% felt it was possible to get AIDS from working near someone infected with HIV (Rodgers-Farmer, 1999).

Our findings also point to the role of agency and personal control with respect to assessments of exposure to a threatening health event. Those older adults who attributed the likelihood of becoming HIV infected to external forces such as fate, contact, or social imperilment at least partly placed the blame for its occurrence and responsibility for its prevention elsewhere. Such assumptions tend to mask the degree to which a person's own actions can contribute to possible exposure (Smith et al., 2007). As Smith and colleagues (2007) found with injection drug users, framing risk for HIV as the property of one's associates allowed people to distance themselves from the likelihood of becoming infected despite their own behavior. It also affects decisions to take health action, since belief in the positive outcome of preventive action may be dampened when people believe the locus of control lies outside of themselves (Bailey & Hutter, 2006).

Our results showed that respondents reported the heuristic of taking self-protective action most frequently. This finding should not be taken as evidence that the older people who answered this way were highly vigilant against contracting the virus. While wearing a condom during sex or selectively choosing partners were cited as self-protective ways to reduce HIV risk, so was the notion of taking care of oneself in general. Such a heuristic

notion implied that living a healthy lifestyle provided blanket protection against all types of ills, including HIV. The risk assessments of the older adults in our study reminded us that the consequences of personal acts, including perceptions of acquiring HIV, were anchored in time and circumstance. Informants who reported being at no sexual risk due to the death of a spouse or lack of sexual opportunity incorporated their current situations into risk estimations of the present, even though HIV can be acquired through past as well as future acts, though this was not the case with every informant. For example, the older male who recalled previous indiscretions based on drinking behavior acknowledged the possibility that risks of the past could exact their costs in the present and future.

Results from this study contribute to our understanding of how people assess their risk for a serious health threat in the face of ambiguity. The older adults that we studied constructed their risk assessments by taking what they believed to be valid information about HIV and applying it to their own self-perceived likelihood of infection. Thus the “known” became the basis for calculating the “unknown.”

The reliability of self-reports regarding sensitive issues such as risk for HIV through illicit drug use or sexual behavior can be questioned. One of the limitations of our study was that we had to rely on what our informants were willing to reveal as to why they perceived or did not perceive themselves at risk. HIV risk behavior is often underreported in surveys because of the enormous stigma, moral judgments, and possible legal punishment that surround it. Moreover, many of our older informants were reared at a time in history when speaking openly about sex and one’s sexual behavior was strongly discouraged. It is likely, then, that our informants’ responses are colored to some unknown extent by social desirability biases.

Multiple studies have indicated that people older than age 50 are less likely than their younger counterparts to perceive themselves to be at risk for HIV (Aragon, Kates, & Hoff, 2001; Davis, Duncan, Turner, & Young, 2001; Grant & Ragsdale, 2008; Liddicoat, Losina, Kang, Freedberg, & Walensky, 2006). Still, more than 50% of our informants reported believing themselves to be at some likelihood of becoming infected. How frequently the possibility of HIV entered into their everyday thoughts or the behavioral choices that they made is open to speculation. The literature has suggested that knowing someone with HIV or hearing HIV prevention messages can heighten awareness (Burkholder et al., 1999). In asking our informants to tell us about their beliefs and behaviors in relation to HIV infection, our interviews likely worked this way as well.

Some older adults feel anxiety about sex and intimacy due to the prospect of contracting HIV, as seen in our informants’ responses. For some, the only way to be absolutely certain you will not get HIV is to never be intimate or have sex again. Yet there is evidence that the need for sexuality, intimacy, and satisfying social relationships is an important aspect of successful aging (Steinke, 2005). Indeed, there is a positive relationship among older adults between the likelihood of having a spouse or other intimate partner, the likelihood of being sexually active with a partner, and good physical health (Lindau et al., 2007). The task of mitigating needless anxiety about sexuality and HIV among some older adults may be particularly pressing for low-income minorities, who are already at a health disadvantage with respect to access to education, public health information, and quality health care, and who are nevertheless demographically at higher risk for contracting HIV.

It is unrealistic to assume that HIV campaigns targeting the general population have the same impact and effectiveness for all populations of adults, including those older than age 50. Expanding our understanding of how heuristics influence risk perception for HIV may lead to more effective education interventions for older adults, especially members of minority populations. It offers the possibility of developing public health communications

that neutralize or redress erroneous risk perceptions based in biased heuristic conclusions that may discourage, for some at risk, the need to engage in self-protective behaviors while causing others not at risk to worry needlessly. Such discriminating public health communications may be particularly vital to serve those populations of low-income, minority older adults projected to comprise the expanding vanguard of the HIV epidemic in the decades to come.

Clinical Considerations

- People ages 50 and older, many of whom are members of minority populations, account for 15% of those newly diagnosed with HIV each year, and this percentage is expected to grow rapidly over the next decade.
- Studies show that few older adults perceive themselves at risk for HIV, a view that is shared by many health care professionals. Such lack of awareness can result in loss of a valuable opportunity to discuss HIV as a pertinent health issue during patient visits or client counseling.
- As is true of HIV prevention with people of any age, health providers should remember that older adults hold their own heuristic beliefs as to why they might become infected or how they might avoid acquiring the virus. We have identified seven heuristic categories from our data, but there are likely to be many others. Discussions of HIV should begin with asking older persons if they see themselves at risk and why or why not as a starting point for further exploration.
- The heuristic beliefs that older adults use to calculate their risk may or may not be consistent with scientific understandings of how the virus is transmitted. Whether or not these heuristics are scientifically valid, they form the basis upon which older adults' decisions are made.
- Educational counseling and prevention messages must address the heuristics that older persons use to assess their risk if they are to successfully counter misconceptions about transmission that either reinforce risky behavior or produce unnecessary worry.

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Table 1

Demographic Information by Overall and Gender

Variable	Overall N = 134	Men n = 71 (53%)	Women n = 63 (47%)
Age (<i>M, Md., SD</i>)	63.7, 64, (9.8)	63.8, 64, (10.1)	63.7, 63, (9.5)
Age Group (<i>N, %</i>)			
50–61 yrs.	60 (45%)	29 (40%)	31 (49%)
62–73 yrs.	51 (38%)	29 (40%)	22 (35%)
74+ yrs.	23 (17%)	13 (18%)	10 (16%)
Race/Ethnicity (<i>N, %</i>)			
Black/African American	76 (57%)	39 (55%)	37 (59%)
Puerto Rican	36 (27%)	21 (30%)	15 (24%)
Other Latino	9 (7%)	6 (8%)	3 (5%)
Other	13 (9%)	5 (7%)	8 (12%)
Education (<i>N, %</i>)			
Less than H.S. Grad	83 (62%)	40 (56%)	43 (68%)
H.S. Grad/GED	28 (21%)	17 (24%)	11 (18%)
Some College +	23 (17%)	14 (20%)	9 (14%)
Religion (<i>N, %</i>)			
Protestant	66 (49%)	35 (49%)	31 (49%)
Catholic	49 (37%)	28 (39%)	21 (33%)
Other	11 (8%)	2 (3%)	9 (15%)
None	8 (6%)	6 (9%)	2 (3%)
Marital Status (<i>N, %</i>)			
Single	37 (28%)	24 (34%)	13 (21%)
Widow/Widower	30 (22%)	9 (13%)	21 (33%)
Married/Common Law	26 (19%)	15 (21%)	11 (18%)
Divorced	21 (16%)	15 (21%)	6 (9%)
Separated	20 (15%)	8 (11%)	12 (19%)
Monthly Income (<i>N, %</i>)			
Less than \$700 mo.	97 (72%)	50 (71%)	47 (75%)
\$700 – \$1,000 mo.	21 (16%)	13 (18%)	8 (13%)
Sexually Active?*	Yes: 54 (40%)	36 (51%)	18 (29%)

Note. H.S. = High School; GED = General Equivalency Degree

* Sexually active included vaginal, oral, anal, or hand sex.