

Social and Economic Factors in an Integrated Behavioral and Societal Approach to Communications in HIV/AIDS

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Health communication scholars have tried to understand how individuals process information and have identified the factors that contribute to appropriate behavior change. Some of these theorists have, implicitly or explicitly, assumed that if individuals were provided with the “right” information they would adopt the recommended behavior. Some others have endorsed the need to provide behavioral skills along with information so that individuals are able to carry out the desired behavior. Both approaches, however, are concerned with individual behavior change. Socio-demographic variables like class, gender, and race have seldom figured in socio-psychological analyses in the AIDS context. Limited attention has been paid to the manner in which political, economic, and social variables have constrained or enabled individual behavior related to AIDS. In this article, the various socio-psychological theories/models that inform AIDS prevention are delineated; the socio-psychological approaches in the context of class, race, and gender issues are critiqued; and an analytical framework that integrates behavioral and societal level variables to guide policy interventions is provided.

Introduction

An integrated sociobehavioral approach to communication in human immunodeficiency virus (HIV), acquired immune deficiency syndrome (AIDS) is essential because the lack of a medical cure for AIDS puts the focus on prevention. In the absence of pharmacological, immunological, and medical interventions for the prevention and cure for HIV/AIDS, changing behavior has been recognized as the only possible way to contain the spread of this disease (Edgar, Fitzpatrick, & Freimuth, 1992; Maibach, Kreps, & Bonaguro, 1993; Freimuth, Hammord, Edgar, & Monahan, 1990; World Health Organization [WHO], 1988). Although HIV has been identified as the etiological agent causing AIDS, transmission of this virus depends on human behavior related largely to sexuality and drug use. Communication plays an important role in this process because it disseminates information that may prevent risk behavior and spread awareness leading to reduction of social stigma (Melkote & Muppidi, 1999). AIDS prevention programs, disseminated through mass media or community awareness campaigns, are directed toward changing sexual practices and use of intravenous needles. However, not all of these

programs are successful and sometimes fail to bring about appropriate behavior change. To minimize the chances of failure, an impressive array of psychosocial theories have been developed to drive communication campaigns and to predict the consequences of interventions (Maibach et al., 1993).

In this article we will (i) review various sociopsychological models that inform AIDS prevention, (ii) critique the sociopsychological approaches in the context of socioeconomic, race, and gender factors that impact the transmission of the AIDS virus, and (iii) provide an analytical framework that integrates behavioral and societal level variables to guide policy interventions.

Review of Sociopsychological Models for AIDS Prevention

Researchers have come up with various theories and models to explore the relationship between knowledge, attitude, and beliefs about AIDS and 'high-risk' behaviors. They have cited a combination of theories within their typologies, i.e., Freimuth (1992) has identified the health belief model (HBM), social cognitive theory (SCT), diffusion of innovation, social marketing and media advocacy as having been applied in AIDS media campaigns. Hingson and Strunin (1992) have found HBM, the theory of reasoned action (TRA), problem behavior theory, and SCT as being frequently used in research on knowledge, behavior, and attitude in the AIDS context. However, researchers (see Auerbach, Wypijewska, & Brodie, 1994; Kashima, Gallois, & McCamish, 1992; Leviton, 1989; Michal-Johnson & Bowen, 1992) have identified certain core psychosocial theories and models that have been used frequently in AIDS/HIV prevention campaigns and have been evaluated in the existing literature. Among them are HBM, TRA, SCT, and AIDS risk reduction and management (ARRM). HBM, TRA, and SCT have been discussed in the article by Airhihenbuwa and Obregon. We will discuss ARRM and the critiques of all of the above.

ARRM

ARRM (Catania, Kegeles, and Coates, 1990) combines elements from the HBM and SCT to describe the process through which individuals change their behavior. It tries to understand why individuals fail to make the behavioral transition. ARRM has been specifically designed to understand and predict AIDS-related behaviors. Hence the analytical framework that it offers can be considered to be most relevant in studying high-risk sexual practices and how and why individuals adopt preventive behaviors. ARRM is ideally suited for longitudinal studies to understand why people fail to progress through the various stages. This understanding would allow for effective intervention since it would be possible to identify the position of the person in the change process and address the particular needs for that stage.

Critique of Psychosocial Theories

The HBM as well as TRA base themselves on cognitive determinants to bring about behavior change, that is, perception of susceptibility, severity of effects, benefits of action, intention of performing behavior, and so on result in behavior change. However, Bandura (1994) states that "to achieve self-directed change, people need to be given not only reasons to alter risky habits but also the behavioral means, resources, and social support to do so. It will require certain skills in self-motivation and self-guidance" (p. 25).

Self-efficacy and social modeling are two elements of Bandura's theory that have been used widely in AIDS campaign (Freimuth, 1992). Self-efficacy refers to a person's belief in his or her personal efficacy, which determines what course of action that person will choose, how long it would be sustained in the face of resistance, and his or her resiliency to bounce back following setbacks. Social modeling is based on the principle that people learn vicariously by observing the actions of others. And, further, people are more likely to judge their own capabilities in part from how well those whom they regard as similar to themselves exercise control over situations. If people see models similar to them solving problems successfully, they will develop a stronger belief in their abilities. This ties in with self-efficacy; only if actors are confident of their ability to act can they act effectively.

The critique against the theory of reasoned action holds true also for SCT. It assumes that individuals are in volitional control over their behavior. TRA as well as social learning theory do not include many sociodemographic variables that impinge on preventive health behavior:

Thus for instance, low socioeconomic background, low parental education, residing in a female-headed household, and residing in households with a large number of children are not in the theory but have been linked to heightened sexual activity. (Jemmott III & Jemmott, 1994, p. 149)

Although psychosocial theories have provided conceptual frameworks that have contributed to the formation of AIDS communication campaigns, they have not been reliable predictors of behavior change. They make assumptions that limit their applicability. The most recent and inclusive theories assume that individuals "who formulate an intention to behave in a particular way and have the skills and self-efficacy beliefs to do so are likely to carry out the intended behavior" (Auerbach et al., 1994, p. 84). This is not the case often, as shall be argued in this section. The models/theories presented above assume that individuals make rational decisions when engaging in sexual activity. On the contrary, sexual behavior is not only impulsive but is driven by physiological needs:

A well-formulated plan of action that is the product of a careful weighing of potential harms and benefits can be dismissed in the context of a passionate sexual encounter when competing proximal goals (i.e. sexual gratification) offset well-informed intentions (i.e. to use a condom). (Auerbach et al., 1994, p. 87)

Further, according to Auerbach et al. (1994), the theoretical models do not account for "contextual personal" and sociocultural variables such as gender and racial/ethnic culture:

Gender roles and cultural values and norms influence the behavior of women and men and the nature of the relationships in which sexual activity occurs. Unsafe sexual practices often are not the result of a deficit of knowledge, motivation or skill, but instead have meaning within a given personal and sociocultural context. (p. 87)

In this scenario, Bunton, Murphy, and Bennet (1991) find that the existing theories of behavioral change reflect significant theoretical gaps in their failure to

account for social structural and cultural factors. Although their review of the HBM, SCT, and TRA, among others, indicates a movement away from psychologically oriented models toward sociopsychological models, they perceive this shift to be inadequate. More fundamentally, however, knowledge about AIDS transmission, which precedes any behavioral intervention, has been low among certain sections of national populations. People who are poor are not only economically deprived but also find themselves with severely restricted access to information. This has led to an unequal distribution of knowledge in the population resulting in “knowledge gaps” between people of low and high socioeconomic status (SES). The importance of these findings for communication campaigns intending to provide information or modifying attitudes and behaviors related to AIDS are consequential, as will be argued in the following section.

Socioeconomic Status and Knowledge of AIDS: Knowledge Gap Hypothesis

It is logical to assume that better-educated people (who are usually in the higher SES category) have better access to information about HIV, how it is transmitted, and how it can be avoided. Unequal access to information leading to “knowledge gaps” is a phenomenon that is consistent with several studies in communication that have showed that knowledge is imperfectly distributed in the population. Singer, Rogers, and Corcoran (1987) found that those with the least education were also least likely to be knowledgeable about AIDS. These findings are in line with Tichenor, Donohue, and Olien’s (1970) knowledge gap hypothesis. This hypothesis suggested that public information campaigns tend to widen the gap in knowledge between high and low SES groups because the higher SES group tends to acquire the information at a faster rate than the lower SES group. Other studies also have supported the knowledge gap hypothesis (Cook et al., 1975; Tichenor, Rodenkirchen, Olien, & Donohue, 1973; Werner, 1975).

By contrast some studies found a narrowing of knowledge gaps following a communication campaign. Shingi and Mody (1976) examined a television program geared toward farmers in India. They found a decrease in the knowledge gap following the program between the information rich and information poor farmers. In this study, the researchers used an innovative strategy of communicating knowledge geared specifically to the low-knowledge groups. This indicates that in communication campaigns tailored message strategies need to be employed to appeal to specific sections of the target population. Similarly, in a study assessing the effects of a health campaign in Minnesota, Ettema, Brown, and Leupkar (1983) found a narrowing of the knowledge gap.

Although research on the knowledge gap has produced mixed results, Gaziano (1985) in a review of 58 knowledge gap studies identified several trends in this area of research. In the majority of the studies, she found that higher education was related to greater knowledge. In the area of health-related issues, she posited that gaps still may occur even when all groups are potentially interested in health issues. Although Gaziano accounted for the inconsistent findings, among other things, to the manner in which the knowledge variable was measured, the confounding of knowledge gap effects may be explained instead by the narrow use and definition of the socioeconomic variable.

From the initial study on knowledge gap, education was considered the only valid index of SES (Tichenor et al., 1970; Viswanath & Finnegan, 1996). This unidimensional definition was thereafter consistently employed in studies testing the

knowledge gap hypothesis. Although education is an important index of SES, it is not the sole or the most important indicator. Class or economic power is a crucial variable that not only determines (i.e., sets the limits on) educational levels but also access to mass media and other information delivery systems. Simply stated, the argument is that gaps in knowledge will continue to exist among individuals with high levels of education if they belong to unequal economic groups.

In the developing world, studies and reports have dealt with SES and various aspects related to AIDS. In their study of knowledge and perception of AIDS among married women in Bangkok, Thailand, Shah et al. (1991) found that women with greater household income displayed more correct understanding about AIDS. Women with lower income manifested greater misperceptions about how AIDS is contracted. A study conducted in an urban slum in Delhi, India, found that knowledge of AIDS was low among the respondents, especially among women. Perception of risk was almost nonexistent among respondents in this impoverished population (Chowdhury, Goswami, & Amar, 1993). Similarly, in a study by Mukherjee and Chatterjee (1993) conducted in India, it was found that illiteracy linked to poverty created a gap in knowledge about AIDS. A study conducted by Ferreira and Mallol (1994) in Argentina found that urban women of low SES were particularly vulnerable to AIDS because of their "double subordination" to class and gender. They had low awareness and low perception of risk regarding AIDS. Although none of the above studies formally tested the knowledge gap hypothesis, they have looked at various demographic variables and their relation with knowledge and other variables related to AIDS.

Social Context of AIDS

Recent years have witnessed a surge in the number of studies exploring the social context of AIDS (Fee & Krieger, 1993; Quinn, 1993). Among the two frequently occurring social variables are race and gender. In their review, Peruga and Celenzano (1993) found that most studies detected no relation between gender and knowledge variables. In the case of race (in the United States), White respondents always had greater AIDS knowledge compared with African Americans. However, the importance of race and gender go beyond influencing knowledge levels and attitudes about AIDS; it will be argued that they configure material realities that determine the manner in which AIDS impacts societies. AIDS is more than just a medical issue; it is related to socioeconomic development problems.

Race and AIDS

Although African Americans constitute about 12% of the U.S. population, they represent 28% of all AIDS cases in the country. Similarly, in the case of Hispanics, they form about 6% of the U.S. population but constitute about 16% of AIDS cases (Duh, 1991). According to the Joint United Nations Programme on HIV/AIDS (UNAIDS, 1998), although there is a general decrease in the number of AIDS cases in the United States, "among African-Americans, new AIDS cases rose by 19% among heterosexual men and 12% among heterosexual women in 1996. In the Hispanic community, there were 13% more cases among men and 5% more among women than a year earlier" (UNAIDS, 1998, p. 19)

The higher incidence of AIDS among ethnic minorities, made up of African Americans and Hispanics in the United States, was reported 10 years earlier in other studies (DiClemente, Boyer, & Morales, 1988; Peterson & Marin, 1988; Selik,

Castro, & Pappaioanou, 1988). Race per se may not be the cause for higher incidence of AIDS. Race reflects underlying economic deprivation, poorer education, and lower occupational standing for African Americans and stands as a proxy for social class (Pappas, 1994). The communities most vulnerable to AIDS are those that have the least power, the least access to information, and very few resources with which to fight it. For example, when socioeconomic differences between African Americans and Whites were controlled, there was no difference in AIDS survival time by race. However, when a more inclusive method was applied, AIDS survival time decreased significantly among African Americans (Curtis & Patrick, 1993). As the UNAIDS report (1998) points out,

This is partly because these communities may find it hard to access the expensive drugs that could stave off the onset of HIV. It is partly, too, because prevention efforts in minority communities, where transmission is often through heterosexual intercourse and drug injecting, have been less successful than in the predominantly well-educated and well-organized gay community. (p. 19)

Curtis & Patrick (1993) concluded that race may be a marker for socioeconomic factors or access to health care or both (p. 1425).

In his book *Blacks and AIDS*, Samuel Duh (1991) negotiates through the “folk beliefs” about higher incidence of AIDS among African Americans and argues forcefully that the lower SES of this group makes it more susceptible to all types of diseases including AIDS. According to him, SES contributes to the health status of individuals and families. “Immune system integrity and function depend on coexisting illnesses, nutritional status, and possibly stress. Thus, a person in generally poor health is more likely to develop AIDS once infected with the virus” (Duh, 1991, p. 5). Because of limited financial resources, a substantial section of African Americans have poor health, low nutritional intake, and limited access to health care. Those living in the inner city also are less likely to be reached by health campaigns. These institutional factors along with other cultural frameworks (Michal-Johnson & Bowen, 1992) make a large number of African Americans more susceptible to AIDS.

Gender, Race, and AIDS

Although the rate of incidence of AIDS has declined among gay and bisexual men, it has increased among women, making them the fastest growing group at risk of contracting AIDS. In the United States, AIDS is the fifth leading cause of death for women (Nyamathi et al., 1993). In 1997, nearly 600,000 children were infected with HIV, mostly through their mothers before or during birth or through breastfeeding (UNAIDS, 1998). Not all women are at the same level of risk though. Economic status and ethnic background of women explain the unequal distribution of this disease among this group. The Center for Disease Control (CDC), in June 1999, reported that more than 10,841 women in the United States have been diagnosed with AIDS since July 1998, with African American and Latino women accounting for more than 80% of these cases. African American women constitute 52% of all AIDS cases reported for women, the rate of incidence being 13.6% higher than that for White women (Quinn, 1993). Impoverished Latino and African American women have been found also with low knowledge and perception of risk and high-risk behavior related to AIDS (Nyamathi et al., 1993). In her sample consisting of

170 African American women drawn from a low-income locality, Quinn (1993) found that only 50% had correct knowledge about AIDS transmission. Further, knowledge of protective behavior was extremely low among these women who reported high-risk behaviors in the recent past.

According to Schneider (1992), race, class, and gender largely determine a person's health status: "In concert they will affect perception of health and illness, kinds and availability of care, [and] modes of delivery" (p. 21). This unequal distribution of access to health care mirrors the manner in which social and political power, resources, labor, and services are distributed in society (Schneider, 1992, p. 21). Quinn (1993), exploring the interaction of race, class, and gender in the context of AIDS preventive behavior, found that social factors push risk reduction behaviors outside the control of certain individuals. For example, the use of condoms assumes an equal distribution of power in sexual relationships: The woman may have the intention and the self-efficacy to adopt this behavior, but the actual act requires the active cooperation of the male partner (Fee & Krieger, 1993; Kashima, Gallois & McCamish, 1992; Peterson & Marin, 1988; Quinn, 1993). Poor women are especially vulnerable to coercion from and compliance to their male partners since they are economically and emotionally dependent on them (Bandura, 1992). Other scholars have noted that poor women are limited in their choices about relationships and living situations in ways that middle-class women may not be, and that they may not experience the freedom to regulate sexual practices or to separate from their men. Concerns regarding food, shelter, and care of their children may be more important than worries about AIDS.

Developing countries offer a conducive environment for HIV to flourish. In Asia and Africa, poverty, malnutrition, unemployment, illiteracy, lack of infrastructural and basic primary health care systems, rural-urban migration, unemployment, poor sanitation, cultural factors (such as the low status accorded to women), and war, among other factors, create a favorable setting for the large-scale spread of HIV. The social impediments to safer sex and knowledge regarding AIDS is also prodigious. In Zimbabwe, Kenya, South Africa, and Zaire, the increasing financial insecurity that exists among many female-headed households makes transactional sex a "rational means of making ends meet" (Gill & Mohammed, 1994, p. iii). Further, women in these societies generally have smaller landholdings, less income, and less access to agricultural training, which sometimes make the exchange of sex for money the only survival mechanism for some women belonging to lower socioeconomic groups. Low economic and social status of women is widespread also in parts of Asia and Latin America where similar factors may operate to constrain individual behavior change (Bhawani & Gram, 1994; Rai, Leslie, Dupar, & Pyakuryal, 1993). While the world attention has been focused on Asia and Africa, the number of HIV infections have been growing rapidly also in Latin America (Snell, 1999). Brazil, Mexico, Ecuador, and other countries in the region face the threat of an AIDS epidemic but are ill equipped to do much because of poor economies, lack of infrastructural facilities, and poor data collection methods.

Toward an Integrative Framework for AIDS Prevention

In light of the structural factors mentioned above, to talk about specific behavior changes ignoring that health-risk behaviors "are embedded in economic and social arrangements that reinforce those behaviors" (Pappas, 1994, p. 893) may be inadequate and unethical (Quinn, 1993).

As mentioned in previous sections, this paper has looked at the possibility of integrating social variables like economic status of individuals into a socio-psychological framework. It was expected that SES of the individual would be associated with knowledge levels, thus producing a gap in relation to AIDS information/knowledge among different SES groups. The long-term solution to bridging symbolic and material inequity lies in structural reforms that change the manner in which resources are distributed in society. However, such transformations cannot be achieved in a short span of time. In the context of AIDS, short-term solutions are needed to alleviate the impact of AIDS along with long-term change.

SES is a variable that is relatively difficult to address since it does not lend itself well to short-term intervention strategies directed toward reducing the knowledge gap. Hence, it is critical to identify manipulable social, cultural, or behavioral variables that may be employed to reduce the knowledge gap. In this study, communication-related variables such as cognitive, affective, and behavioral involvement were studied for their role in reducing the knowledge gap.

Cognitive, affective, and behavioral involvement

Some researchers have suggested that involvement is an important variable in determining how messages are processed (Chaffee & Roser, 1986). Chaffee and Roser (1986) point out that, "when people are highly involved with a topic, they process the information more deeply" (p. 381). In this paper, the authors adopted the operationalization of involvement as articulated in a study by Chaffee and Roser (1986). They categorized it into three dimensions: cognitive involvement or heightened state of awareness/attention; affective involvement or self-perception about risk; and behavioral involvement or information seeking. There is sufficient research evidence to suggest that higher cognitive involvement and active information seeking on the part of individuals will lead to greater levels of knowledge (Salmon, 1986). Since SES is a relatively nonmanipulatable variable, studies have stated that it may be more effective if the two involvement variables are used in intervention strategies to reduce any knowledge gaps among people of different SES groups.

Although several studies in communication suggest that *affective involvement* or self-perception of risk is associated with higher levels of knowledge (Ettema & Kline, 1977; Ettema et al., 1983), other studies such as the Minnesota Heart Health Program showed that high levels of concern about heart diseases were associated with lesser knowledge (Chaffee & Roser, 1986; Salmon, 1986).

Although the researchers believe that knowledge and appropriate attitudes are necessary for bringing about risk reduction behavior, they may not be sufficient. As has been stated before, merely giving people facts/knowledge of AIDS may not always lead to risk reduction behavior. This is supported in several models of health behavior and the common sense model of illness danger (Leventhal et al., 1980). Therefore, for effective intervention strategies, there is a need to identify perceptions of risk and also examine factors that predict risk. Once the determinants of risk are identified, communication and educational strategies may be specifically directed toward changing the mental images that give rise to perceptions of risk (Prohaska, Albrecht, Levy, Sugrue, & Kim, 1990). This will result in more effective intervention strategies than just providing general information about AIDS. Our literature review suggests that knowledge about AIDS, attitudes toward AIDS, and cognitive and behavioral involvement may contribute to effective self-perceptions of risk. This

paper underlines the necessity of considering social context as an important mediating factor in shaping individuals' behaviors and attitudes related to AIDS. Unlike many studies being conducted in the classic "social psychological" mold in the context of AIDS, the authors have resisted the tendency to seek explanations or interpretations of individual behaviors and attitude devoid of their social, cultural, and economic settings. Although behavior and attitude change play a crucial role in the prevention of HIV/AIDS, it is argued that such behaviors and attitudes are produced and reproduced by individuals living in larger communities and being impacted by cultural, economic, social, and political influences. So AIDS is not just a health issue or a sexual behavior-related issue. There are several factors that impact on this problem: poverty, access to formal education, income inequality, gender inequality, knowledge inequality, vested interests, lack of democratic norms, and so on. Now the emphases in communication campaigns is on short-term goals: Get tested, use condoms, choose partners carefully, and so on. Although these goals are very important for containing the spread of AIDS, they are not sufficient. An effective strategy for HIV/AIDS prevention will require long-term and sustained strategies that should also address the social, cultural, economic, and political factors that influence the spread of AIDS.

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