

Health Disparity and the Racial Divide among the Nation's Youth: Internet as a Site for Change?

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Some of the most positive consequences of the Internet have been demonstrated in the realm of health benefits for children and youth.¹ Approximately 21 million youths used the Internet in 2005, up from 17 million in 2000.² One of the fastest-developing uses of the Internet among the youth is to obtain health information, with this category seeing a growth of 47 percent between 2000 and 2005.³ Furthermore, 44 percent of eighteen- to twenty-four-year-olds using the Internet do so to search for information about sensitive topics such as pregnancy, birth control, and AIDS, and 39 percent of these young online health information seekers have changed their personal behaviors because of information obtained online. With respect to the youth, online health information offers an effective means of (a) communicating with doctors, (b) managing chronic health problems online, (c) learning health information, and (d) participating in online prevention campaigns.⁴ Ultimately, online health information seeking impacts the health outcomes of the nation's youth.

In this chapter, we interrogate the link between the distribution of communication technologies among youth and the race-based health disparities that exist among the nation's youth. Several lines of work explore the intersections between the research areas of the digital divide and health disparities, suggesting that the distribution of health disparities mirrors the distribution of communication technologies. In other words, the racially marginalized sectors of the nation's youth are doubly disadvantaged by their lack of access to health care technologies and communication technologies. We suggest mechanisms through which lack of access to health care technologies among youth influences health outcomes. To do so we present an integrative model of online health information seeking that incorporates individual motivation and ability to use the Internet for health purposes. Through this model, we suggest that race-based disparities among the nation's youth are manifested in individual-level differences in the motivation to seek out health information, the perceived ability to search for health information, and the perceived efficacy to use new media technologies such as the Internet owing to deep-seated biases in the traditional communication infrastructures and limited educational opportunities for the underserved. These differences in the motivation and ability to seek out health information and participate in online technologies are situated within structural disparities and, in turn, influence the extent to which individuals search for online health information. We suggest further that the disparities in the social structures that constrain and limit the offline opportunities available to ethnic minorities also constrain the opportunities for online health.

In proposing an agenda for new media applications in health care directed at minority youth, we argue for the importance of (a) ensuring access to online technologies,

(b) developing educational programs that emphasize “how-to” knowledge that builds health information efficacy and technology efficacy in underserved populations, (c) developing culture-centered health care technologies that are organized around the communication needs of underserved youth, and (d) harnessing the dialogic potential of online media for fostering health care activism among the marginalized youth such that they can go about challenging the dominant structures that constrain their lives. We conclude the chapter with a sense of hope, drawing from an example of participation in new media technologies among minority youth,⁵ thus demonstrating the ways in which minority youth enact their agency in new media platforms that empower them and challenge dominant structures that constrain or restrict their lives.

Health Disparities among Young Adults

The health care disparities that plague minority youth in the United States narrate a story of structural deprivation where racial and ethnic minority youths have lower access to health care services and preventive choices as compared to middle-class Caucasian youth. If the central goal of eliminating health disparities between ethnic and racial groups within the United States is to be achieved, as proposed by the Healthy People 2010,⁶ there is an urgent need to devise policies and strategies that address the race-based structural injustices that plague youth in the United States.⁷ The term *health disparities* is defined as the circumstantial result of ongoing experiences of unfairness or injustice in access to, utilization of, and quality of care, health status, or other health outcomes.⁸ Williams conceptualized health disparity as being enmeshed within the social context of everyday life.⁹ He refers to the importance of factors like race, ethnicity, gender, and social class, and their interactions in the impact on the health and well-being of citizens. Race and ethnicity, often interchangeably used terms, have had a distinct influence on the distribution of and access to health resources in the United States.

In addition to having limited access to basic health care resources, the Institute of Medicine¹⁰ reports that racial and ethnic minorities in the United States still receive a lower quality of care than whites, after accounting for differential access to care. In other words, even within similar socioeconomic classes or when comparing minorities and whites with equal structural access (e.g., availability of hospitals and doctors in the area), minorities receive lower-quality treatment in medical settings. In examining the roots of these disparities, the IoM reported factors such as clinical uncertainty, stereotypical behaviors of providers (physicians and nurses), and conscious bias among health care professionals. The findings of the Commonwealth Fund’s 2001 Health Care Quality Survey also demonstrate that minority Americans do not fare as well as whites on a wide range of measures of the quality of health care services they receive because of biases in the health care systems and prejudiced attitudes of providers.¹¹

Race can be described as a politically designated term that has been used to explain legitimized inequality of power and opportunity.¹² Historically, race-based differences in U.S. society have resulted in differential/restricted access to socioeconomic resources like educational and employment opportunities. This segregation has meant general lower levels of income in minority families, and lower socioeconomic status. Unhealthy living conditions and limited access to structural resources like transportation, food, medicine, and insurance are all products of this race-based social differential and, in turn, exert a considerable impact on the health and well-being of minorities. Therefore, no one should be surprised that

low socioeconomic status, adverse health behaviors, and lack of health insurance have been identified as the primary pathways through which racial disparities are played out in the realm of health.¹³

Several studies have depicted just how race-based differences cause disparities in access to medical care. Williams notes that there is a large body of evidence which indicates that even after adjustment for socioeconomic status, health insurance, and clinical status, whites are more likely than blacks to receive a broad range of specific medical procedures.¹⁴ Among Medicare inpatients, Williams says, blacks were less likely than whites to receive all of the sixteen most common procedures.¹⁵ This demonstrates the prevalence of prejudiced treatments in health care within the United States, even after controlling for social class.

In looking at the disparate health status in minority youth, it is important to draw attention to the structural racism that impedes the opportunities presented to them as well. The systematic absence of support for structural resources is evident in health care policies that continue to ignore issues of redistributive justice, social inequality, and structural violence. The social and cultural environments within which minority youth find themselves are often devoid of the opportunities that are essential to their health. Studies reveal that racial and ethnic minorities are less likely to have access to health care and more likely to be impacted by and die from most major diseases as compared to white youth (e.g., cancer, diabetes).¹⁶

The per capita health expenditure among white adolescents is \$1,180, compared to Hispanics (\$627) and African Americans (\$439).¹⁷ A sizeable proportion of American youth/children who do not have health insurance are minorities. There are approximately 11 million U.S. children under the age of 18 uninsured, with these individuals being disproportionately of racial and ethnic minority status.¹⁸ According to Lieu, Newacheck, and McManus, children in families headed by single mothers, black children, and those living below 150 percent of the poverty index were much more likely to be in poor or fair health than children in two-parent families, white children, and those in more affluent families.¹⁹ Poverty clearly has a strong effect on child health, and poverty, as has been mentioned earlier, is largely correlated with race and ethnicity.

Pointing out that minority youth face unequal opportunities, options, and access to health resources, Guthrie and Low²⁰ draw from a review of racial and ethnic disparities in the health care of adolescents by Elster, Jarosik, VanGeest, and Fleming.²¹ The review, which included sixty-five published studies, suggests that racial and ethnic disparities in health care for adolescents, as with adults, persist after accounting for access to health care and socioeconomic status because of the inherent prejudice in the health care system. Guthrie and Low go on to add that since adolescence is a period of transformation, it is an ideal time not only to identify and address, but also to prevent potential health disparities commonly found in this group.²² In addition, they add, adolescents should not be considered downward extensions of the adult population with similar needs and experiences. This trickle-down approach fails to recognize the unique health needs and worldviews that adolescents tend to form and must learn to negotiate.²³ Several other studies corroborate the fact that race and ethnicity significantly influence youth health and account for a major part of health disparities that exist among youth in America. Study data, collected by Shi and Stevens (2005) at two points—in 1996 and 2000—demonstrates that before and after controlling for health insurance coverage, poverty status, health status, and several other factors associated with access to care, these disparities in access to care persisted between 1996 and 2000. This is a pointer to the fact that despite some policy efforts to reduce health disparities based on

race and ethnicity, such gaps continue to persist not only among adults but also among the youth of the United States.

Racial differences in health, according to Shi and Stevens, reflect the impact of the social environment and the cumulative effect of adversity across multiple domains. One such domain—in today's digital world—is access to technology, particularly the Internet, which has a proven track record of being an important contributor to the good health and well-being of the population, particularly the youth. Thus, comprehensive efforts to improve the health of racial minority youth and reduce racial disparities in health will require consistent focus on the uses and power of digital learning among today's youth. Systematic efforts would be needed to create learning opportunities that build the confidence of minority youth in using online health platforms, and provide training about ways to use online health resources meaningfully. These efforts would need to be culturally sensitive in order to be able to appeal to minority youth. Culture-centered technology platforms might provide spaces of dialogue with minority youth and create conduits for listening to their voices. Finally, given the material disparity in the health care system, digital media provide a space for minority youth to engage in activism that addresses the social structures and seek to transform them.²⁴

The Racial Divide: Where *DO* We Stand?

Initially, the exponential growth of available information online was, and to some degree still is, thought to be the ultimate equalizer, by providing individuals and groups access to a variety of information resources that, in turn, would provide access to structural resources. In its simplest form, the argument suggests that information is power, and free information decimates barriers facing the underserved. This notion is evident in documents such as the National Library of Medicine's (NLM) Strategic Plan for Addressing Health Disparities²⁵ : "improving access to affordable and easy-to-use health-related information . . . can help solve health disparities." On the surface, the argument seems logical: provide free information to all and they will come. However, a more realistic answer to the question "Where do we stand on matters of universal access and the racial and ethnic digital divide in the 21st century, especially in terms of digital media and learning?" is, unfortunately, "even further from where we started." We surely have not failed to provide information; there are more than 70,000 Web sites that contain health information,²⁶ and the number of health sites is rapidly increasing.²⁷ However, we are failing to support adoption campaigns with equal amounts of literacy and usability training, particularly with respect to the underserved. This is perhaps a product of the structurally situated nature of online technologies such that online participation patterns reflect offline participation patterns. The underlying structures that constrain the opportunities for ethnic minorities in the offline world also continue to replicate in the online world, when looked at in the context of the overall patterns of usage.

According to the National Telecommunications and Information Administration (NTIA),²⁸ the *digital divide* can be defined as the gap between people who have and people who do not have access to Internet technology.²⁹ Patterns of computer and Internet penetration levels show substantive differences between different racial and ethnic groups in the United States, and similar differences are observed in the realm of online health information seeking.³⁰ Compared to 23 percent of young Asian Americans and 22 percent of white young adults who use the Internet to search for health information, 13 percent of Native Americans, 12 percent of African Americans, and 11 percent of Hispanics in the segment seek out online health information.³¹

Table 1

Percentage of children living in households with computers

Ethnicity	Percentage
African American	56
Native American	58
Latino	58
Asian American	86
White	87

Table 2

Percentage of children living in households with a computer modem

Native American	41
African American	43
Latino	44
Asian American	75
White	80

Noting the ways in which the digital divide plays out in the realm of citizen participation and involvement, Chen and Wellman³² argue that “ultimately, the digital divide is a matter of who uses the Internet, for what purpose, under what circumstances, and how this use affects socioeconomic cohesion, inclusion, alienation, and prosperity.”³³ In other words, disparities in the accessibilities of health care technologies impact the economic outcomes of social groups, and therefore continue to reinforce the broader structural disparities within the population. The Silicon Valley Joint Venture workforce study³⁴ suggests that, although 99 percent of youth have access to a computer from some location, Hispanics (69 percent) and African Americans (80 percent) are less likely to have access at home than white or Asian students (94 percent). Although strict access (whether or not a student has a computer available at his or her disposal at some location) does not seem to vary based on ethnicity, the quality of this access has been shown to vary in other studies.³⁵ The California Department of Education found that schools with higher minority concentration have fewer computers per hundred students than schools with lower minority concentration. Racial minorities are less likely to have broadband access at home than their white or Asian counterparts.³⁶ This is important because broadband users are more likely to engage in online activities in general.³⁷

Furthermore, The Children's Partnership report³⁸ suggests the following patterns of access among children ages 7 through 17. Compared to 36 percent of children who lived in households with personal computers in 1994, 77 percent of children in 2003 lived in households with personal computers. Access among African American, Native American, and Latino children was significantly lower compared to access among white and Asian American children (see Table 1).

Whereas 15 percent of children in the 7–17 age range lived in households with a computer modem in 1994, 68 percent of children in 2003 lived in households with an Internet connection. Ethnic disparities are also evident in the realm of access to the Internet at home, with whites and Asian Americans having greatest access, as compared to lower levels of access among Native Americans, African Americans, and Hispanics (see Table 2).

Table 3

Percentage of children living in households with broadband connection

Native American	13
Latino	14
African American	14
White	32
Asian American	33

Table 4

Percentage of young adults who searched for health information

Latino	11
African American	12
Native American	13
White	22
Asian American	23

Compared to 0 percent of children in ages 7–17 that lived in households with a broadband connection, 26 percent of children in 2003 lived in households with a broadband connection. Differential patterns of access are also observed in this realm (see Table 3).

The Children's Partnership Report also documents ethnic differences in the percentage of young adults (ages 18–25) who searched for health information on the Internet (see Table 4).

Fairlie attempts to explain the ethnic disparities of home computer ownership by appealing to other demographic factors such as education and income.³⁹ In all, demographics accounted for less than 50 percent of the variance in ethnic difference (comparing each racial category versus whites). Published scholarship on the digital divide suggests that ethnic disparities are larger in children than in adults for computer access at home, and slightly larger in children than in adults for Internet access at home.

Consistent with past research, Jackson et al. point out that (a) African American children use the Internet less than white children, (b) younger children use the Internet less to search for information than older children, and (c) girls are more likely to use the Internet for communication, while boys are more likely to use the Internet for information seeking purposes.⁴⁰ Controlling for race, the researchers suggest that Internet use predicted GPA obtained after one year of home Internet access. (After the children of low-income families were given free Internet access, the users had significantly higher GPAs than nonusers.) More time online was associated with higher reading comprehension and total reading scores (not so for math scores), and neither GPA nor standardized test scores predicted Internet use. Children in this project used the Internet to search for information more so than to communicate (i.e., e-mail).

The findings of Jackson et al. also demonstrate that income and education cannot explain racial disparities, and that giving people access is not enough to solve the digital divide. Individuals and communities also need to train underserved groups how to use and benefit from Internet connectivity, and motivate them to take advantage of technology access. Jackson et al. provided low-income families with home computers and Internet access.⁴¹ Racial differences in use, with African Americans reporting less overall use than white participants, were present at the first three-month follow-up, and actually increased at the

six-month survey. Thus, it seems that, with the dissemination of computers also comes the responsibility to motivate their use, train users in best-practice strategies, offer hardware and software that is user-friendly, provide low-cost and helpful technical support, and offer help in understanding material and assessing information quality. Although investigating the division between the Internet “haves” and “have nots” is important in all context areas, it is especially important in the context of access to and use of health information. Consider this: Among youth with similar insurance coverage and socioeconomic status (SES), black and Hispanic children are between 31 and 42 percent less likely to use inhaler-driven medication for asthma as compared to white children, even though this illness is more prevalent among these populations.⁴²

Although the Internet was initially seen as the great conqueror of social disparities, the introduction of the Internet as a tool to aid in disease control and decision making has actually increased this division between the health haves and the health “have nots.”⁴³ Two broad explanations exist for this gap. First, race and ethnicity as social categories are at the root of this disparity. Low socioeconomic status (SES), adverse health behaviors, and lack of health insurance have been identified as the primary pathways through which racial disparities are played out in the realm of health.⁴⁴ Therefore, within this framework, race and ethnicity, like any other individual-level difference, should not be considered in isolation but instead should be considered as a part of an individual's overall status.⁴⁵ Focusing strictly on demographic characteristics of the individual or specific minority group is similarly flawed. Thus, a second explanation appeals to a psychographic approach⁴⁶ that connects macro-level characteristics with individual-level features in the realm of e-health information usage. Online health information seeking among youths⁴⁷ seems to mirror general health information seeking offline;⁴⁸ both tend to be higher among whites than among minorities. It has been suggested that individual motivation and ability to attend to certain types of information in general, or information on the Internet specifically,⁴⁹ and a pattern of decreased medical information seeking overall among certain minority groups,⁵⁰ may better explain online health disparities.

The integrative model of online health information seeking we propose in this chapter connects the racial disparities at the population level with the individual-level characteristics that are directly related to the amount and type of health information usage on the Internet owing to broader social structures that undermine most learning opportunities and resources available to minority youth. We suggest that the racial disparities among youth are manifested in the form of individual-level differences in health information orientation and health information efficacy that result from deep-seated structural differences in the learning opportunities available to youth.

Integrative Model of Online Health Information Seeking

The Integrative Model of Online Health Information Seeking (IMOHIS) suggests that macro-level disparities in social structures play out in the realm of individual-level differences in motivation and ability, thus connecting the broader structures in social systems with the micro-level or individual contexts. In other words, the individual-level differences in motivation and ability become the conduits through which the structural inequities reinforce themselves and continue to contribute to health care disparities. Therefore, the racial divide is not only played out through differentials in access to the health care infrastructures within social systems, but are further reinforced and sustained by disparities in access to and

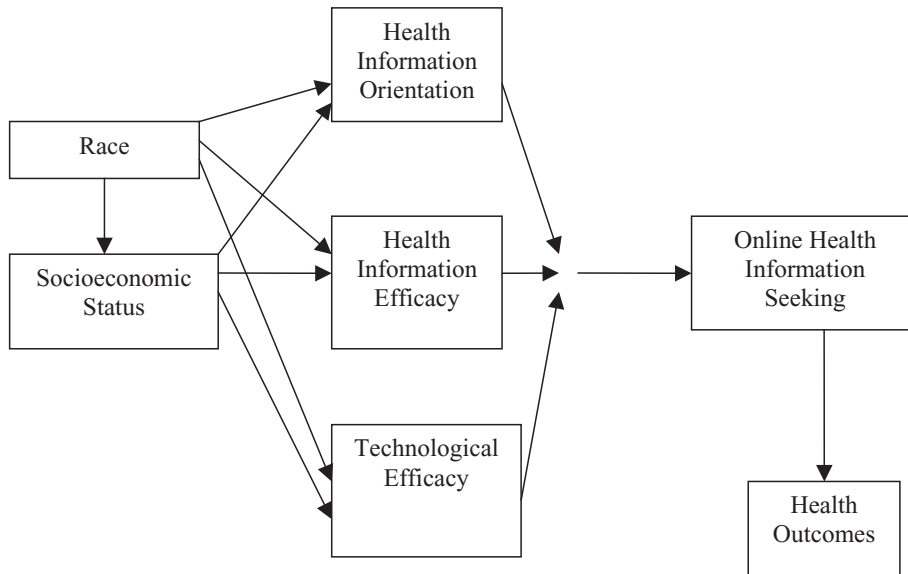


Figure 1
Integrative Model of Online Health Information Seeking (IMOHIS).

usage of communication infrastructures. Figure 1 presents the IMOHIS based on the media effects literature.⁵¹ According to this model, both motivation and ability are key contributors to online health information seeking. The model is particularly relevant for examining youth learning and usage as patterns of access, use, and learning established during youth are reinforced through the life cycle. These patterns also set the stage for future uses of technologies and patterns of health information seeking that are enacted at various life stages of the individual.

The IMOHIS suggests that the underlying social structure determines the intrinsic interest in health that, in turn, results in the search for health information. Health orientation, which reflects the intrinsic consumer interest in issues of health, fundamentally contributes to the consumer motivation to search for health information online. Health-oriented youth are more likely to seek out health information on the Internet compared to their less health-oriented counterparts. This motivation in health-related issues is embedded within the structural context, being shaped and socially constituted through the society within which the youth come to understand and live in the world. For instance, Dutta-Bergman⁵² demonstrated that motivation in health-related issues increases with education and income. Existing scholarship also documents a strong relationship between race and health orientation, suggesting that the motivation in health-related issues is greater among certain segments of the population as compared to others. These differences in health orientation are created through the social contexts within which children understand and act on the value of health. In structurally deprived contexts where the day-to-day struggles for survival are played out in the lives of young people, the opportunities for learning about positive health behaviors and health-enhancing resources are fairly limited.⁵³

In addition to the motivation for health information seeking, the individual needs to have those structural-level components—like reliable access to the Internet—that foster a sense

of self-efficacy (or self-sufficiency) for its use for purposes of health information seeking. The concept of efficacy taps into the individual's belief in his or her ability to engage in constructive behavior. The twin concepts of health information efficacy and technological efficacy capture the perceived ability to seek out health information and use new communication technologies respectively. The greater the efficacy, the stronger the likelihood that individuals will be motivated to engage in health information seeking. Efficacy, once again, is structurally constituted and directly related to a lower level of perceived ability to seek out health information among minorities. Similarly, the perceived ability to use communication technologies to meet felt needs is lower among racial minorities. These perceptual barriers in using technologies and seeking out health information are very much constituted by real differentials in access to communication infrastructures. Finally, the motivation and efficacy components are interlinked, and are themselves defined within the larger structural environment of the American economy.

Health Information Orientation

Health information orientation reflects the underlying motivation the individual feels in regard to health-related topics and, therefore, taps into the degree of personal interest in health information. This degree of interest in a health topic by minority youth is often limited because of the inherent biases built into the system. For instance, existing research on health promotion documents the white-middle-class bias of health-promoting campaigns that reach out to the haves while simultaneously ignoring the have-nots, also known as the underserved segments of the population.⁵⁴ The high health information-oriented individual actively monitors his or her environment and scans for relevant health information to ensure that he/she is not at risk of disease or illness. By comparison, the low health information-oriented individual is less likely to participate in health information seeking. Thus, it may be argued that health information orientation would lead to the active search for health-related information, capturing the intrinsic consumer interest in health topics. In the context of the nation's youth, the extent of motivation felt toward health-related topics would influence the ways in which the youth seek out health information, and monitor the environment for health information, as well as the ways in which they learn from the health content that they encounter in both traditional and new media information venues.

Our understanding about health information orientation is that there exist variances in the types of channels through which high and low health information-oriented individuals learn health content. In fact, studies point out that the health information-oriented individual is more likely to learn health information from active and information-heavy communication channels, which is not the same for the individual who is not health information oriented or has a low level of health information orientation. This knowledge about the link between health information orientation and health information seeking is essential to the design, implementation, and evaluation of preventive health interventions. With a large number of youth-targeted interventions focusing on the issue of prevention, it is particularly important to develop communication strategies involving new communication technologies that speak to both levels of health information orientations exhibited by the nation's youth. Also, examination of the relationship between health information orientation and health information seeking provides a theoretical framework for understanding the communication system surrounding high and low health information-oriented individuals, and the ways in which these systems might be structurally improved in order to meet the information needs

of individuals, groups, and communities. In addition, by investigating the role of motivation in health information seeking, the IMHIS provides an explanatory pathway for articulating the process underlying the use of the Internet for purposes of health information seeking among the nation's youth. It also offers a mechanism for understanding the ways in which racial disparities influence health outcomes through their impact on information seeking and information processing strategies.

Health information orientation not only influences the amount of health information sought out by the individual, but also influences the information processing strategies he or she adopts. Dual processing theories point out that motivation triggers an individual's intrinsic interest in a particular issue or topic, which leads to active engagement in cognitions, attitudes, and behaviors related to the specific issue/topic.⁵⁵ In other words, motivation activates individual engagement in information processing, decision making, and adoption of behavioral choices based on the consideration of arguments presented in health information messages. A high level of motivation increases the attention paid by the individual to relevant information and to the comprehension of such material. It also increases the active information search for issue-based information. Therefore, a health-motivated individual actively participates in health-related issues and actively searches out relevant health information.⁵⁶ For America's youth, the extent of health information orientation is likely to influence the degree of attention paid to online health information and the way in which the information is attended.

In the absence of health-enhancing structures within the minority community, young people are less likely to learn about the relevance of health behaviors, to have role models promoting health behaviors, and to value health-promoting behaviors owing to the lack of resources that would support such behaviors. As a consequence, they are more likely to focus on the daily struggles of survival. In this sense, being able to be healthy is more deeply connected with basic survival needs, such as being able to procure adequate food for the day, being able to secure shelter, staying out of the path of violence, and so forth. In terms of racialized social contexts, the structures surrounding the lives of African American and Latino youth provide minimal opportunities for health-enhancing behaviors, and often are embedded within threatening structures of violence, such as police brutality, structural racism, racially driven strike laws, the war on drugs, and so on. Under such circumstances, the opportunities for developing and sustaining health orientation within these underserved communities remain minimal. Therefore, health policies ought to focus on creating sustainable structures within these communities that would promote health orientation among young children and adolescents. Communication initiatives promoting healthy attitudes and behaviors ought to be supplemented with structural changes and allocation of resources that would promote health orientation.

Health Information Efficacy

The concept of health information efficacy is built on the existing research on self-efficacy, which refers to the degree of confidence individuals have in their ability to perform a health behavior, and positively predicts the adoption of preventive behaviors.⁵⁷ It is the perceived ability to exert personal control, and in this case, capture the extent of confidence individuals feel in their ability to engage in health information seeking. Self-efficacy influences the likelihood of health information seeking and health information processing.⁵⁸ Health information efficacy refers to the intrinsic consumer belief in his or her ability to search for and

process health information. Among the nation's youth, health information efficacy varies with the extent to which youth feel empowered to make their own sound health choices, and the extent to which they feel they have access to the basic resources of health that are critical to survival. Efficacy, in these terms, is embedded in social structures, such as when white youth with access receive a variety of educational programs and other advantages that encourage a certain level of comfort with using and evaluating health information. This is in contrast to minority youth who systematically receive lesser opportunities for learning about health information and its uses.

In addition to motivating health information seeking in these minority youth, they need to have access to the Internet, and the ability to use the Internet for pertinent health information processing. Efficacy, then, is shaped by the dispositional orientation of the consumer, his or her experience with the medium (Internet), and his or her demographic characteristics. Of particular relevance are the demographic correlates of access and efficacy, given the technology-related gaps in the population. Individual uses of the Internet for health care purposes influence a variety of outcomes, such as accessibility of care, quality of care, patient satisfaction, physician-patient relationship, and the effectiveness of health care policy. Health information efficacy among the youth varies with race such that African Americans and Latinos perceive lower levels of efficacy as compared to whites. This perception is both created and maintained by the actual limitations encountered by minority youth. As explained above, minority youth are less likely to have computer or Internet access at home, as well as have limited access to broadband connections at school. Moreover, the Web sites devoted to health issues for minorities have been shown to be of poorer quality and are harder to access from search engines such as Google and Yahoo. Lower levels of efficacy are tied to the material absence of tools and resources in the African American and Latino segments of the population. The structural absence of critical resources contributes to the perceptions of barriers where engaging in health information seeking is concerned. These perceptions of barriers however are very tangible and are connected to the material absence of resources in these underserved communities. Furthermore, African American and Latino youth also experience barriers in terms of the knowledge and the know-how with respect to the uses of health information sources, and processing strategies for identifying and using information received from credible sources. This suggests the need for health literacy programs that emphasize training children and youth in strategies for seeking out, deciphering, and evaluating the quality of health information. Such programs may be instituted through classrooms, but also through community-based programs that seek to build health information-processing skills in underserved communities.

Technological Efficacy

Another important element in our research is the concept of technological efficacy, which reflects the extent to which individuals perceive their ability to navigate communication technologies. As a reflector of perceived ability, technological efficacy impacts the extent to which youth are likely to use communication technologies to fulfill their health information needs. Rojas et al. support the argument that dispositions toward technology drive its use.⁵⁹ Dispositions come from social, cultural, and economic surroundings and are reinforced (rather than changed) by school and peer environments. The absence of capacity-building infrastructures in minority communities (such as training programs, educational opportunities in schools, support networks promoting technology, and

technology-promoting messages) systematically contributes to the low levels of technological efficacy in these underserved communities. Furthermore, in instances in which training programs are available, their racially biased characteristics fail to attract youth from underserved communities. Minorities may not view the Internet as having anything of value to offer, or may not be motivated or able to access information due to other pressures, social climate, et cetera. In fact, the individuals interviewed in the Rojas et al. study⁶⁰ reported not accessing the Internet from the libraries where so many have focused attention to alleviate the divide. Similarly, Pinkett⁶¹ argues that “people must be able to see the relevance of technology in order to fully embrace it. At the same time, since access does not imply use, and use does not imply meaningful use, we must also consider the nature of engagement we seek to promote.”⁶²

Regarding race-related issues, minorities such as African Americans and Latinos are more likely to run into barriers to using new media technologies because of the systematic absence of literacy programs and capacity-building efforts targeting African American and Latino communities. This suggests the need for training programs that equip these underserved communities with skills for using technologies to meet their information-processing needs. In the realm of health, health literacy programs may be combined with technological literacy programs in order to build the overall information efficacy of underserved individuals, groups, and communities. These programs would need to be culturally sensitive in order to respond to the needs of the minority communities. Furthermore, technologically mediated spaces may be developed that are responsive to the characteristics of these cultures as well. Also, a culture-centered approach to technological efficacy would suggest the need to develop technology platforms for the voices of minority youths based on specific technology-based programs that build community capacity to articulate community concerns. This last strategy is evident in the MySistahs project presented later.

Online Health Opportunities: From Information Seeking to Activism

The literature on online health information seeking suggests that searching for health information on the Internet is correlated with a variety of outcomes that are beneficial to individual health.⁶³ Researchers studying the role of the Internet in the context of health suggest that searching for health information on the Internet equips consumers with the ability to engage in preventive behaviors, empowers them in the context of their ability to navigate physician–patient relationships, empowers active health care consumer participation in the realm of policies that impede health outcomes, and fosters community platforms for social change by presenting possible communicative spaces for engaging the health active segment of the population.

Online Health Information Seeking and Health Disparities

Ultimately, the IMOHIS offers a theoretical framework for understanding population-level health care disparities among youth by suggesting mediating mechanisms through which health information orientation, health information efficacy, and technological efficacy influence online health information seeking. From a policy standpoint, the model also lays out key foundations for addressing health care and communication infrastructures with the goal of reducing the inequities in health care among the nation’s youth. The motivation and perceived capacity to navigate health information tends to be lower among the marginalized communities within social systems, thus reinforcing the existing disparities within the social

systems.⁶⁴ Health information seeking is a critical component in modern-day consumer decision-making processes and closely tied with a variety of health outcomes,⁶⁵ and therefore, the extent to which certain segments of the population seek out health information significantly affects the health outcomes of these segments. In examining issues of inequity in online health information seeking, it is critical to pay attention to issues of access, patterns of usage, and evaluations of quality of online health information. We will argue that all of these components are significantly interrelated with health information orientation and health information efficacy within the population.

Access and Equity

The differential patterns of health care access are a growing area of concern for policy makers, practitioners, and academics working in the health care sector. Increasingly, scholarly articles continue to document the disparities in access to basic health care such that, whereas health care is accessible for some population segments, such care and its benefits are typically inaccessible to the marginalized segments of society.⁶⁶ Health care access typically reflects sociodemographic differentials such that higher-SES groups have significantly greater access to health care infrastructures as compared to lower-SES groups. These differential patterns of access in the context of SES are relevant for racial disparities because racial inequities mirror SES disparities. These patterns of inaccessibility to health care services are also replicated on the Internet, such that those with minimal access to health care structures also have minimal access to health information infrastructures, such as health Web sites.⁶⁷

Therefore, African Americans and Hispanics have minimal access to both health information and health care infrastructures as compared to whites. People with preventable health problems and without insurance coverage are least likely to have access to the necessary communication technologies that would serve as repositories of health information.⁶⁸ Digital divide studies attest to the significant differences between the higher- and lower-SES groups in the realm of access to the Internet, with the lower-SES groups facing a variety of barriers such as cost, location, illiteracy, physical ability, and capacity.⁶⁹ The differential demographic distribution of both health information orientation and health information efficacy between high- and low-SES groups further suggests differential patterns of access to health information resources on the Web. These patterns are also reiterated in the realm of race and ethnicity, and further documented in the context of access among young children and adolescents, because ethnic disparities also provide the contexts for disparities in SES. As documented earlier in this chapter, African American and Hispanic youth have more limited access to health information infrastructures as compared to white and Asian American youth.

We know that research on the knowledge gap documents the fact that public information campaigns typically improve overall outcome levels, and simultaneously increases the gaps between the higher- and lower-SES groups of society.⁷⁰ Health information systems on the Internet are likely to contribute to such gaps. Also, the motivation factor serves an important role as a mediating variable because higher-SES groups are typically more health information oriented as compared to lower-SES groups.⁷¹ As a result, higher-SES groups are more likely to seek out health information resources on the Internet, process information from such resources, and adopt healthy behaviors as compared to lower-SES groups.⁷² These disparities in SES are also reflective of the structural disparities in the context of race, as certain racial and ethnic groups are more likely to be clustered in the higher-SES segments as compared to other groups. This presupposes the need for public and governmental efforts that are specifically

targeted at reducing the gaps between the health “haves” and “have-nots” in society by creating sustainable technological resources for health information access and by developing initiatives for increasing awareness of such resources.⁷³ Such efforts need to highlight both issues of access and motivation. Eng et al.⁷⁴ recommend steps such as providing public and residential access, increasing health and technology literacy, and integrating universal access into health planning. Technology—such as multimedia kiosks, information portals, and Internet-equipped computers—needs to be made available in publicly accessible spaces. One such attempt in bridging the digital divide is the creation of community technology centers (CTCs) that offer public access computer facilities located in low-income neighborhoods.⁷⁵ Furthermore, sustainable efforts need to be put into place for developing health information efficacy among the underserved ethnic segments of the population through the development of sustainable communication skills for seeking out and processing health information.

Schools in underserved communities (such as primarily African American, Hispanic, and Native American communities) need to incorporate specifically health-oriented programs that seek to build health information orientation and health information efficacy in the cultural practices of underprivileged groups. Such programs also need to include components of self-motivation and response efficacy to increase the perceived ability of the underprivileged segments in using the Internet for health care purposes. Targeted workshops and training sessions are needed to teach technology literacy skills related to the effective and efficient use of the Internet, and thus build health information efficacy in the everyday lives of the population. For instance, Salovey et al.⁷⁶ developed two community technology centers affiliated with two Head Start early childhood education programs in New Haven, Connecticut, one of the three poorest cities in the state of Connecticut. The program trained Head Start staff members to become technology coaches, and offered training programs for Head Start parents as well as other individuals in the neighborhood who desired training. For another option, health Web sites could be deployed for delivering tailored health prevention campaigns that address the needs of the at-risk groups, and deliver communication messages that match the stage of change of the consumer.⁷⁷ Such message tailoring might be particularly relevant for the underserved sectors of the population because of the uniqueness of the barriers and the information needs experienced in such segments.

Patterns of Usage

As we have shown, not only do consumers within diverse population sectors differ in their access to communication infrastructures, but they also vary in their patterns of usage of the Internet for various functions.⁷⁸ In fact, recent scholarship on the digital divide questions the simplistic notion of the digital divide being conceptualized in terms of basic access or inaccess, and calls for further exploration of the ways in which various segments of the population use the Internet.⁷⁹ In other words, we ought to look beyond ownership of computer and Internet connection to explore the ways in which computer access is put to use.

Racial divides are significantly evident in patterns of health information usage, with African Americans being significantly less health information oriented compared to Caucasians and Asian Americans. Internet health information seeking disparities mirror the broader patterns of disparities in the population. This suggests the relevance of investing in capacity building in underserved communities that have low levels of health information orientation and health information efficacy.⁸⁰

In addition to investing in infrastructures in such communities, health communicators and policy makers ought to focus on creating educational resources that foster better patterns of health information orientation and health information efficacy in underserved communities. Specific programs addressing the barriers faced by racial and ethnic minorities need to be put into place; also, efforts need to be targeted toward building efficacy through skills training. For instance, educational programs seeking to provide training in searching, evaluating, and deciphering health information would help address the barriers related to the extent of overload that the underserved groups face. Similarly, culturally sensitive design opportunities need to be created for the developers of online health information to respond to the communities that are in most need for health information.

Quality

The rapid growth in the use of Web sites for consumer health decision making has led to increasing concerns in the expert community about the quality of health information retrieved by patients.⁸¹ This concern is built on the notion that anyone can post health information on the Internet, and in the absence of a qualified gatekeeper, there really isn't a way to monitor the quality of what gets published. In this context, the onus of evaluating online health information and deciphering the quality of the information posted on a certain Web site shifts onto the consumer. Researchers studying quality suggests that the quality of health information retrieved from the Internet influences the value, cost, and effectiveness of care received by the patient.⁸²

Criteria for assessing quality in the area of Internet use for health care include source credibility, accuracy, completeness, relevance, and applicability.⁸³ Also, applying the IMOHIS to our understanding of quality suggests that the ways in which the quality of a health Web site would be evaluated depend on the motivation and ability of the consumer using the Web site. From the perspective of the underlying motivation to search for health information, it may be articulated that highly health information oriented consumers will be more likely to pay attention to systematic quality criteria in evaluating a Web site. In other words, the evaluation of quality is a heterogeneous process that varies with the information seeking functions of the consumer. Whereas certain quality criteria might be particularly relevant for consumer decision making in the domain of particular Internet functions, other quality criteria become critically relevant when the consumer uses the Internet for other functions. For instance, the consumer using the Internet for purchasing medicines might be more likely to evaluate the privacy policy of the Web site as compared with the consumer who is simply surfing the Internet for health information.

Similarly, health information efficacy also influences the quality criteria used by the consumer. Consumers who have high levels of health information efficacy are likely to pay attention to systematic cues that require considerable cognitive effort. Such cues might include the evaluation of the completeness and accuracy of the information on the Web site. On the other hand, individuals who have low levels of health information efficacy are perhaps more likely to apply heuristic quality criteria such as Web site design, the presence of visuals on the Web site, and Web site organization in evaluating the Web site. Given the population-based disparities in the distribution of health information orientation and health information efficacy among the different ethnic groups, there is a greater need for focused efforts on developing initiatives for training the low-health-oriented segments in the evaluation of quality of health information in patient decision making. Sustainable educational programs need to be created that work with the youth on developing quality indicators for

evaluating health Web sites and making health care decisions. Finally, engaging with online media also offers an opportunity for challenging the structural disparities through projects of activism involving minority youth.

Health Care Activism: Enacting Agency Online

It is not hard to find digital projects that involve youth in activist enterprises aimed at improving their health. There is the “Truth” project that successfully brands “truth teens” as a socially acceptable, responsible segment of youth who shun the allures of the tobacco industry. Then there are projects like the Youth Action Center,⁸⁴ which provides sexual and reproductive health information, important news that affects teens today, and ways for youth to get involved in their communities; Sex Etc.⁸⁵ is a Web site organized and run by teens that offers information on sexual health issues for young people; and Teen Wire,⁸⁶ a site from Planned Parenthood that provides great information on body basics, how not to have sex if you don’t want it, safer sex, and dealing with relationship breakups. It is far more difficult to locate digital media initiatives that are located in the realm of youth who are from underprivileged sectors of society. If this is an indicator of the need to examine such projects as harbingers of youth-driven social change, one project deserves to serve as an exemplar.

In spite of the structural constraints and the disparities in health and technology infrastructures, a growing number of e-health projects involving minority youth demonstrate the opportunity for engaging minority youth and addressing their health disparities online. These projects offer hope as we conceptualize new ways of engaging minority youth in health information seeking and in interrogating the structural injustices in the U.S. health care system. MySistahs⁸⁷ has a bold and youthful Web site that makes no bones about proclaiming ownership: “MySistahs is a website created by and for young women of color to provide information and offer support on sexual and reproductive health issues through education and advocacy.” This statement, and the banner that covers most of the top half of the Web site’s home page, locate the essence of the project—that it addresses health issues of youth of color, and that this Internet project’s locus of action lies within the cultural spaces of young women of color. “Who else knows more about us than us” is the catch line that runs across the banner. It also points to education and activism as the prime routes to achieving the objectives of this project. Implicit in these assertions is the notion that participants in this project are aware of their marginalized status in terms of health, and that they realize they can use new media forms like the Internet to influence health and well-being of people like their participant members. Also implicit is the notion that being people of color, and also women of color, does not necessarily mean that they are not capable of harnessing the resources available to them to take care of themselves. The Web site’s assertions speak to the contrary—that they can engage with available structural resources to make sense of their needs and frame strategies to take care of these needs. The banner statement, one needs to mention, runs through the entire Web site. The assertions originating on the home page become clearer as one moves on to subsequent pages. For instance, the “About Us” page, where the mission statement is laid out, notes that the project is dedicated to “creating programs and advocating for policies that help young people make informed and responsible decisions about their reproductive and sexual health.” It goes on to add that youth are not only part of any problem, but also constitute a part of the solution and should be included in the development of programs and policies that affect their well-being.

The “Features” page has the latest essays on sociocultural issues related to the participant population. The issues range from the influence of mass media on health, to those on

activism and “how to make a difference,” to self-help guides on how to remain healthy, and to information about young women in hip-hop. This latitude that the “Features” page offers in terms of social and cultural issues essentializes the location of health for underprivileged participants in the realm not of individual behaviors alone, but also within broader sociocultural structures. This is aligned to the arguments that we make in our text that the influence of the Internet on the health of underserved populations should be factored into the creation of communicative structures that locate members of the population at the heart of the discourse. Our argument is echoed in the “Health” page of the Web site. The first paragraph on this page says: “Socioeconomic, cultural, and gender barriers limit the ability of some young women of color to receive information on sexually transmitted infections (STIs), including HIV, access culturally appropriate health care, and reduce sexual risks.”

Nested in the Young Women of Color Leadership Council⁸⁸ project and under the umbrella of Advocates for Youth,⁸⁹ MySistahs’ emphasis on building community and its strategy of participant activism is evident too. The “Sistah-to-Sistah” link encourages members of the community to seek the help of peers for support and information—a feature notable in successful health communication initiatives on the ground, like the sex worker-driven Sonagachi HIV/AIDS Intervention Programme (SHIP) in India. Participant-driven health communication empowers members of a marginalized population to participate in the process of sense-making and ensuring better health behaviors for the community. What adds an edge to this call for ground-level activism in MySistahs is the focus on encouraging people to put a face to those names that are already involved as peer educators, thereby encouraging others to join the group.

The “Community” page demonstrates how the project engages in the building of an online community—precious to the operations of an activist organization in a marginalized space. It lists a series of options in this regard: signing up for e-mail newsletters, encouraging political action and organizing by petitioning elected representatives, participating in upcoming events on the ground as well as in the digital space, and searching the database to find local organizations. In this exercise, we see a distinct effort to complement and supplement activist efforts on the Internet with actions on the ground. The resources provided to community members as part of the project cover a range of issues like health, body politics, violence, and lists books, hotlines, and parallel organizations. However, it is worth noting here that most of these links point to projects that have a broader focus. Other than AmbienteJoven, which is a Spanish-language Web site for Latino young men who have sex with men and for Latino/a gay, lesbian, bisexual, transgender, and questioning youth in the United States and Latin America, the other projects appeal to youth in general, and are not focused on youth who are marginalized in terms of health. This is consistent with the argument we made earlier that there is a need for activist projects that involve and focus on health issues of youths in underserved populations.

MySistahs also takes its health activism for the underserved into the realm of politics and public debates related to the framing of health discourse for its user community. The focus is on the fact that policy discourse and maneuvers are as important as ground-level activities to address health disparities based on race, class, gender, and ethnicity. This also foregrounds community-level activism in the digital realm as a critical exercise toward greater equity in health care.

MySistahs’ activist emphasis becomes clearer in its “Freedom Corner” section, the purpose of which is to “provide a platform for the creative voices of young women of color.” The project staunchly proclaims that it makes central the voices of cultural participants in the

framing, design, implementation, and evaluation of programs dedicated to the health of the participants themselves. It is significant to note that this strategy goes against the grain of most health initiatives aimed at underserved populations where the stress is on transmitting messages that are created by people from outside the community. MySistahs is opposed to this logic, and locates its strategies of health and well-being in the agency of its youth members. The testimonials in the “Freedom Corner” provide exemplars of this approach and its validity and effectiveness in addressing health issues among youth of color. Although our example presented here is based ultimately on a single case, it offers new possibilities about ways of engaging minority youth in activist projects that challenge the structural injustices that constrain their lives, and opens up the discursive space to the voices of hitherto marginalized youth instead of the top-down approaches to e-health design based on the agendas of campaign planners.

Conclusion

In conclusion, the integrative model of online health information seeking proposed in this chapter suggests a pathway through which racialized structural disparities presented to the nation’s youth are mediated through disparities in individual-level factors such as the motivation and ability to search for health information, and the perceived ability to use communication technologies. From an applied standpoint, the IMOHIS suggests that simply equipping communities, households, and individuals with communication technologies is not enough. Although creating points of access in communities is an important step, it is only a stepping stone toward addressing deeper, structural disparities in online health information usage among the nation’s youth. As the research presented in this chapter demonstrates, emphasis needs to be placed on creating sustainable learning opportunities for using digital media technologies, and for seeking out and using health information in underserved communities. Furthermore, efforts of capacity building ought to address the very structures that create and sustain inequitable conditions. Structure-centered approaches to health communication are particularly relevant as such programs directly seek to alter the structures that foster health inequities.⁹⁰ Efforts also need to be made to foster learning opportunities in underserved communities. Programs might focus on building health orientation in such communities, and complement such educational programs with structurally supportive components that sustain health orientation in communities. Health and technology literacy programs should be created to teach children the skill sets for using new technologies to fulfill their health needs. Ultimately, this chapter suggests that disparities in technology uses and health information seeking reflect broader structural disparities in society that adversely affect communities of color. These disparities work hand in hand to create, sustain, and reinforce health disparities in underserved communities. Health care activism mobilized online among minority youth offers a space for engaging with these structures and the racialized ills they perpetrate.

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