Published in final edited form as:

Am J Health Behav. 2008 ; 32(5): 547–556. doi:10.5555/ajhb.2008.32.5.547.

Factors That Influence the Receipt of Eye Care

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Abstract

Objectives—To better understand what factors influence the receipt of eye care so that screening and education programs can be designed to promote early detection and treatment.

Methods—Twenty focus groups were conducted. Analyses entailed debriefing sessions, coding, and interpreting transcribed data.

Results—Attitudes about eyesight and eye exams influence the receipt of preventive eye care. Limited knowledge about certain eye diseases and conditions was reported. Participants stated that their primary care providers did not communicate information with them about eyesight nor did they conduct basic eye screenings.

Conclusions—Improving provider-patient interactions and developing public health messages about eye diseases and preventive eye care can facilitate increased use of appropriate eye care services.

Keywords

health education; health professionals; vision; receipt of care; qualitative research

Research indicates that low vision and blindness increase significantly with age in all racial and ethnic groups.¹ The prevalence of these conditions is likely to increase given the aging of the baby boom generation. It is estimated that by 2020 the number of persons aged 40 and older who are blind in the United States will increase approximately 70%, to 1.6 million people. The number of persons with low vision is expected to increase to 3.9 million, bringing the total number of Americans aged 40 and older with visual impairments to 5.5 million.² Many Americans are unaware that they have an eye disease that is weakening or impairing their vision.^{3–6} Most eye diseases and disorders have no symptoms or early warning signs.⁷

The leading causes of vision impairment and blindness in the United States include diabetic retinopathy, age-related macular degeneration (AMD), cataract, and glaucoma. Diabetic retinopathy, a complication of diabetes, affects more than 5.3 million Americans aged 18 and older.⁸ AMD, the most common cause of blindness and vision impairment in Americans aged 60 and older, accounts for almost 45% of all cases of low vision.^{8,9} Age-related cataracts affect nearly 1 in 6 Americans aged 40 and older. The eyes of more than half of all Americans have

cataracts by the age of 80.8 There are 2.22 million people in the country diagnosed with open angle glaucoma, half of whom are unaware that they have the disease.¹⁰

Early detection and treatment of eye diseases and conditions--before major vision loss occurs--are the best methods for controlling these disorders.¹¹ Routine eye examinations allow for the timely diagnosis and treatment of vision-threatening disorders. Although many people report accessing eye care,¹² many others either do not take part in recommended screenings or do not receive the comprehensive type of eye exam necessary to detect some eye diseases that, if left untreated, result in visual impairments.¹³⁻¹⁵ Multiple factors may inhibit the receipt of appropriate preventive eye care, including fear, denial, and lack of knowledge about the importance of routine eye exams.¹⁶⁻²¹ Our focus is to elucidate factors that influence, positively or negatively, people's willingness to seek and obtain eye care.

Due to the expected increase in the prevalence of age-related eye diseases and the expanded treatment options becoming available, we conducted a study to explore how factors such as attitudes, knowledge, and communication may influence participation in routine screenings and regular eye care practices to prevent vision loss. We hope health educators and health care providers can use these findings to develop or refine educational materials and eye-disease screening programs to promote early detection and treatment before irreversible vision loss occurs.

METHODS

An in-depth, qualitative research approach was used to examine perceptions of what influences people to receive preventive eye care services. Focus groups were convened to examine the complex way in which attitudes, knowledge, and communication influence behaviors related to the receipt of eye care.

Procedure and Sample

Twenty focus groups were conducted in Miami, Florida; Chicago, Illinois; and San Francisco, California, between March and April 2005. Professional recruiting firms in each city recruited participants by telephone interviews using a random-digit-dial procedure. A participant screener developed by the researchers was used to select eligible members of the population in each city. The eligibility criteria included people who were English speaking and over the age of 40, and who did not work as some type of health care professional.

Six groups were conducted with African Americans, 6 with Hispanics/Latinos, 4 with whites, and 4 with Asian Americans. All participants self-identified their race and ethnicity. The focus groups had an average of 9 participants per group (range, 6 to 11). Fifteen eligible participants were dismissed because of overrecruitment. Those dismissed were the last participants to arrive at the facility, and they were dismissed before the focus groups began.

Participants in each location received cash compensating them for their time and participation in the group discussion. The amount was \$65 or \$70, depending on the location of the focus group.

The study protocol was reviewed and approved by the institutional review boards of Macro International, Inc, and the University of Maryland, Baltimore County. All participants provided written informed consent.

Conducting the Focus Groups

As participants arrived, they were given a short demographic questionnaire to complete anonymously. The focus groups began with each participant signing a consent form, followed

by group discussion and a self-rating of general health by each participant. A hypothetical situation was presented to the participants to gather their general attitudes about eyesight relative to other disabilities. Participants were asked, "What would be the worst disability that could happen to you: losing your memory, hearing, eyesight, speech, or an arm or a leg?" Other questions related to vision, vision literacy, knowledge about eye exams, patient-provider communication, and barriers to eye care were also asked of participants. Participants were asked to reflect on their own experience and the experiences of those they knew and to share the personal experiences and attitudes they perceive as having an influence on their receipt of eye care.

Each focus group was homogeneous in terms of self-reported race/ethnicity. All groups were conducted by the same moderator and 2 investigators who served as notetakers. The moderator used a structured moderator's guide, developed to guide discussions and probe participants' attitudes and knowledge about general health, vision, vision literacy, communication with providers, and barriers to the receipt of eye care. For this research, we pose that attitudes comprise beliefs about an object (or behavior), which includes feelings toward the object and personal experiences. The moderator's guide included evaluative items meant to identify attitudes, knowledge, and communication that influence behaviors.

Standard group moderation techniques were used in all discussions.²²⁻²⁴ All focus groups lasted approximately 1½ to 2 hours and were audiotaped. Two groups in Miami were also videotaped.

Analyzing the Focus Groups

The focus group audiotapes were transcribed verbatim by a professional transcription service and reviewed independently by 2 investigators. The transcripts were coded according to concepts of grounded theory.^{25,26} Participant comments were categorized into themes. Any differences of opinion about the meaning of specific passages in the transcripts were discussed and resolved by arriving at a consensus about its meaning.

Results were not analyzed by age, sex, or education for this study. We used NVivo qualitative analysis software from QSR to facilitate content data management and analysis. Only the themes that were identified by more than half of the participants are presented herein. We discuss findings identified across all focus groups as they relate to attitudes, knowledge, and communication.

RESULTS

A total of 180 people participated in the focus groups. Males and females were almost equally represented in all focus groups, with a mean age of 53 years. Participant demographics are presented in Table 1.

General Beliefs and Attitudes About Eyesight and Eye Examinations

Participants were found to value their eyesight and healthy vision and described their eyesight as indispensable. They indicated that they would be less independent and less productive if they lost some or all of their vision and that the loss of eyesight would be devastating to them. One participant said, "I want to see. I want to see my children. I want to see friends, strangers, flowers, just the world...To me, it's [eyesight's] the most important sense."

At the same time, participants also voiced a competing belief that they take their eyesight for granted. One participant stated, "Most people are born with very good eyesight, so they don't concentrate on that. I take it for granted." In general, participants did not link their eyesight with their health status. One participant said, "I don't see that eyes are that related to health. I

don't see it as a health issue until other factors come into play...like diabetes and things like that.”

Participants also expressed the belief that seeing an eye care provider is not a necessity. This belief was attributable to several factors, including the idea that their vision has not changed and different beliefs about when to visit an eye care provider. For example, when the participants were asked about the last time they saw an eye care provider, one participant responded, “I don't even know. Not since I've lived here and that was '88, so what's that, 17 years ago? It's been a long time. I don't need glasses. I have nothing wrong with my vision. I have no pain. I just kind of know that they're fine.”

An exchange between a participant and the moderator in Text Box 1 also illustrates this belief.

Text Box 1

MOD: When was the last time you saw an eye doctor and had your eyes examined? Let's start with Gary.

MS: The last time, to be honest with you, it was 1980. The last time I got my eyes checked. No, these glasses are reading glasses. The last time I had my eyes checked was in 1980 when I had my last pair of [prescription] glasses.

MOD: That's 25 years, brother. Why haven't you gone to a doctor in the last 25 years?

MS: Well, I haven't had the need to go. I know that's no excuse.

MOD: Okay, for 25 years.

MS: Twenty-five years ago.

MOD=moderator; MS=male speaker; FS=female speaker

Participants also indicated that the primary reason for visiting an eye care provider was to check on or change their eyeglass or contact lens prescription and not to examine the overall health of the eye. “Well, my vision has basically stayed the same since 1999,” said one participant, “so that's why I haven't gone. And I haven't noticed any difference [in seeing with the glasses], either. And I've been wearing glasses since I was 2, I think.” Certain participants reportedly have never had problems with their eyes and felt that the eyeglass and contact lens prescriptions they had were sufficient for them to perform everyday activities such as reading and driving.

Seeing an eye care provider for preventive measures and checks on the general health of their eyes was rarely reported by participants. For example, “a lot of times when you think of a doctor, in general you're going to go for some other illness unless you're having a problem seeing. You're not going to go for preventative [eye] care...especially when you're in your 20s and 30s. You don't do that. You just don't do it. You don't think about it. You're invincible.”

However, in each of the 20 focus groups, getting an eye examination was mentioned as one way of preventing loss of eyesight and preserving healthy vision. The attitude that seeing an eye care provider or obtaining an eye exam is not a necessity highlights a disconnect between participants' general attitudes about visiting an eye care provider and general ideas about the importance of healthy vision and ways to prevent loss of eyesight.

When asked to cite some factors that could serve as barriers to receiving an eye exam, fear and denial were mentioned by participants. When asked, “What do you do when you have problems with your eyesight?” one participant said, “Some people do nothing because of fear. Some

people don't want to know. I think there are some, and I know a couple of people. As long as they don't know what's wrong, they're okay with it. There is that fear of knowing.”

The following exchange in Text Box 2 also illustrates this concern.

Text Box 2

FS: That was about 2 years ago, the first time I went in 10 years [to have an eye exam]. So I really never go. But I have to start going. It's just hard to force myself to.

MOD: Why is that, Judy?

FS: I don't know. Because I'm diabetic. And I'm afraid if my eyes are bad, they'll put me on insulin. And I don't know. I'm just scared.

MOD=moderator; MS=male speaker; FS=female speaker

Participants also stated that eye injuries or disease are unlikely or will not happen to them and expressed the notion that “what people don't know won't hurt them.”

Knowledge About Eye Health

Generally speaking, participants in the 3 different geographic locations had very little knowledge about eye health. Participants mentioned disease and accidents as reasons people lose their eyesight, and they were somewhat knowledgeable about what constituted a dilated eye exam. However, focus group participants were not knowledgeable about specific eye conditions and eye diseases such as low vision and diabetic retinopathy. When the participants were asked if they had heard of low vision before, one participant replied, “I heard about it, but I'm not too sure. Isn't that something where you can only see a certain height or something like that? It's exactly...in other words, your eyes...you can't see above a certain horizon or something like that.” Text Box 3 transcribes an exchange with an individual with diabetes.

Text Box 3

MS: I've never seen an eye doctor.

MOD: You've never seen an eye doctor? You've never seen an eye doctor?

MS: Not even for diabetes screening. [The participant earlier in the discussion revealed he has diabetes].

MS: No.

MOD: Why not?

MS: Because, like I said, I've never had problems with my eyes. The only time I had problems with my eyes was when my diabetes was really bad. And I didn't know I had it [diabetes] then.

MOD=moderator; MS=male speaker; FS= female speaker

Participants may lack knowledge or understanding about what constitutes preventive eye care. In each of the focus groups, participants revealed that getting one's eyes checked by a health care provider is one form of preventive eye care. Yet many participants stated that their eyesight was fine and that “if it isn't broken, there is no need to fix it.” Participants said that they do not seek information about their eyes. The participants who did seek information about their eyes were typically looking for information about symptoms they were experiencing or for more information about conditions that friends and family might be experiencing. When asked if

they had ever looked for any information regarding their eyes or vision, one participant said, “I’ve had no eye problem[s] and no vision [problems]. I haven’t found it necessary to inquire.”

Participants also mentioned that, in the media, there is a lack of information provided about the importance of eye health and the need to become more aware of eye disease and low vision, especially when comparing information provided about other diseases such as breast cancer and prostate cancer. One participant said, “...we don’t see enough of that...they talk about cholesterol, they talk about all these other illnesses, but you never hear them say too much about diabetes. I mean about eyes; that maybe diabetes affects your eyes and so forth and so forth. You know. Maybe that’s why you don’t get enough information or enough awareness to make you a little bit more cautious or to follow up or check out something like that.” A different participant suggested, “I would also like to see it [eye health information] in the talk show circuit. If Oprah and Dr Phil had something on eye care.....you know...loss of your eyes, people would take notice because it’s [Oprah and Dr Phil] something they can believe and trust...If it’s in Oprah magazine, I tell you, you can change the United States.”

Participants reported receiving no information from public service announcements, although some did report receiving pamphlets about eye health in their health care provider’s office. The lack of eye health information, in certain cases, was reported to affect their prioritization of receiving eye care services relative to other health care services and personal responsibilities. When asked, “What do you know about eye health?” one participant responded, “Basically nothing, ‘cause nothing ever comes on the TV that talks about any eye disease. Or on the radio. Ever.”

Communication/Sharing Information

To further our understanding of the factors that influence, positively or negatively, the receipt of eye care, it is essential to consider sources of information individuals use to educate themselves about the value of eye care and to prioritize it among the many demands on their time. For this research, we predicted that communication, namely the sharing of information about vision and eye disease, between health care providers and their patients might facilitate the formation of beliefs and attitudes that ultimately determine intentions and behaviors regarding the appropriate receipt of eye care.

Participants reported communication as an important component of provider-patient interactions. Participants said that their level of comfort in communicating with their primary care provider or eye care provider was good, very good, or excellent, and that they have a good relationship with their provider. “I have good communication,” said one participant. “I can ask things and they will explain to me what is going on or what the medication [is] that they prescribed to me.”

Despite the overall high level of comfort in communicating with providers, participants said that when visiting with their primary care providers, the providers do not share information with them about their eyesight. When asked whether their primary care provider ever shared information with them about their eyesight, one participant said, “No, it’s not in his expertise.” The exchange with a participant in Text Box 4 illustrates concerns with communication about eye health between providers and participants.

Text Box 4

MOD: Has your primary care physician ever shared information with you about your eyesight?

MS: The only conversations that I have with my primary doctor is [are] when I ask to be sent to the optometrist. And that was it.

MOD: Anyone else, has your primary care physician ever shared any information with you about your eyesight?

MS: No.

MS: No.

FS: It would be good if they did.

FS: I guess if there is [are] problems they have to [share information with you about your eyesight]. Usually the primary care physician doesn't see eye problems. He doesn't tell you probably because there is nothing wrong.

MOD=moderator; MS=male speaker; FS=female speaker

In the rare instances when primary care providers did share information, it was in reference to a participant's diabetes.

Participants also said that their primary care provider no longer examines their eyes or conducts vision screenings when giving a physical examination. When asked, "Has your primary care provider ever shared information with you about your eyesight?" one participant said, "You know, I'm going to be honest with you, not mine." Another participant said, "You know, these primary care doctors, they only check certain things; then they send you to a specialist. I never heard of a primary care doctor checking my eyes, ever. I've been going to this guy a long time. I just had one [a general physical examination]. [MOD: And they didn't look and see?] No."

DISCUSSION

Blindness and visual impairment from most eye diseases and disorders that are prevalent in the United States can be diagnosed with routine eye examinations and slowed or halted with timely diagnosis and treatment.^{27,28} This study suggests that participants are not well-informed or knowledgeable about eye health, eye disease, or the need for routine eye exams. It also indicates that messages about eye health and eye care are not being conveyed to participants through the media or by their primary care providers.

The findings reveal that many primary care providers no longer examine participants' eyes or conduct vision screenings during physical examinations. This lack of attention to eye care was said to affect participants' perception of the need for, and ultimately receipt of, preventive eye care services. Screening for serious eye disease in a primary care setting is an efficient mechanism to identify patients with undetected but treatable ocular disorders that require referral for confirmatory diagnosis, follow-up, and/or treatment.²⁹ Given the absence of physical symptoms and, in most cases, no significant visual loss, early detection of developing eye disease is unlikely to occur without vision screenings.

Screening for potentially serious eye conditions during routine physical examinations also provides an opportunity for patients and providers to discuss eye care and the health of their eyes, including the correction of refractive error to maintain good visual acuity. Participants reported a lack of such discussion about eye care during many primary care provider visits. Lack of discussion about eye health with primary care providers was reported to negatively impact the receipt of preventive eye care services and conveyed messages about a perceived unimportance of eyesight to participants. An earlier, quantitative survey of knowledge, attitudes, and practices regarding eye health and disease indicates that only 8% of adults said a doctor who was not an eye care provider had spoken with them about eye health or disease within the past year (96% of study participants said they would be likely to have an eye exam if their family/personal primary care provider suggested it).¹⁷ Greater involvement of primary

care providers and other health care professionals in inquiring about patients' eyesight, whether patients had any trouble seeing, or whether patients had a recent eye exam may prove beneficial in altering participants' views about eye health and behaviors regarding the receipt of preventive eye care. Such discussions during general physical examinations will also provide an opportunity to increase awareness about eye health and disease, ultimately resulting in more informed attitudes and knowledge pertaining to eye health and disease. This may affect people's behavior, increasing their receptivity to and action toward making routine eye exams a priority in their otherwise busy lives.

The findings from this research as well as previous quantitative research¹⁷ indicate that primary care providers play an important role in influencing patients to receive eye care services. Because physicians are often relied upon to inform patients, direct patients through the health care system (referrals), and, in many cases, manage a patient's health, they are in a prime position to educate the public about eye health and influence the receipt of preventive eye care services. Primary care providers need to be informed that they play a pivotal role regarding the receipt of eye care services. At a minimum, it would be worthwhile if they could remind their patients about the need for regular comprehensive dilated eye examinations for all children and adults, and, if feasible, encourage providers to learn (or relearn) how to conduct a basic screening eye examination and implement this as a routine part of a general physical examination.

Participants reported a lack of knowledge or understanding about preventive eye care and certain eye diseases and conditions. This lack of knowledge seemed to affect general attitudes about eye health. For example, participants stated that their eyesight was fine and that "if it isn't broken, there is no need to fix it." This sentiment was also found in another quantitative study where one third of the sample who had not had an eye examination in the past 2 years reported no need for an eye exam because they did not believe they had any eye problems.¹⁷ After learning that many eye diseases are asymptomatic and that the best way to prevent eye disease is through regular comprehensive dilated eye examinations, participants suggested that public education might best be accomplished using public service announcements and eye health awareness campaigns.

As indicated above, similar findings about poor attitudes and knowledge regarding eye diseases and conditions have been reported. A national telephone survey of the public's knowledge, attitudes, and practices about eye health and disease revealed that the majority of adults have not seen or heard anything about eye health or disease in the past year.¹⁷ Only 36% of adults reported receiving eye health information in the past year, not including ads for contact lenses and glasses.¹⁷ Lack of knowledge is widespread—63% of Americans mistakenly believed that eye pain is an early symptom of glaucoma.¹⁷

Results from this study, complemented by results of other studies on eye disease, as well as targeted studies among diabetics at elevated risk of sight-threatening diabetic retinopathy, highlight the need to educate both the general public and health care professionals about eye diseases and conditions such as glaucoma, diabetic eye disease, AMD, and low vision. In particular, messages about the asymptomatic nature of many eye diseases and the importance of early detection and timely treatment to prevent or reduce vision loss are important. The fact that eye disease has no early warning signs necessitates regular eye screening/examination. Broad eye health education efforts are necessary to refocus attention on healthy vision as a part of general physical health and maintenance of a healthy lifestyle, beginning at a young age.

To improve the general level of knowledge concerning eye diseases, such as the role of family history, targeted and culturally relevant dissemination strategies are needed. In some cases, the eye health educational materials are already available but are underused. It may also be

worthwhile to implement eye health education into elementary and high school health education curricula. School-based eye health education activities may result in an increase in the number of children who discuss eye health with their parents and other family members and may encourage improved attitudes and eye health across generations.

Findings from this research suggest the importance of health education and improved communication about eye health in provider-patient relationships. If participants are not inquiring about eye health, if their primary care providers are not sharing information with them, and if information is not being provided through various media outlets, it is likely that people will remain uninformed about preventive eye care and unknowledgeable about the asymptomatic nature of many eye diseases. The effect of this lack of knowledge has widespread implications for the American public and their receipt of appropriate eye care. Health care providers are in a unique position to positively influence the receipt of eye care. Further research into the identified factors influencing the receipt of eye care is necessary to design and implement effective eye health and awareness campaigns and eye health interventions.

Acknowledgments

This work was supported through a contract award from the National Eye Institute (contract #263-01-D-0174 NICS 39). We thank the reviewers of an earlier draft for their insightful comments and suggestions. Many of the findings in this manuscript appeared in a final report that was submitted to the National Eye Institute.

Preliminary findings of this study were presented at the American Public Health Association's 134th Annual Meeting and Exposition in Boston, November 4–8, 2006.

Arlen Rosenthal assisted with the development of the study design and collection of data, and she reviewed drafts of the article. Adrienne Semidey assisted with the development of the moderator's guide. Sandra Townsend assisted with coordinating the focus groups, and Vernon Bowen moderated each focus group. Dr William Scarbrough III, K. Ceres Wright, Neyal Ammary, Bonnie Bates, and Bart Lawrence also reviewed drafts of the article. The authors would also like to express their gratitude to the people who participated in this study.

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Table 1Characteristics of Focus Group Participants^a

Variable	Miami, FL (n = 33)	Chicago, IL (n = 86)	San Francisco, CA (n = 76)
Age, mean (range)	55 (40-74)	52 (40-74)	54 (40-75)
Gender			
Male	52%	48%	49%
Female	48%	51%	49%
Race/Ethnicity			
Hispanic/Latino	15	18	19
African American	18	19	19
Asian	0 ^b	17	19
White	0	18	18
Marital Status			
Single	46%	44%	55%
Married	52%	56%	43%
Other	3%	0%	1%
Education			
Some high school	9%	7%	1%
High school graduate	18%	23%	9%
Some college	33%	35%	32%
College graduate	24%	24%	42%
Grad. school/prof. degree	15%	10%	16%
Income			
< \$15,000/yr	15%	8%	8%
\$15,000-\$24,999/yr	21%	16%	8%
\$25,000-\$49,999/yr	24%	45%	27%
\$50,000-\$74,999/yr	21%	13%	28%
\$75,000-\$99,999/yr	9%	14%	18%
\$100,000+/yr	9%	4%	11%
Insurance status			
Insured	84%	78%	93%
Not insured	16%	20%	5%
Don't know	0%	2%	1%

Note.

Percentages may not total to 100% due to rounding.

^aThe demographic information reported in this table is based on the 195 people who were recruited for this study and who showed up at the focus group facility for participation in the discussion groups. Demographic information was completed anonymously, making it difficult to remove extra participants from the demographic profiles. One hundred eighty people were kept as participants in the discussion groups.

^bHispanics/Latinos and African Americans were oversampled to provide meaningful comparisons between the various racial and ethnic groups. This design was prompted because of the documented growth in the prevalence of eye diseases and disorders within these minority groups.¹⁵

Table 2**Factors That Influence the Receipt of Eye Care****Attitudes About Eyesight and Eye Examinations**

- ⇒ Eyesight and healthy vision are very important
- ⇒ Eyesight is often taken for granted
- ⇒ Eye exams are deemed not necessary, because--
 - Vision has not changed or worsened
 - There is no pain in eyes
 - The primary reason for visiting an eye care professional to change their eyeglass prescription
- ⇒ Fear and denial can act as barriers to the receipt of eye care

Knowledge About Eye Health

- ⇒ There is a lack of knowledge about eye health in general
 - Limited knowledge exists about certain eye conditions and diseases such as low vision and diabetic retinopathy
- ⇒ There is a lack of knowledge about what constitutes preventive eye care
- ⇒ There is a lack of information about eye health and disease provided by the media

Communication/Sharing Information

- ⇒ Communication is an important part of provider-patient interactions
- ⇒ Patients have a good level of comfort in communicating with their primary care provider and eye care provider
- ⇒ Primary care providers do not share information with patients about eyesight
- ⇒ Primary care providers do not conduct basic eye screenings