

DR. MOM AND DR. WEB: A QUALITATIVE ANALYSIS OF WOMEN'S USE OF HEALTH INFORMATION ON THE WEB

Wendy Macias, Liza Stavchansky Lewis, and Vandana Shankar

Abstract: The primary goal of this qualitative study was to begin to understand and gain insight into how women use the Web to search for health information. This has become an increasingly important area to understand because more consumers are taking control of their healthcare, women tend to take responsibility more than men, and the Web is a key source of healthcare information. Several key findings support the literature and theory saying that women are highly involved in searching for health information and they increasingly rely on the Web. These women are not relying on their doctors to provide their healthcare information and they are skeptical of health information with a sales purpose. Implications for marketers are discussed.

The third most common reason people go on-line is to search for health related information; this is after weather and sports and just ahead of pornography (Schifrin and Wolinsky 2001). In 2002, about 73 million American adults went on-line to search for health related information (Pew Internet and American Life 2002). Women in particular use the Internet for health information gathering - about 72% of them search on-line (Pew Internet and American Life 2002). The Internet has become another major medium in the United States - so, it should be no surprise that its users search for health related information. Every year, the American patient is becoming more financially responsible for her healthcare needs. In addition, the past decade has been characterized by a "wellness movement" in which individuals are taking greater responsibility for their own healthcare and health-related decisions (Cangelosi and Markham 1994). This has powerful implications for healthcare marketers because, increasingly, the individual instead of the healthcare provider makes decisions. Therefore, with the increased tendency to search for health information (Drumwright and Kane 1988), research on health search and information processing is even more important. This change has become more dramatic in the Internet-age. Choosing to be empowered with information, the consumer searches on-line for her health information.

Thus, it is quite important that researchers make the effort to understand how the Internet is being used by Americans, women in particular, to gather information regarding their health. That is the primary research focus of this paper-how and why women use the Internet to search for health information. A constantly changing American health care system with increased financial burdens on consumers increases the need for information and research. Little research has investigated how consumers search for and use health care information since the advent of the Web. This

paper furthers the understanding of interactive advertising by gaining insight into how consumers use information from health related Web sites and their reactions to both marketing (e.g., direct-to-consumer advertising) and third party (e.g., WebMD) information sources online where interactive advertising may be sold. The authors consider interactive advertising to be banner/pop up ads, as well as final destination marketing Web sites.

For this study in particular, women will be the focus. Since women are using the Internet at a greater rate than men for the health related information (72% women vs. 51% men) (Pew Internet and American Life 2002) the authors believe that to understand the story behind the use of this medium for health information your must begin with its most eager participants. As Katherine Anne Binns, senior vice president for Health Care Research at Harris Interactive Inc. observes, as chief health care decision makers for their households, "women are really making use of the full array of (online) resources that are out there. Almost six in 10 women use the Internet to look for health information and say they rely on it a good deal to search for information," (National Women's Health Resource Center 2001). In addition, women, as opposed to men, tend to be more involved in health-related decisions (Kahn 2001) and more oriented toward gathering and using health information in general (Cangelosi and Markham 1994).

LITERATURE REVIEW

Health care managers have also come to view consumers' use of information as a critical element in cost containment (Bunn 1994). More informed consumers are believed to use health care facilities more appropriately and to request less unnecessary medical tests (Vickery et al. 1983). Also, by disseminating information to patients, improvements in the

quality of care through increased patient compliance, better control of chronic conditions, and fewer complications after procedures should be realized (Bartlett 1989).

Health Information Search on the Web

As previously mentioned, there has been limited research recently looking at how consumers search for and use health information and even less with a focus on the Web. Direct-to-consumer (DTC) drug advertising was found to be used by less than 50% of consumers in their decision-making (Menon et al. 2003). However, women perceived DTC drug advertising as more useful than men did (Menon et al. 2003). However, much of the DTC advertising is still encountered in traditional media (e.g., magazines, television, etc.).

What are women researching on-line? Ninety-three percent of health seekers on-line look up information on a particular ailment, while 63% search for information regarding weight management issues: nutrition, weight control, and exercise (Pew Internet and American Life 2002). Fifty-five percent gather health information before they visit with a physician and 64% look up information regarding prescription drugs (Pew Internet and American Life 2002).

How often do they go on-line for health information? On an average day, about 6 million Americans go on-line to learn about health issues. Most health information seekers go on-line occasionally, not on a daily basis (Pew Internet and American Life 2002). More than half, 60%, of these health information seekers claim that the Internet has improved the way that they take care of themselves (Pew Internet and American Life 2002) and 70% say the information they find influences a decision about treatment (Berland et al. 2001).

Consumer Issues with Health Information

However, medical information for the lay person may be difficult to understand. If the assumption is that the more informed the patient is, the better, less expensive care they will seek, then the information should be understandable to the lay person. It is also assumed that consumers will have a wide range of information available to them. Thus, they will be able to "shop" for medical care similar to the way they shop for other goods and services (Bloom 1989). This will lead to a competitive market that will lower medical care costs. Bloom (1989) developed a diagnostic model for identifying the relative magnitude of information problems in particular markets. He found that decisions related to healthcare belong to the category of "credence goods". Many times, with credence goods, consumers are unable to evaluate choices

effectively and the opportunity is high for instances of poor consumer choice (Bloom 1989). The Web has become a medium of choice for disseminating consumer health information - but, how easy is it to understand? What about accuracy?

An important question to ask regarding health information sites concerns the accuracy of the information. "There is a tremendous amount of information out there, but what is missing is an accuracy or reliability filter," states Dr. Stephen Barret, a retired psychiatrist (Schifirn and Wolinsky 2001). One of the public health objectives of the US Department of Health and Human Services (HHS) is to, "increase the proportion of health-related World Wide Web sites that disclose information that can be used to assess the quality of the site," (US Department of HHS 2000). In addition, a recent article in the Journal of the American Medical Association (JAMA), reported on a study with the objective of reviewing health Web sites for quality of health information found on Web sites. The authors found, "significant problems, criticizing lack of completeness, difficulty in finding high-quality sites, and lack of accuracy" (Eysenbach et al. 2002). Further, a study analyzing the different factors thought to be essential to credibility (expertise, trustworthiness, sponsorship, etc.) found "some of the highest rated elements to be: quick response to customer service queries; comprehensive and attributable information; author's credentials are listed; search capabilities; site has proven useful in past; full contact information listed; privacy policy clearly stated; site has been prominently advertised; ads on site are relevant; and professional design" (Greenspan 2002). These findings are interesting because they show people assessing credibility using factors that are not clearly or directly related. Less important than how the information was presented was who sponsored the information-non-profit organizations were rated more credibly than commercial companies (Greenspan 2002).

Physicians are also commenting about the health information their patients are gathering on the Web. For example, Dr. Benjamin Chang, assistant professor of plastic surgery at the University of Pennsylvania School of Medicine, illustrates the point of a lay person not understanding, or confusing, medical information on the Web:

"A few months ago, I had a new patient who came into my office and was antagonistic toward me right off the bat. The patient's primary physician had ordered a biopsy on a 4 millimeter melanoma. After reading his (patient's) pathology

report and then consulting the medical Web site, the patient was convinced he was a goner. The pathology report stated that his tumor was level four. He had confused the level with the stage and gone on the Web and found that stage four meant the cancer was far advanced and that he'd have almost no chance of survival" (Schifrin and Wolinsky 2001).

Dr. Chang then went on to explain to his patient the misunderstanding and calmed him down and removed the melanoma in a routine, simple procedure (Schifrin and Wolinsky 2001). In addition, Dr. Sujana Chandrasekhar, associate professor of Otolaryngology at the University of Medicine and Dentistry of New Jersey says, "I have patients coming into my office every day confused or scared out of their minds from stuff they read on the Web" (Schifrin and Wolinsky 2001).

Another study published in JAMA discovered that the reading level of most health Web sites is elevated. All the sites the authors studied, which were in English, were at the 10th grade level or above. The authors reported that 48% of the US population has low or very low reading skills taken from the 1992 National Adult Literacy Survey. The author's point is that even though the digital divide is narrowing, the online health information that is currently available is difficult for many people to understand (Berland et al. 2001).

Theoretical Framework and Research Questions

Because many of these issues dealing with health information search on the Web are quite recent and have not been adequately researched, there is little theory specifically developed for this topic. However, information search/processing theory is extensive and there is some theory developed for health information search. One of the most relevant and parsimonious theories for this topic was chosen to be the framework for this study. Bunn (1994) developed a framework for consumer health information search strategy with three main aspects—source, effort (amount of search consumer performs) and topics (information content). The intersection of each possible pair then reveals other elements of the model, including preferred modality (face-to-face, mass media, computer, etc.), search motives (specific decision or ongoing search) and direction of search (which topics from which sources). In addition, Bunn (1994) includes situational characteristics, previous experience, and perceptions of sources as influencing factors.

The source of health information has traditionally been the patient's physician. However, recent research has confirmed

that this has changed. Jensen (1987) found that 26% of physicians thought they were their patients primary source of health information, 29% thought television was, 38% thought print sources (newspapers, magazines and brochures) were relied on most and finally only 4% relied on family and friends. Other sources, besides the Internet, that evolved after Jensen's 1987 study include health books, advertising, media news, health newsletters, and health information centers (Bunn 1994). While the percent of people who use these different sources has surely changed, of most interest has been the development of the Internet.

Patients who go online fall into three distinct segments depending on the severity of their condition and their attitude towards their physician—those who are accepting of their physician's opinion who they view as "Godlike", those who are informed and view their physician as a "partner", and those who are involved and in control of their healthcare and view their physician as a "supplier." This final segment (who desire the greatest control in their health care) prefers to get their health information from the Web (46%) rather than from their doctor (45%) (Von Knoop et al. 2003).

The idea of search effort comes from Bettman (1979) and refers to the degree or amount of search (e.g., number of sources, time spent, etc.). Factors that affect search effort include gender (women tend to search more), age (elderly tend to report receiving less information), income and education (consumers with higher levels search more) and perceived risk (Bunn 1994). Older age has also been reported to be associated with being more health conscious (Cangelosi and Markham 1994). Specific search motives for health care topics include desire to prevent, detect, and cure health concerns (Bunn 1994).

Based on the literature review, theoretical framework, and lack of previous research in this area, the following research questions were developed to begin to understand the issues relevant to women and online health research.

RQ1: How do women research drugs and health information on the Web?

RQ2: Why do women use the Web for research on health issues?

RQ3: How do women evaluate health information on the Web? How do they decide if health information on the Web is valid and not false or misleading in some way?

RESEARCH METHOD

This study utilized focus groups to investigate the broad questions introduced in the previous section.

Participants

Six focus groups of 5-8 participants were held in a large metropolitan city and a smaller city in the Southeast. The total sample size was 37. All of the focus group participants were women between the ages of approximately 25 and 60 years old who answered yes to the screening question (Have you ever conducted health or drug related research on the Web?). Participants were primarily recruited using convenience and purposive techniques to represent diverse ages and backgrounds. Although all of the women had used the Web to research health concerns, the degree to which they used it and proficiency varied greatly. The authors conducted focus groups until redundancy occurred and the point of information saturation had been reached (Lincoln and Guba 1985).

Procedure

Each focus group was moderated by an undergraduate or graduate student under the supervision of one of the authors of this study and lasted between one and two hours. The focus groups were audio taped and transcribed verbatim. A discussion guide was used to facilitate the discussion and ensure that the necessary topics were covered (McCracken 1988, Morgan 1997). The guide covered topics specifically related to the research questions identified above as well as the following more general issues related to health-care information:

How and where is health information obtained? In what ways, if any, have they changed the methods used to research health and drug information in the past 5-10 years? Why do they choose to use the Web to research health and drug information? What methods do they use and why? What do they feel about the quality of health information on the Web and how do they evaluate it? What are the positive and negative aspects to using the Web to gather health and drug information?

After the focus groups were completed, two of the primary researchers wrote thematic overviews of each and identified key representative quotes from participants. Through inductive qualitative analysis, the themes and quotes were analyzed using a technique described by Corbin and Strauss (1990) that prescribes linking and relating sub-categories by

denoting conditions, context, strategies and consequences. Themes and quotes identified in the first round of analysis were printed from the computer on individual pages, one single theme/quote to a page (open coding). This data was then sorted into categories through a method of constant comparison and evaluation of ideas (axial coding). Finally, each primary researcher worked together to examine the categories and determine how they related to one another, and what central concepts or ideas emerged from the aggregate of themes (selective coding). The research questions remained a central focus throughout coding and analysis. The researchers were also open to exploring unexpected insights that arose from the qualitative research process.

RESULTS

RQ1: How do women research drugs and health information on the Web?

The focus groups logically showed that many women now turn to the Internet as a major source of information on drugs and other health related issues. Their own doctors along with the need for more information in most cases aided this change. The types of information that they are looking on the Internet for ranged from allergies to drug information to doctors to cosmetic procedures; either for themselves or for others they know.

"A lot of the medications that our insurance company, some drugs are allowed and some drugs are not, which I don't really understand. For example a cholesterol medication, Lipitor is not on the drug list. So when you go get your prescription you have to pay a lot more. So if you want to try to find a comparable generic drug then you kind of want to look up this stuff and find out what's what and then call your doctor and find out if that's acceptable for you to use so you only have to pay \$10 instead of \$40."

Another reason many women go online is to look up any ailment that they suspect they might or might not have, as the case maybe. Increasingly, these women want to be prepared when they go to see their doctors; given a very small window of time they want to ask the right questions and get the most help from their doctors. With a large number of Web sites putting out information about ailments (minor or serious) as well as drugs or treatments for the same, more people are turning to this source of information before rushing off immediately to the doctor, especially with the prohibitive costs of health care.

Research has prompted most of the women to turn to the Web. They turn to generic health Web sites, like WebMD for general information; specific organization Web sites for more specific needs; and either of the two for information or resources, like doctors, facilities, alternative options, etc. When they are looking for others who have had similar experiences they turn to chat rooms, support groups, and bulletin boards. Other common sources of health information for the women were family and friends, their pharmacists, doctors, newspapers, hospitals and their local health departments.

"Probably definitely first of all from the physician, from there I would do research on the Web to see what I can find, also brochures the physician might give. I have a family member who is a pharmacist and so discuss with him."

When turning to the Internet, the women go to a wide variety of Web sites from search engines like "google.com" or "askjeeves.com" to specific health or drug Web sites like "pharmaceuticals.com" or "drugs.com." For even more specific information, they turn to national associations' Web sites like the "American Heart Association" or some of the women even went into pharmaceutical company Web sites. "I usually go specifically to WebMD and they have a search feature within WebMD for words or terms or specifics. Last time I had looked up Achilles, I thought I had injured my Achilles, and it gave me a lot of information on it. Anywhere from 15 - 50 or depending on what you are asking you may have 2 or 300 sources to check from there." When asked about the changes in their search methods, most women acknowledged the increased use of the Internet for health and related information.

"As the daughter of a doctor, if I had any type of medical question, I picked up the phone or go to their house, "Daddy what does so and so mean?" And he'd look it up in his, you know the old fashioned way of looking it up in the book. Of course, that was before the computer; it might have been invented by then but it was long before I even knew how to turn it on. And I do have some of the medical reference book, the Physician's Desk Reference and those kind of things to look up drugs and find out what happens with this and if you take that and if you're on this then you should definitely not take this kind of medication, and if you do what type of reaction people might have...that it will nullify the effects of one medication if you take another one and that type of thing. Now with the Internet or the Web it's just so easy to look up a lot of that stuff. Now that I'm getting older, I never even used to know what cholesterol meant or triglyceride or hormone

medication, replacement therapy, that type of thing. You never even thought of things like that and now, I'm an expert."

"Well, also I mean your doctor; that's one opinion. The Internet is a way that you can see what everybody else is saying about it and it's just a library at your finger tips."

"Well, you know, back in the old days ago before the Internet, back in the olden days I used to call my mother or I run up to the library to look up the medical dictionary. Uh; I called someone who I thought to know things. You know, and then the Internet really helps to made me very much easier to do research on the questions. You do not have to run out of house and run up to the library; uh; it is made it very convenient. Actually easier than to pick up the phone and call somebody a friend or mom, Dr. Mom." While several years ago most of the women, as illustrated by the quotation above, relied on doctors or pharmacists or their mothers for health information, they have now turned to the Web, which they feel has more information than they really require.

RQ2: Why do women use the Web for research on health issues?

There was a great deal of consensus about the majority of the reasons why these women use the Web for health research. However, a few participants gave additional, unique reasons why they go on-line for health information. The most commonly mentioned reason was the convenience of the Web and that it was easy. "You know, Emory is very close. Since the Internet became much more saturated in the last two or three years, I have not gone to Emory to do physical research. I usually go online and avoid a trip to Emory or the University of Georgia or something." "I can get into a site and find it very useful and clear. Anybody can do it." Some other related comments included, that the menu on WebMD makes it easy, lists are sorted by "how relevant the articles are; something that is right on the money for what you were looking for" and information is "neatly packaged ;and easily understood by everyday people." The second most commonly mentioned reasons dealt with the availability and amount of information and the variety of sources and opinions that can be compared which allows for both/all sides to be examined. "Well, you find different perspectives (on the Web). I know I've been able to look for natural remedies or something." One person brought several of these points together, stating-

"I think the Web has brought information to us on a larger scale and it is accessible to people and it is a good volume to go to if you were looking for something and it is a whole lot

quicker than walking down to the library or going through medical books. Medical books are really good but once you go down there you are getting only one opinion or one idea so the Web certainly will give you more."

The next most common comment is that it is private and confidential. "I used to try to get my courage up and ask other people, ask friends and things, but it is so much easier to have the Internet. I rely on it heavily. At least for your first round of information, before you go to the doctor, before you would call a nurse. It is nice to have that confidentiality and the privacy." The importance of confidentiality resonated with another respondent who said,

"(confidentiality) that's a huge thing, even if you have a question about something and you are not, you know, sure who to go talk to or if you want anybody to know that you have a question about something. I mean if you are considering something you can at least go and look and get an idea, a brief idea about something." (another respondent adds) "without people saying, oooh;" "exactly. You don't have to tell anybody anything and you can do one search and go, I changed my mind, I don't want to search about this anymore, I don't want to find out anymore information. Or I want to spend 5 hours doing it. It is all totally up to you. You don't have to explain yourself to anyone."

This is followed closely by the fact that it is a fast way to get health information and the information is "up-to-date." Several people commented that they go to the Web because it gives detailed, exhaustive information on topics of interest and that the information was helpful/valuable. "I think it is incredible it is close to exhaustive with what is out there, just to me it is a wonderful resource to know what is available there." Somewhat related, but only mentioned by one participant, was that the information is free. Aside from the traditional health information obtained from the Web a couple women stated they look for information to check home remedies and like having access to provisions and benefits from health care providers. "My mom keeps telling me to try different things, she always has these hints. The latest thing is taking vitamin E before working out will let your muscles not become sore or something. I will go on the Internet and look that up."

Interestingly, many women mentioned reasons for going to the Web for health information that had less to do with features of the Web and more to do with their doctors' visits. Doctor issues included-less information is available through their doctor, doctor is less informed these days, they only

represent one opinion, doctor was not always helpful, follow-up questions they think of after the doctor visit or questions to look up before and questions about a doctor's diagnosis or prescription. "And I think the more you're around doctors, the more you see that really things change and they just do the best they can. But next year, the best they can do this year might not be the best that can be done." Another respondent said, "I sometimes feel like my doctor isn't going to have the most up-to-date information because he is so busy with patients that, you know, I can go out there and see what article has been published in JAMA or, you know, whatever is out there and get the most up-to-date information." One respondent talked about doing research before a doctor's visit, "if you can do your background research on the Web, you kind of have an idea of what you're talking about. You feel- educated. You feel like you are asking good questions." About follow-up questions, another respondent said, "usually you think of those questions after you have left the doctor's office. This is wonderful and then I get home and think I didn't ask him this, I wonder what he meant by that." One woman went so far to say that she felt the resources on the Web were good and she trusted them more than her doctor. This is, admittedly, an extreme viewpoint, but one that is likely to be shared. Similar comments dealt with using the Web as a supplement or second opinion information source. Two other respondents made the following comments,

"Well, also I mean your doctor; that's one opinion. The Internet is a way that you can see what everybody else is saying about it and it's just a library at your finger tips."

"I have a condition called "can't understand the name" syndrome. And I don't know if any of the rest of you know what that is, or have it. It can be connected with it's the legs that keep me awake at night and I was getting to the point were it was becoming a mental health problem because I couldn't sleep. So I went online and found out what they're doing out there because my doctor said nothing. I'd been to 2 or 3 different doctors from where I started in Atlanta. Went to Tennessee and they look at you like, "So your legs jump, what's the biggie?" That's the way they look at you. Well, I was absolutely going crazy. It's like I could just scream sometimes. By going online, I found out that they were starting to give a medication which they give for Parkinson's disease for this condition. And so I started taking that, it worked for about a month and then after that it didn't work anymore so I went on another one and it's been like a miracle to me.

Several participants commented on reasons why they use the Web that point to other, somewhat unique strengths it has over other sources of information. Several examples include (listed in no particular order)-ability to see pictures to help with diagnosis (e.g., poison ivy or thrush), information or support for rare diseases, access to a Web chat room that gives a sense of community and access to more people with similar conditions/concerns, both technical/medical and layman/personal sides were available, listservs to help give ideas of the right questions to ask or give interesting insights (sometimes), the ability to read or share later after printing and its interactive nature. Below are some comments relating to these points:

"Like you were saying about confirmation-my five-month-old has a rash in her mouth and I figured it was thrush, this yeast infection they get, but my five-year-old never had it so I didn't know what it looked like. I went on the Internet because I knew if I could see a picture of it;and I ended up having to go to the doctor and get a prescription for it, but it was nice to have an idea before I went."

"The other thing that I use the Web for, not necessarily to find information, is the old term purpose you can discuss the same topic with other people and I find a lot of;it is nice to talk to somebody who is exactly in the same situation, when there maybe one or two in the entire town, but on the Web you can talk to 200 people, so there is a sense of community in that. Beside the information, there is that community aspect."

"That's one of the things that I like about big time disease Web sites like cancer, diabetes and heart, because they have the more technical aspect. If you want it, they've got the online support groups you can sign onto. They've got layman's terms and coping aspect. I think when you go to a Website for health information, you are looking for healing, hope and coping. That's really the three things you are to find, so it is a big time disease and you are usually going to find that on a reputable site."

A few comments were made relating to direct-to-consumer (DTC) drug advertising. Several women said they like to go to the Web to research things from DTC ads or to compare brand names to generics. Others commented on turning to the Web for more information (than the insert) on how to take the drug or the contraindications. "I find on the drug sites, at least the ones I look at, there's more than just the little pamphlet that you unfold that has micro small type, but at least on the drug sites you can make it large enough that you can read the micro type." And, finally, one older participant said she only

uses the Web to research one specific drug (to treat cholesterol) which was of particular importance to her life right now. An interesting advertising-related comment was that she liked WebMD because it differentiates ads from content. A lack of differentiation on other sites is a specific concern that comes up in the next section.

Several other reasons why the women like to get health information from the Web included trusting the information more than other sources. "I guess if I had to choose between newspapers, journals and the Internet, I would choose the Internet." Another resounded this by saying that she was more skeptical of newspapers or magazines because of typos and their advertising purpose. Yet another said, "Newspapers are so full of headlines, I would trust the Internet over newspapers;they are just trying to make a headlines. I don't trust them at all." One person said that other articles (i.e., magazines or newspapers) will refer to the Web or they like to use it in conjunction with other sources.

The following quote summarized many of the reasons why women go to the Web for health information, as well as an increased concern with health as she gets older:

"I would say, I basically have taken a more active role with my health probably in the last five to ten years, just;I'm 33 so you know when you are 23 ;"(another respondent interrupts with); "no worries." "Yeah, exactly. I think that the Internet has enabled me to;to become more informed and have a more diverse amount of information given to me so you know there is strict medical kinds of places you can go and get kind of the run of the mill kind of stuff and then there is also kind of the outer edge things that maybe people are questioning some things. Like, I know I have high cholesterol and the cholesterol medicine there is a lot of controversial information out there about it, but they don't really publicize it a whole lot in the straight things and if you ask a doctor they are not going to tell you anything negative about it either, so that is just one example I guess."

Despite the reasons why women gave for looking on the Web for health information, many realized the importance of evaluating the quality of that information.

RQ3: How do women evaluate health information on the Web?

By far, the most common way to evaluate health information on the Web was to check the source. Some specific methods used in evaluating sources included whether or not it was a known source (e.g., New York Times or Wall Street Journal), a

referral, national or nonprofit organizations, or a referred source (versus opinion). One woman got more specific by saying that she felt general medical sites were not as reliable as sites sponsored or funded by organizations that specialize in women's health. "I feel like if that's their focus; they really understand [women's issues]." Related to this, and the second most mentioned evaluation technique, was to compare information obtained on the Web to other sources, such as nonprofit organizations, media, healthcare providers, or other's opinions. "I think that is a big statement I hear a lot is we don't seem to trust just one source." "For me, it's about the source. Or, it's what I have heard of or know about and I trust it. And if I don't, I know somebody I can ask."

"That's the main thing that I do, is compare it to other sites, and some sites you pull up and they just look hokey, you know, I mean you can just tell it looks like some 12th grader who has done a research paper or something, you know what I mean you can just get a feeling for it as to how official it is, but the main thing is to compare, and the majority kind of rules. If most things say if this is what it is, then that's what it is." To a lesser degree, several more methods were given with somewhat equal frequency. Several people talked about avoiding sites with a sales purpose, one's that are sponsored, and a general distrust of pharmaceutical sites. "I like to look at the source, too. But, if it is a drug company like XXXX then I cannot place much validity on it at all." One respondent said that she does not like a Web site that in effect says, "you're sick you need a pill to make you feel right. That's the kind of thing that is so insulting, but that's the way [pharmaceutical companies] make money." They also tend to know and avoid sites with a specific agenda. "I like the organization of the American Heart Association. It does not really have an agenda other than helping people without good hearts." Another common response was to check the date of the material online and make sure it is up-to-date. "You have to make sure that it is the most up-to-date, because I have also done searches and it will say last updated 1997 and you get these Web pages from 5 years ago." Several of the above points were made by one respondent: "As long as it has most up-to-date information on it. But at the same time, it depends on source on the Web, too. I don't want to go to anybody's Web site selling anything and that's not what I want for my health information and even if it's WebMD that has ads on the top of the page and I just as soon not go there. I rather go to those sites where the experts are, American Cancer Society, diabetes, Heart Association etc. and also other like to hospital Web sites."

Finally, only one respondent mentioned the following evaluation techniques-doctor recommended the site, look or design of the site, take everything with a grain of salt/skeptical of all sources regardless of medium, or how concise or helpful the site is. One woman was honest in stating that she did not do much to evaluate the information online. Again, two respondents summarized many of the evaluation techniques:

"There are some sites that I don't necessarily go to simply because I know that it's more specific. They are really, they have an agenda, its not necessarily information that I would trust as wholly as I might trust something else; one of the good things I think about having access to Internet searches is being able to compare those things and having more sources than just one, what the doctor said, I had a doctor that actually suggested Web sites to go to. ¶If you have questions this Web site might help and things like that.' In terms of evaluating them, it's hard to really know its hard to know what your doctor is saying is true and its hard to know if what you are reading on the Web is true, so your evaluating them is knowing who it is putting all the information and understanding and doing this cross checks."

"I always take everything that comes off of the Web with a grain of salt, so it is not like talking to a doctor. It is just to gather information and to help me have some information before I would go to the doctor or pursue anything further, but you have to look at, of course, the source. I mean if it is the Center's for Disease Control Web site versus somebody's home page who thinks they have had a disease, it really affects the reliability of the information and I look at how concise is it, how helpful is it, um, mostly the source, that's the biggest thing is where it is coming from, it is refereed at all or is it just someone's opinion."

DISCUSSION

While several years ago most of the women relied on doctors or pharmacists or their mothers as their sources for health information, they have now turned to the Web, which they feel has more information than they really require. They tend to trust the Web because they can cross reference the information, they can check the sources of the information, and they feel that most of the information is up to date, as opposed to any other source, even their own doctors, in many cases. The reason they have given being that the Internet makes them more "self reliant" and as they got older, they "read more and compared" the information, another important reason being that they could get a second opinion. This switch from traditional sources to the Internet for health

and related information, has given the women control over their health and that of their loved ones, it has opened up numerous choices for these women, and they do not have to stick with their traditional remedies. Not surprisingly, the most common reasons for using the Web for health research included-convenience, ease, availability, amount of information, variety of sources, privacy, and speed. However, several women talked about using the Web for health information because they could not always get the information the needed/wanted from their doctor. This research indicated that the reliance on doctors is changing due to developments on both sides of the stethoscope. Women are taking more control of their own healthcare and many doctors have increasingly less time to devote to individual patients. This supports the idea of the "wellness movement" (Cangelosi and Markham 1994). Many of the women from these focus groups would fall under the "partner" or "supplier" categories mentioned earlier (Von Knoop et al. 2003). Several women also commented on the sense of community that the Web can provide through discussion groups. Although this is not one of the more common uses of the Web for health, it clearly can be very important to some.

The women in this research most often turn to search engines and generic health Web sites, like WebMD, as well as more specialized organization Web sites, like the American Heart Association. This is a strength of using the Web for health information-it can be utilized by both novices and relative experts.

Evaluation of health information on the Web is an important topic given the importance of one's health. The most common ways to evaluate the information obtained was to check the source and compare to other sources. As the Web has developed and changed, there are certain sources of health information that people feel they can trust. Some of these are Web-only sources, like WebMD, and others that are trusted for their offline reputation as well, like the New York Times or Wall Street Journal. Several discussions of the evaluation of health information included avoiding sites with a sales purpose, including direct-to-consumer pharmaceutical sites. This research indicated that some women do not trust them because of their obvious agenda and dislike the implication that a pill can fix everything. Although several women did state that they sometimes visit a DTC Web site after seeing an advertisement on TV or in a magazine, pharmaceutical companies may be able to increase the consumer's trust by considering these negative comments and reevaluating their relationship with the consumer (e.g., health information

provider as opposed to only a drug provider). Macias and Lewis (2003) found indications that many of the DTC drug Web sites include extensive health information, including alternative treatments and supportive behaviors. However, this educational purpose may not always be clear to the consumer, as indicated by the present study.

Overall, this research showed the importance of the Web to women for health information. Despite some problems and concerns, it is an information source that has grown in the past five to ten years. A comment from one respondent summarizes an overall feeling about using the Web for health information-"Just don't take the Internet away from us."

Limitations and Directions for Future Research

The goal of this qualitative research was to gain insight into how women use the Web for health information. As with all studies, there are limitations to consider. As qualitative research, it is not designed to be projectable to the entire population, but rather to gather in-depth information and share the voice of the consumer. In addition, the focus groups were comprised of people with a relatively high education. The age bracket for the purpose of this study was limited to the 25 - 55 years old, eliminating older people who may have a much more limited Internet usage, or the younger group having a much higher Internet usage but limited need for health information specifically. Finally, the moderators were different for several of the focus groups conducted. Their individual styles (demeanor and nuances) and subjectivity towards the Internet could have influenced the focus groups that they conducted.

It is important that future research be conducted to move the knowledge of this topic forward. Specifically, research should further explore the opinions towards DTC drug Web sites to aid in increasing credibility and means to provide a valuable resource to the consumer. Quantitative research has shown the vast number of people who turn to the Web for health information. Pharmaceutical companies are missing out on a great opportunity if they are not capturing that audience. Given the mistrust issues, research focusing on forming relationships may prove helpful.

REFERENCES

- Bartlett, Edward E. (1989), "7 Steps to Success," *Group Practice* (May/June), 49-57.
- Berland, Gretchen K., Marc N. Elliott, Leo S. Morales, Jeffrey I. Algazy (2001), "Health Information on the Internet:

Accessibility, Quality, and Readability in English and Spanish," *JAMA*, 285 (May 23/30).

Bettman, James R. (1979), *An Information Processing Theory of Consumer Choice*, Reading, MA: Addison-Wesley Publishing Company.

Bloom, Paul N. (1989), "A Decision Model for Prioritizing and Addressing Consumer Information Problems," *Journal of Public Policy and Marketing*, 8, 161-80.

Bunn, Michele D. (1994), "Aspects of Consumer Search for Health Information: A Framework for Structuring Information Problems," *Health Marketing Quarterly*, 11 (3/4), 75-98.

Cangelosi, Joseph D. and F. Scott Markham (1994), "A Descriptive Study of Personal, Institutional, and Media Sources of Preventative Health Care Information," *Health Marketing Quarterly*, 12 (1), 23-36.

Corbin, J. and A.L. Strauss (1990), "Grounded Theory Research: Procedures, Canons, and Evaluative Criteria," *Qualitative Sociology*, 13 (19), 3-19.

Drumwright, Minette E. and Nana M. Kane (1988), "Failure of Information in Health Care Marketing," in *Advanced in Consumer Research*, Vol. 15, Thomas K. Srull, ed. Provo, UT: Association for Consumer Research, 249-255.

Eysenbach, Gunther, John Powell, Oliver Kuss, and Eun-Ryoung Sa (2002), "Empirical Studies Assessing the Quality of Health Information for Consumers on the World Wide Web: A Systematic Review," *JAMA*, 287 (20), May 22/29.

Greenspan, Robyn (2002), "Trust is in the Details," (June 21), <www.internetnews.com/stats/article.php/1369641> (accessed 2/25/04).

Jensen, Joyce (1987), "Most Physicians Believe Patients Obtain Health Care Information from Mass Media," *Modern Health Care*, 17 (19), 113-114.

Kahn, Caryl (2001), "How the Media Influences Women's Perceptions of Health Care," *Marketing Health Services*, 21 (1), 13-17.

Lincoln, Yvonna S. and Egon G. Guba (1985), *Naturalistic Inquiry*, Newbury Park, CA: Sage Publications.

Macias, Wendy and Liza Stavchansky Lewis (2003-4), "A Content Analysis of Direct-to-Consumer (DTC) Prescription Drug Web Sites," *The Journal of Advertising*, 32 (4), 43-56.

McCracken, Grant (1988), *The Long Interview*, Newbury Park, CA: Sage Publications.

Menon, Ajit, Aparna Deshpande, Mathew Perri and George M. Zinkhan (2003), "The Utility of Direct-to-Consumer Advertising for Health Care Decision-Making: A Consumer Perspective," *Journal of Health Communication* (forthcoming).

Morgan, David L. (1997), "Focus Groups as Qualitative Research," *Qualitative Research Methods Series*, 16 (2nd Ed.), Thousand Oaks, CA: Sage Publications.

National Women's Health Resource Center (2001), "Women's Health and the Internet," <http://www.healthywomen.org> (accessed 2/25/04).

Pew Internet & American Life Project (2002), "Vital Decisions: How Internet Users Decide what Information to Trust when they or their Loved Ones are Sick," 1100 Connecticut Avenue, NW - Suite 710.

Schifrin, Matthew and Howard Wolinsky (2001), "Use With Care," *Forbes* (June), 26-30.

US Department of Health and Human Services (2000), "Healthy People 2010: Understanding and Improving Health," 2nd ed., Washington, D.C.: Office of Disease Prevention and Health Promotion, US Department of Health and Human Services.

Vickery, Donald M., Howard Kalmer, Debra Lowry, Muriel Constantine, Elizabeth Wright and Wendy Loren (1983), "Effect of Self-Care Education Program on Medical Visits," *Journal of the American Medical Association*, 26, 81-101.

Von Knoop, Carina, Deborah Lovich, Martin B. Silverstein, and Michael Tutty (2003), "Vital Signs: E-Health in the United States. (The Boston Consulting Group) (January 3), http://www.bcg.com/publications/files/Vital_Signs_Rpt_Jan03.pdf (accessed 2/15/03).

ABOUT THE AUTHORS

Wendy Macias (Ph.D., The University of Texas at Austin) is an Assistant Professor in the Department of Advertising and Public Relations, Grady College of Journalism and Mass Communication, University of Georgia. Her research focuses on interactive advertising, consumer behavior issues and health communication, including direct-to-consumer drug advertising, on the Web and in traditional media. She can be reached at wmacias@uga.edu.

Liza Stavchansky Lewis (Ph.D., The University of Texas at Austin) is a marketing research consultant for Spectra Marketing, a VNU company. Her full-time client is Schering Plough Laboratories in Kenilworth, NJ. Liza's academic research focuses on health communication issues, with special interest regarding direct-to-consumer prescription drug advertising.

Vandana Shankar (M.A., University of Georgia) is currently working as a freelance graphic designer in Athens, Georgia.