This study examined how women’s magazines framed breast cancer and silicone implants to determine whether they used a sense-making framework. *Sense-making* calls for existing gaps to be closed between what one group views as real and what another group experiences (Parrott, 1996). Analysis included 86 articles on cancer and implants published in four women’s magazines from 1990 to 1997. Overall findings suggest that women’s magazines used a sense-making approach to cancer coverage, framing the disease in terms of coping with its effects, personal experiences, and risk factors. Themes in implant articles pertained to economic concerns of the medical industry and media.

The news media are charged with covering issues in a fair, balanced, and informative manner. However, there is constant tension between the social impact versus the economic health and well-being of society (Parrott, 1996). In news, because resources are scarce, decisions must be made about what stories to cover and how they are presented. News *framing* refers to this selection and emphasis of certain aspects of issues. For magazines, these issues include elements of drama and timeliness, which some critics argue are intended to increase profits rather than offer balance (Parrott & Condit, 1996).
Social scientists increasingly believe that media reporting of women’s health problems must be understood as socially, culturally, and economically influenced. A review of the literature suggests that these influences are not consistent in the way they shape media coverage, however. Ruzek, Olesen, and Clarke (1997) stated that the media often take women’s health out of context, presenting unrealistic views of cures and prematurely reporting progress. In addition, the media pay little attention to the downside of medicine, such as treatments that carry more risks than benefits or that contribute little to health conditions. They contend that in this cultural context beliefs about curing support large private and public investments in biomedicine. On the other hand, Vanderford and Smith (1996) analyzed media coverage of silicone breast implants and noted that these accounts “dramatized harm, trivialized benefit, and emphasized danger over safety” (p. 131). News about toxic shock syndrome also focused on its health harms (Weiner, 1986). Other researchers have suggested that women’s medical problems are described by the media and understood as deviations from the norm (K. Johnson & Hoffman, 1994). Furthermore, Fisher, Gandy, and Janus (1981) argued that the promotion of traditional women’s roles is linked to national health policy and funding priorities.

In the United States, magazines have long been a major source of information about cancer (Freimuth, Greenberg, DeWitt, & Romano, 1984), and women have been found to turn to magazines in seeking information about breast cancer because the magazines “provide a critical base of information that [women] may use to evaluate subsequently acquired information … when they are confronted with a medical problem” (J. D. Johnson, 1997, p. 9). In women’s magazines, women’s health is a major concern; a content analysis of six prominent magazines found 694 editorial items published during a 5-year period (Kessler, 1989). Although Vanderford and Smith (1996) found that about half of women they surveyed sought information on silicone implants from magazines, as compared to 94% who used television news, magazines provide a richer context for information. Whereas television news is ephemeral, women can return to magazines to double-check statistics, symptoms, and advice. Moreover, women’s magazines, which combine elements of news and entertainment media, may have greater influence on women’s perceptions of risk of breast cancer than newspapers or newsmagazines because entertainment media exposure is positively related to perceptions of personal risk (Snyder & Rouse, 1995).

In this study we examined how selected women’s magazines framed information concerning breast cancer—a disease afflicting women—and silicone breast implants, which can result in afflictions that many people believe women have brought on themselves. The two issues are important to study in tandem because of their related nature and the fact that breast implants were often recommended by physicians to breast cancer patients as a solution for the disfigurement of surgery. Moreover, silicone implants can impair detection of breast lumps during mam-
mography (Cowley & Ramo, 1993). Thus, breast cancer and implants have been intricately entwined as women’s health issues.

The silicone implant story came to light in 1990 when the media reported that some women were having problems with their implants. Previous studies analyzing newspaper coverage of breast implants indicate that most stories relied on official sources from implant manufacturers, presenting only one side of the controversy (Powers, 1997), and that women’s voices were marginal in newspaper discourse (Andsager & Smiley, 1998). Also in 1990, estimates of breast cancer among U.S. women jumped to 1 in 10 (Kahi & Lawrence-Bauer, 1996). An earlier study of breast cancer coverage indicated the media were more attentive to shifting relations and priorities within the health care industry than they were to the public interest, a priority reflected in a steadily increasing breast cancer mortality rate (Corbett & Mori, 1997). To extend such research, we analyzed how four women’s magazines covered these two controversies from 1990 to 1997.

THEORETICAL PERSPECTIVE

Framing occurs as journalists “select some aspect of a perceived reality and make [it] more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described” (Entman, 1993, p. 52). As Entman (1991) noted, frames emerge as the presence or absence of certain key words, sources of information, and sentences that form thematic clusters. Media scholars have argued that it is important to understand the ways in which journalistic framing of issues occurs, because framing influences public understanding and, consequently, policy formation (Gans, 1979, 1983; Gitlin, 1980; Pan & Kosicki, 1993; Tuchman, 1978). In the abortion debate, for example, the media were found to advocate unique policy messages (Terkildsen, Schnell, & Ling, 1998).

In the realm of health-policy formation, framing may have a large impact on public health (Walsh-Childers, 1994). How health and risk issues are framed is important because “the media may affect the nature of regulation, the course of litigation, or the direction of research and development” (Nelkin, 1989, p. 54). The media tend to reinforce conventional definitions of health problems and, hence, the legitimacy of various solutions. News stories about medicine “may increase or diminish the willingness of individuals to present themselves for care, and raise expectations, and dash hopes, or may provoke alarm” (Winsten, 1985, p. 7).

During the 1990s, several policy changes related to breast cancer and implants were enacted, in part as a result of raised public concern and media coverage of that concern. In 1990, Congress approved a bill that allowed Medicare to cover biannual mammograms for women over age 65, as well as screening for poor women in four states (M. Beck et al., 1990). In 1992, however, Congress passed a can-
cer-screening law that delegated cancer control efforts to state health departments (Cancer Registries Amendment Act, 1992). In 1994, the National Cancer Institute said it would increase its funding for breast cancer research 34% from 1993, due in part to a grassroots campaign conducted by the National Breast Cancer Coalition and President Clinton’s directives (Gorman, 1993). In January 1992, the Food and Drug Administration implemented a ban on silicone implants until their effects could be better understood (Schwartz & Kaplan, 1992).

The notion of story frame comes from Tuchman’s (1978) work on the social construction of reality within media accounts. Certain pieces of information are selected and put together within the genre constraints of a news story. These choices, based on news values and journalists’ interpretations of social responsibility, have consequences. Readers form impressions of the news stories’ central theme–issue and attitudes toward the policy actors (Hornig, 1990). For the most part, the media are the public’s only contact with technical fields. Journalists can be perceived as brokers, “framing social reality and shaping the public consciousness about science” (Nelkin, 1989, p. 54). Thus, the media create boundaries within which debate can take place.

Media coverage of controversial technologies has a tendency to highlight competing interests of the policy actors through disputed data and opposing judgments about risk. When scientists are identified as policy actors, they are perceived as “the source of authoritative evidence and definitive solutions” (Nelkin, 1989, p. 55). However, if the media did not explore scientific issues involving health risk disputes, the public would be left with little or no basis for making meaningful judgments about policy actors’ competing allegations. Thus, medical professionals are granted expert status in health risk conflicts, such as the value of mammograms and the danger of silicone implants. Corbett and Mori (1997) found that the media were generally supportive of medical community activities and willing to follow their lead in changing emphases and priorities regarding breast cancer.

Source Factors

Overreliance on official sources is of particular importance in light of increasing criticisms of the media being out of touch with women’s issues. According to Tuchman (1977), use of official sources and public relations subsidies helps satisfy the strategic ritual of balance. Too often, sources are used to cite facts without further investigation and to give credibility to the reporter’s point of view (Ericson, Baranek, & Chan, 1989). In this way, sources can influence the issue’s frames. Entman (1993) posited that “the frame in the news is really the imprint of power—it registers the identity of actors or interests that competed to dominate the text” (p. 7).

Powers and Fico (1994) found that despite the availability of numerous information sources, journalists’ decisions to use them may be influenced by concerns
other than audience needs or adherence to professional standards. Results from a survey of journalists from top-circulation newspapers indicated that news content was most powerfully shaped by journalists’ own orientation toward source qualities. The journalists’ judgments had the most powerful and numerous influences on source selection in both routine and conflict situations. According to Sigal (1973), such beliefs have resulted in a lack of source diversity.

Furthermore, research indicates that men far outnumber women as newsmakers and sources. Because women do not hold as many prominent positions in society as do men, their lack of status as experts makes it more difficult for the news media to include them in coverage. Although news organizations claim objectivity in their reporting, they do not claim to balance the viewpoints of men and women (Rakow & Kranich, 1991).

Others have suggested that news is written for the political and economic interests of men. For example, distinction has been drawn between hard news, which is serious, important, and masculine in nature, and soft news, which is likely to be written by female reporters for female readers (Rakow & Kranich, 1991). Hartley (1982) stated that the majority of news stories are written by men about men’s issues. Holland (1987) added that two prominent themes in television news—excitement and seriousness—are both based on masculine values. This is why news is not one of women’s favorite categories of television programming (Morley, 1986). Both television news and newspapers, the media outlets analyzed in these studies, are directed at general audiences; it appears that male interests tend to dominate those presumed of the general audiences. However, women’s magazines should not be as subject to this criticism because their writers may be more likely to be female, and their audiences are clearly dominated by female readers.

Although little research has examined news framing of breast cancer, early studies on implant coverage suggest that the media were biased against their use (Anderson & Larson, 1995). Palcheff-Wiemer, Concannon, Conn, and Puckett (1993) surveyed women who had breast implants. Respondents described the reporting as biased, sensational, and overgeneralized. Vanderford and Smith (1996) found that the media relied on dramatic narratives that exploited an audience’s identification with victims. The researchers concluded that sensational narrative forms portrayed dangers, trivialized medical benefits, and portrayed rare problems that created negative perceptions of the silicone implants.

A Sense-Making Approach

The key assumption of a sense-making approach states that gaps exist between what one group views as real and what another group experiences (Parrott, 1996). A sense-making approach requires that these gaps close. The media contribute to gaps of knowledge by omitting information, such as overlooking the importance of so-
cial support networks (Parrott, 1996). According to Parrott, these social support networks are discounted because they do not involve the use of medical technology or drug therapy and may reduce the need for such treatment. Such a contention is supported by previous research indicating that journalists tend to rely on official or authoritative sources, such as doctors, scientists, and corporate spokespeople (Gans, 1979; Gitlin, 1980; Shoemaker & Reese, 1996; Tuchman, 1978). Another gap in messages communicated includes overlooking what women may have already learned about their health. A lack of understanding of facts and procedures will keep women from making informed decisions on their health. In the case of breast implants, for example, many studies, some funded in part by implant manufacturers, found no conclusive link between implants and autoimmune-related diseases. Other studies indicated that such links existed. Reports of studies of silicone implants, like other medical news, were “characterized by ambiguity, uncertainty, and contradiction” (Vanderford & Smith, 1996, p. 110). The conflicting studies may have resulted in confusion, preventing some women from seeking help. Unless media reports question the validity of manufacturer-financed studies in particular, the social structure linking science and corporate interests as a major influence on women’s health will not be elucidated. Examination of groups’ and institutions’ responsibilities for the factors affecting health care availability and funding is part of a sense-making approach to covering women’s health (Dervin, 1989; Parrott, 1996).

To develop a sense-making approach, creators of health messages need to determine how the consumers of those messages make sense of their lives, how they connect health messages to their personal behaviors and social structures (Dervin, 1989). More promotion of self-efficacy in the media is also important in a sense-making approach to communicating about women’s health. Self-efficacy is the belief that women can exert control over their motivation, behavior, and social environment. If women know they have control over their environment and that agencies are available to help, there is a greater likelihood that they will benefit from the media coverage concerning their health and will take action (Parrott, 1996). Increased attention to the institutions and agencies that affect women’s health may cause them to “reassess their priorities and agendas” (Parrott, 1996, p. 415).

The use of a women-centered sense-making approach—including the use of a variety of sources, facts from all sides of an issue, and information promoting self-efficacy—may provide women and the public with a better understanding of their health. Women-centered means that media messages about breast cancer would focus on women’s needs to obtain mammograms or practice self-examinations, for example, as well as examining barriers in the environment that affect women’s health and efficacy, such as the availability of breast cancer screening for women in low-income or remote geographic areas. Messages about silicone implants would discuss how society influences some women to feel the need to obtain implants or would emphasize their personal experiences rather than the economic impact on implant-pro-
ducing corporations—all of which are socially constructed influences on the women’s health care industry. In other words, a women-centered, sense-making approach to coverage of these health issues would allow alternative perspectives to compete against the dominant frame provided by individuals in power and transmitted by means of the media (Dervin, 1989). Such alternative perspectives could focus on women’s own experiences regarding their health or on activist or support groups that challenge the conventional wisdom and environment affecting research funding and availability of health providers, for instance.

According to Parrott (1996), the identification of linguistic discontinuities or gaps in communication between campaigners’—or, in this case, the medical, scientific, and economic communities’—and audience’s experiences is critical to the success of communicating with women. In this light, we ask the following research questions: What issues do women’s magazines address concerning breast cancer and implants? What types and numbers of sources are used in reporting such stories? What frames emerge from magazine stories on breast cancer and implants?

METHOD

Four women’s magazines were selected for analysis: Good Housekeeping (GH), Ladies’ Home Journal (LHJ), McCall’s, and Ms. Ms. magazine does not have one of the highest circulation rates, but we included it because it does not accept advertising and thus should have less influence from economic interests. GH, LHJ, and McCall’s each have a circulation of about 5 million, with readers averaging about age 40 (Endres, 1995; Gottlieb, 1995; Zuckerman, 1995). Ms., which is aimed at a feminist audience, has a much smaller circulation of about 250,000 (Prijatel, 1995). The articles analyzed include all of those listed in the Readers’ Guide to Periodicals from 1990 to 1997 under the headings “breast cancer” and “breast implants” for these four magazines. These years were chosen because significant events occurred during this period that related to both implants and breast cancer. Each article was examined in its entirety.

We used two content analysis methods. We used traditional content analysis to identify the main issues addressed and the number and type of sources used in the articles. This analysis was important because of claims that too often official sources are relied on by the media when presenting controversial information. In the case of breast cancer and breast implants, a need exists for expanded coverage presenting the viewpoints of not only the medical establishment but also of the patients. The unit of analysis was the magazine article. Two coders analyzed each story. After a pretest, the level of intercoder agreement was 98%. We used chi-squares to identify whether differences in coverage and sources existed among the magazines.
A computer-assisted content analysis program was used to determine the frames in coverage. Two files—one for breast cancer and one for implants—were formatted for analysis in VBPro (Miller, 1993b), a program that calculates frequency of all terms in the stories. The researchers select key terms based on the articles’ content; the program then groups these terms on the basis of their co-occurrence within articles to illustrate the frames (Miller, 1993a). We selected 120 of the most frequently occurring, unambiguous, and representative terms in the breast cancer and implant articles. Synonyms, such as doctor, doctors, physician, and physicians, were coded as one term. The magazines were also coded so that any differences in their frames would be apparent.

The program produced unstandardized eigenvectors for each of the terms based on their co-occurrence within stories. We cluster analyzed these eigenvectors in SPSS (SPSS for Windows, 1999) to group the terms in order to determine frames, using hierarchical clustering with the cosine method. The eigenvectors for each cluster (frame) can be used to plot the cluster in three-dimensional space to illustrate the relations among frames. This process is discussed further later in the article. Selection of terms and subsequent cluster analyses were conducted separately on the breast cancer and implant articles.

RESULTS

Eighty-six magazine articles were analyzed: 26 from Ms., 22 from LHJ, 23 from GH, and 15 from McCall’s. The authors of the articles included 5 men (5.8%) and 68 women (79.1%). In 13 articles (15.1%) the sex of the author was not identified. Five major issues were identified in the articles. Because 12 articles discussed breast implants, they were included in their own category. The categories identified were personal cancer stories, new cancer drug treatments, cancer prevention, and “other.” The “other” category included stories such as cancer discrimination and cancer causes. Of the 86 articles, 12 concerned breast implants, 23 concerned personal cancer stories, 13 concerned new cancer drug treatments, 32 concerned cancer prevention, and 6 concerned other issues. Overall, 53 physicians were interviewed; 42 patients were interviewed; 25 supportive figures, including family members and members of support groups, were interviewed; and 29 others were interviewed.

The main issues of stories varied significantly according to the magazine, $\chi^2(4, N = 86) = 26.24, p < .0001$. Table 1 indicates that Ms. was more likely to cover silicone implants than any of the other magazines, but Ms. covered fewer personal cancer stories than the other women’s magazines. Only two such stories were from Ms., seven were from LHJ, eight were from GH, and six were from McCall’s. Coverage of new cancer treatments was similar in Ms., LHJ, and GH. Coverage of cancer prevention was similar among magazines.
The number and type of sources interviewed also varied according to magazine. For the number of sources used, the magazines were significantly different, $\chi^2 (14, N = 149) = 88.77, p < .0001$. Table 2 indicates that GH interviewed the most sources ($n = 39$), whereas LHJ interviewed 35. We performed a series of chi-squares to determine whether the magazines differed significantly in their use of various source types. There were highly significant ($p < .0001$) differences for each type of source. Table 2 indicates that GH interviewed the most patients ($n = 13$), whereas Ms. interviewed the fewest ($n = 7$). GH interviewed the most physicians ($n = 16$), whereas Ms. and McCall’s interviewed the fewest ($n = 11$). People supportive of cancer patients, such as family members and members of support groups, were interviewed most by Ms. ($n = 10$) and least by both LHJ and GH ($n = 3$).

Examining Frames

To answer the research questions on how breast cancer and implants were framed, we grouped key terms from the articles into frames with the use of the co-occurrence matrix and cluster analysis described earlier. These frames were mapped in three dimensions on the basis of their unstandardized eigenvectors to illustrate how frames were related. The analysis suggests distinctly different portrayals of cancer and implants, plus a large variation among the magazines in terms of discussing these issues.

For articles on breast cancer, 13 frames emerged (see Table 3). These frames reflect the topics associated with breast cancer, ranging from breast self-examinations to news about recent studies to critical views on environmental pollutants as carcinogens. The frames fell into three larger themes: basic information on breast cancer and its treatment, research on causes and prevention, and personal stories of cancer survivors or their relatives. These were closely associated with different magazines.

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**TABLE 1**
Frequency of Issues in Magazine Articles

<table>
<thead>
<tr>
<th>Issues</th>
<th>Ms.</th>
<th>LHJ</th>
<th>GH</th>
<th>McCall’s</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer prevention</td>
<td>8</td>
<td>8</td>
<td>10</td>
<td>6</td>
<td>32</td>
</tr>
<tr>
<td>Personal cancer stories</td>
<td>2</td>
<td>7</td>
<td>8</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>New cancer treatments</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Breast implants</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>22</td>
<td>23</td>
<td>16</td>
<td>86</td>
</tr>
</tbody>
</table>

*Note. $\chi^2(4, N = 86) = 26.24, p < .0001. LHJ = Ladies’ Home Journal; GH = Good Housekeeping.*
To facilitate understanding of the breast cancer frames, our discussion will now focus on the frame map in Figure 1. The map shows the relation among frames appearing in the coverage and how those frames are associated with the four magazines. The axes in the center of the map, which can be read as standard x- and y-axes, simplify interpretation because (for example) concepts appearing to the right of the vertical axis (y) have positive second eigenvectors, indicating that they are somewhat related in terms of co-occurrence. The clusters look something like pins and should be envisioned as such to convey the three-dimensional nature of their interpretation. Thus, the closer the frames are on the map, the more closely related they were in magazine coverage. In this case, the map indicates a clear delineation between, say, GH and LHJ, with associated themes clustering near each.

Four frames describing basic information about breast cancer and its treatment were associated closely with GH. The Self-Exams frame, which included such terms as biopsy, benign, physicians, and lumps, was nearest GH. Malignancy comprised terms referring to breasts, cysts, painful, and removal; in other words, it referred to what happens when a malignancy is discovered. A frame called Diagnosis was also near GH, reflecting the terminology associated with mammography and detection of abnormalities. The fourth frame related to GH was Implants. This frame was composed of terms such as silicone, surgery, and mastectomy, which explained when women might have implants, as well as men and society, which appeared as reasons for choosing implants.

Cause and prevention of breast cancer was another general theme emerging from the articles, and it appeared more nearly related to Ms. magazine than the others. Five frames formed this theme. In the center was Causes, a frame including terms such as alcohol, diet, hormones, and menopause. These were often listed in
TABLE 3
Terms Comprising Frames in Breast Cancer Stories

<table>
<thead>
<tr>
<th>Category</th>
<th>Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast cancer research</td>
<td>Breast cancer, breast cancers, data, disease, effective, effectiveness, estrogen, estrogen replacement, evidence, findings, fund, funding, funds, health, incidence, money, NCI, NCI’s, prevent, prevention, preventive, prevents, research, researchers, risk, risks, scientists, studies, study, test, tested, tests, therapies, therapy, trial, trials, women, women’s</td>
</tr>
<tr>
<td>Carcinogens</td>
<td>Carcinogen, carcinogenic, chemical, chemicals, DDT, environment, environmental, mortality, pesticides, pollutants, rate, rates</td>
</tr>
<tr>
<td>Causes</td>
<td>Alcohol, cause, causes, diet, dietary, eat, eating, factor, factors, fat, food, foods, fruit, fruits, hormonal, hormone, hormones, intake, low-fat, menopause, milk, postmenopausal, vegetables</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Abnormal, abnormalities, abnormality, aggressive, atypical, cancers, curable, cure, DCIS, detect, detected, detection, diagnosed, diagnosis, ductal, lumpectomies, lumpectomy, mammogram, mammograms, mammography, medicine, mutation, patients, radiation, recommend, recommendation, recommends, recurrence, situ, spread</td>
</tr>
<tr>
<td>Genetics</td>
<td>BRCA1, BRCA2, experts, gene, genes, genetic, genetics, hereditary, inherited</td>
</tr>
<tr>
<td>Implants</td>
<td>Alone, implant, implants, invasive, lymph, male, mastectomies, mastectomy, men, nodes, operation, silicone, society, surgeries, surgery</td>
</tr>
<tr>
<td>Malignancy</td>
<td>Age, ages, breast, breasts, cancerous, common, cyst, cysts, malignancy, malignant, menstrual, menstruate, menstruation, nipple, nipples, normal, pain, painful, problem, problems, removal, remove, removed, removing, skin, surgeon, surgeons, symptoms, tissue, tissues, typical, woman, woman’s</td>
</tr>
<tr>
<td>Personal stories</td>
<td>Afraid, anger, angry, care, chemo, chemotherapy, children, choices, choose, daughter, daughters, decide, decided, decision, decisions, die, died, dying, emotional, emotionally, families, family, fear, fears, feeling, feelings, friend, friends, frightening, hair, hope, hospital, husband, I, I’d, I’m, I’ve, kids, life, lives, lose, loss, marriage, married, me, mom, mother, mother’s, mothers, my, myself, option, options, reconstruct, reconstruction, reconstructive, scared, sister, sisters, support, talk, talking</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>Baby, birth, bodies, body, love, pregnancy, pregnant</td>
</tr>
<tr>
<td>Self-exams</td>
<td>Benign, biopsied, biopsies, biopsy, BSE, doctor, doctors, exam, examination, examinations, examine, exams, fine-needle, lumps, medical, needle, physician, physicians, self-exam, self-examination, self-examinations, self-exams</td>
</tr>
<tr>
<td>Survival</td>
<td>Cancer, drugs, news, survival, survive, survivor, survivors</td>
</tr>
<tr>
<td>Tamoxifen</td>
<td>Benefit, benefits, blood, cervical, clinical, dead, death, deaths, drug, drug’s, endometrial, healthy, history, inform, information, informed, ovarian, premenopausal, screen, screened, screening, Tamoxifen, Tamoxifen’s, tumor, tumors, uterine, young, younger</td>
</tr>
<tr>
<td>Worry</td>
<td>Help, worried, worry</td>
</tr>
</tbody>
</table>
stories about cancer risk factors. Another related frame was Genetics, which detailed the hereditary aspects, especially the cancer gene BRCA1. Breast Cancer Research, which included the terms breast cancer, health, and women, also discussed the National Cancer Institute and studies being conducted on estrogen-replacement therapy. Another frame, Carcinogens, was closely related to Ms.; it comprised terms such as DDT, environment, and mortality rates, which reflected a number of articles Ms. published on pollutants. Finally, Tamoxifen—the drug being tested for breast, endometrial, ovarian, and uterine cancer—appeared as a frame, because several articles discussed a controversial study.

The third general theme in the breast cancer coverage was that of personal accounts of how breast cancer affected women and their families. This theme was most closely associated with LHJ and McCall’s. The Personal Stories frame included more terms than any other, reflecting not only the first-person nature of these articles but also the emotions associated with them, such as anger and fear. Personal Stories also illustrated the support systems women relied on—daughters, friends, mothers, and husbands. Worry, a frame that comprised the terms help and worried, was near Personal Stories. A frame called Pregnancy, which included the
terms *baby, bodies, and birth*, reflected several articles that discussed cancer survivors who went on to have children. The last frame in the cancer stories focused on Survival, including derivations of the word *survive* and *news, drugs, and cancer*. This was located almost closer to basic information about breast cancer, but its negative third dimension made it part of the personal-accounts theme.

Fifteen frames emerged from the implant articles (see Table 4). Although the implant themes were not as clearly delineated as those from the breast cancer articles, three general themes were apparent in the implant articles. One theme was that of implants and their consequences. A second theme involved the factors that cause women to choose implants, and a third theme was a marginal one involving Bristol-Myers Squibb Corporation and the regulated implant coverings. Our discussion focuses on the first two frames, which were much more central to the discourse on implants, as can be seen in Figure 2.

The first general theme in breast implant coverage involved the consequences of implants. It is not surprising that this topic was most closely associated with *Ms.*, which published more on implants than the other three magazines combined. Nine frames appear to comprise this theme, including both silicone and alternative implants.

Silicone Implants was the largest frame in the implant stories. It included terms describing the implant industry, such as *Dow, man-made, and business*, as well as those that referred to the problems with silicone implants—*rheumatoid, leak, and rupture*. This frame was located nearest Postmastectomy Health, composed of the terms *healthy* and *mastectomy*, and the two frames thus explained one reason for the implants and what happened if they failed. Research Findings, the third frame in the cluster surrounding *Ms.*, discussed studies of autoimmune disorders that might result from implants and lawsuits patients were beginning to file against Dow Corning. These concepts came together in one frame because the articles often mentioned the need to prove that implants caused the symptoms.

The Saline Implants frame offered information about other procedures, such as saline-filled implants and the Transverse Rectus Abdominus Myocutaneous (TRAM) flap and their costs. It contained terms that described the health problems these alternatives would alleviate: *capsular contracture* and *lupus*. A nearby frame called Bra comprised the word *bra* and variations of *harden*, which refers to silicone implants hardening. These two frames were closely related to Informed Choice, a frame that was emphasized in *Ms.* and included terms such as *risk, alternative, and consent*.

The three remaining frames in the implant consequences theme focused on women’s stories about their implants. Central to this was the Personal Experiences frame (similar to the Personal Stories frame in breast cancer articles), reflecting the emotional consequences of implant problems with terms such as *fear, horrified, and painful*. The frame included terms describing a more limited support group
### TABLE 4
Terms Comprising Breast Implant Frames

<table>
<thead>
<tr>
<th>Category</th>
<th>Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bra</td>
<td>Bra, braless, bras, hard, harden, hardening</td>
</tr>
<tr>
<td>Bristol-Myers Causes</td>
<td>Average, cause, caused, causes, causing</td>
</tr>
<tr>
<td>Ideal Women</td>
<td>Ideal, perfect, women, women’s</td>
</tr>
<tr>
<td>Implant coverings</td>
<td>Foam, foam-coated, foam-covered, polyurethane, polyurethane-covered</td>
</tr>
<tr>
<td>Informed choice</td>
<td>Alternative, alternatives, cancer, carcinogen, choice, choose, chose, consent, decision, FDA, FDA’s, information, informed, options, patients, reconstruction, reconstructive, risk, risks, risky</td>
</tr>
<tr>
<td>Marketing</td>
<td>Market, marketing, regulate, regulation, safe, safety, sales</td>
</tr>
<tr>
<td>Media images</td>
<td>Advertisements, advertising, attractive, augmentation, augmented, beautiful, beauty, big, bigger, bodies, body, breast, breast augmentation, breasts, busty, cosmetic, culture, desirable, desirability, feel, feeling, flat, flat-chested, flat-chestedness, happy, image, images, large, larger, magazine, magazines, media, news, nipple, nipples, operation, operations, pleasure, pretty, self-confidence, sexier, sexual, sexy, small, small-breasted, society, surgeries, surgery, surgical, woman, woman’s</td>
</tr>
<tr>
<td>Personal experiences</td>
<td>Bosom, boyfriend, chest, chests, complications, curvaceous, doctor, doctor’s, doctors, examine, examined, examining, exams, fear, feared, horrible, horrified, horror, husband, I, I’d, I’m, I’ve, man, me, my, myself, pain, painful, physicians, problem, problems, shape, terrible</td>
</tr>
<tr>
<td>Plastic surgery</td>
<td>Models, plastic surgeon, plastic surgeons, plastic surgery, surgeon, surgeon’s, surgeons</td>
</tr>
<tr>
<td>Postmastectomy health</td>
<td>Health, healthy, mastectomy, postmastectomy</td>
</tr>
<tr>
<td>Research findings</td>
<td>Attorneys, autoimmune, damage, damages, danger, dangerous, data, disease, diseases, disorder, disorders, evidence, experts, finding, findings, ill, illness, illnesses, immune, lawsuits, lawyers, liability, litigation, proof, prove, proved, proven, research, researchers, results, scientists, scleroderma, sick, studies, study, sue, suffer, suffered, suffering, suing, symptoms, testing, tests, trial, trials</td>
</tr>
<tr>
<td>Saline implants</td>
<td>Abdomen, abdominal, breast-fed, breast-feed, capsular, connective, connective-tissue, contracture, cost, costs, dollars, fee, fees, flap, loss, lupus, money, muscle, muscles, saline, saline-filled, saline implants, salt, saltwater, saltwater-filled, skin, tissue, TRAM, water</td>
</tr>
<tr>
<td>Scars</td>
<td>Mammograms, mammography, scar, scarring, scars</td>
</tr>
<tr>
<td>Silicone Implants</td>
<td>Bleed, breast implant, breast implants, business, companies, company, company’s, Corning’s, corporation, corporations, Dow, Dow’s, explant, explanted, fluid, gel, implant, implant-related, implantation, implanted, implants, industrial, industry, inflammation, inflammatory, inject, injected, injection, injections, leak, leakage, leaked, leaking, liquid, man-made, manufactured, manufacturer, manufacturers, manufacturing, medical, prosthesis, removal, removed, rheumatoid, rheumatologist, rheumatology, rupture, ruptured, ruptures, silicone, silicone-covered, silicone-filled, silicone gel, silicone gel-filled, silicone gel-filled implants, silicone implants, silicone-related, silicone’s, silicone-specific</td>
</tr>
</tbody>
</table>
than the cancer articles, this time focusing on husbands and boyfriends. Mammography and scarring composed the nearby frame Scars. The final frame in the theme was Plastic Surgery, which alluded to reasons for implants other than postmastectomy reconstruction.

Four frames comprising the theme of factors that influenced women to choose implants were located near McCall’s. Media Images included breast size (e.g., flat-chested, curvaceous), culture, and society, and terms associated with one aspect of women’s self-confidence, such as desirable, sexy, and beautiful. The next frame was Causes, consisting of variations of the word cause, and average. This was closely related to Ideal Women, composed of the terms ideal, perfect, and women. Finally, the Marketing frame focused on regulation and safety.

**DISCUSSION AND CONCLUSION**

Women’s health issues received increasing prominence in the mass media during the 1990s, and research suggests the media have played a key role in raising
women’s consciousness of their health. However, some critics question whether the media frame the issues to conform to dominant values and representation rather than meet women’s needs (Dervin, 1989; Smith, 1993). Our purpose was to provide a systematic study of women’s magazine coverage of two health issues of special concern to women during this decade: breast implants and breast cancer.

Overall findings indicate that the women’s magazines in this study support a woman-centered approach to covering these issues, especially for breast cancer. The largest number of articles analyzed concerned cancer prevention and provided specific information on steps for women to take. In addition, the type of sources highlighted the importance of support groups and family members in the recovery process for women. One reason for the women-centered approach to breast cancer coverage in women’s magazines may be the fact that female writers were much more likely to produce these articles than male writers—more than three fourths of authors of the articles we examined were female. Unlike previous studies, in which male writers were criticized for stressing masculine values in news stories written for general audiences (e.g., Hartley, 1982; Holland, 1987; Morley, 1986), our findings suggest that, when the intended audience is female, writers are able to shift the focus of their reporting to women’s values and interests. Female writers, especially, may be able to incorporate woman-centered approaches because they, too, are at risk for breast cancer and likely have the same concerns as their readers. Future research should endeavor to investigate the intended audience’s effects on journalists’ approaches to writing about various topics, particularly those related to health risk.

Breast cancer articles framed the disease in three general themes: coping with disease and its effects, personal experiences, and risk factors. The articles about diagnosing and dealing with breast cancer advised women to be more assertive about testing. For example, McCall’s published “Breast Lumps: News You Need Now” (Kase, 1993), and GH included a story titled “Is Your Breast Exam Good Enough?” (Muha, 1996); these kinds of articles encourage women to be proactive and not to unquestioningly trust their physicians. Similarly, the articles about cancer causes offered information on reducing risk factors, such as “Breast Cancer Prevention: Diet Vs. Drugs” in Ms. (Rennie, 1993) and GH’s “Your Best Self-Defense Against Breast Cancer” (Love, 1995). Even if women could not avoid the breast cancer genes or environmental causes, they learned that they need to be extra vigilant about their breast exams. Such coverage helps to fill gaps in information that may exist in other media outlets because the magazines are intended specifically for women readers.

Perhaps the most important frame in the cancer coverage, however, was that of women’s personal stories. In terms of sense making, this frame offered hope to alleviate the fears that other articles may have generated. Reading of women’s survival may encourage some frightened readers to examine their breasts or have mammograms. Indeed, these women’s magazines often discussed survival from a
personal point of view: “How Breast Cancer Didn’t Change My Life” (Wadler, 1995) and “I’m Still Here” (Hales, 1993). This is not to say that personal accounts were separated from the other themes in cancer coverage, because this frame often included elements of risk factors, diagnosis, or the decision to have a mastectomy. Still, presenting these issues in first-person stories might be more encouraging to women than the impersonal reports inherent in the other themes.

Personal experiences were not as central to the discourse in implant coverage. This frame was only part of a much larger theme that spoke largely—and impersonally—on the problems with, and alternatives to, silicone implants. Only one article was published on a woman’s personal experience with breast implants: “My Twenty-Year Nightmare” (Sanders, 1992), and *LHJ* printed that under a pseudonym. Several articles included women with implants as sources. This comparative lack of personal discussion suggests that the implant industry had a substantial impact on the magazines’ coverage, with the exception of *Ms.*, which does not accept advertising. Dow Corning, for example, was the largest producer of silicone implants; Dow Corning is a joint venture of Dow Chemical—which has subsidiaries that produce household cleaners heavily advertised in mainstream women’s magazines—and Corning, Inc. We did not examine the relation between editorial and advertising content, however, which is something that should be considered in future research.

The larger themes in implant articles pertained to economic concerns, both of the medical industry and the media. The frames associated with silicone and saline implants focused in part on the manufacturers and the costs of implant alternatives. Stories such as “Better Implants” (Lippert, 1990), which ran in *LHJ* prior to the silicone implant controversy, suggest that the magazines were not averse to favorable coverage early on. Indeed, even after the Food and Drug Administration hearings on silicone implants revealed their dangers, the content of articles was notably positive. Granted, the articles described the health problems associated with implants, but they did not examine why those implants were allowed on the market and the Food and Drug Administration’s role in testing them. The coverage leaves a gap between researchers’ and activists’ concerns and female readers, reducing the opportunity for women to make sense of how such decisions had potential negative effects on their decisions regarding implants. Even the most damaging article—“The Danger of Implants” (Kase, 1992)—began with the innocuous sentence “Women seeking breast implants are running out of options,” rather than questioning why women seek implants or charging the manufacturers with negligence. This suggests a strong economic influence on editorial content.

Our findings regarding implant coverage are not as incriminating as those of Vanderford and Smith (1996), who found that more than half of 55 magazine stories on implants were balanced and 42% were negative; however, our sample included 5 more years after theirs, and as time distanced the flurry of concern over silicone implants, negative coverage may have decreased. Also, their sample in-
cluded both news and women’s magazines, which may have confounded the findings. As Kessler (1989) noted, women’s magazines tend to shy away from controversial issues that may be offensive to some readers.

The magazines emphasized that, despite the risks of implants, they should be available—provided that women were informed of those risks. A number of articles appeared on alternatives to the silicone implant, such as “Alternatives: Know the Risks” (Bonavoglia, 1996) in a 1996 issue of *Ms.* Although articles that informed women about safer alternatives to silicone and the risks of various reconstructive procedures are useful in helping women make decisions, the magazines presented a somewhat contradictory message with another theme. Explanations for women’s desire for implants despite their obvious dangers focused on society’s idealization of large breasts as sexy. The magazines criticized this phenomenon in articles such as “Why Women Want Man-Made Breasts” (Mithers, 1992) in *McCall’s* and “Beauty and the Breast” (The Editors, 1996) in *Ms.* These discussed the trend of thin models with unnaturally large breasts in advertising as a negative message to women. The magazines did not, however, offer ways that women could resist such images. Also, although it was beyond the scope of this study, the illustrations accompanying these articles on both cancer and implants regularly featured the naked torsos of fit women who were clearly younger than the magazines’ average readership demographic. This practice sends a mixed message to women who wish to appreciate their bodies without regard for societal standards.

Our findings suggest that women’s magazines present more useful, complete, and socially conscious information about breast cancer than about implants. As previous studies suggest (e.g., Dervin, 1989; J. D. Johnson, 1997), these magazines’ coverage of cancer offered women hope and comprehensive information with which to fight the disease. One possible reason that women’s voices were included more in stories on breast cancer than on breast implants is because in the latter situation, the public relations efforts of large manufacturers had more at stake. According to Ericson et al. (1989), corporate public relations have a vital interest in maintaining their companies’ competitive status. Corporations invest considerable private policing resources guarding possibly damaging knowledge while promoting knowledge that supports their claims. In the case of breast cancer, little in the way of damaging information for private companies would exist if women with cancer were promoted to tell their story. However, manufacturers had more at stake if unsatisfied implant recipients were to tell their side of the story. Therefore, doctors and cancer patients were more likely available for interviews when discussing cancer stories. However, mostly spokespersons for the implant manufacturers were easily available when discussing implants, which may be one explanation in the difference in the type of sources used between stories on implants and cancer.

Another possible criticism of the coverage is that it did not reflect the interests of all women. African American women are more likely than White women to de-
velop breast cancer and to die from it, yet only one article discussed this fact. The illustrations accompanying the articles pictured only one woman of color. This near omission indicates a gap between readers and African American women’s experience, which may reduce the ability of African American readers to make sense of the increased risk that they face. Such a gap violates the notions of the sense-making approach (Dervin, 1989). Given the disparity in incidence rates, future research needs to examine whether magazines aimed at women of color presented any different coverage than these mainstream magazines.

A sense-making approach to covering women’s health issues requires the media to go beyond reporting new medical procedures and economic considerations to contextualizing information in a way that provides women with enough information to make informed decisions. This study indicates that magazines approached this level of coverage in stories concerning breast cancer. However, when it came to covering breast implants, a condition affecting more than 2.2 million women in the United States (J. Beck, 1996) — and many more when friends, relatives, and women considering implants are included — only 12 articles in four magazines were published over a 7-year period, and 7 of those articles appeared in Ms. alone. The disparity between implant and cancer coverage is likely due to the magazines’ distaste for offending readers who had implants, advertising agencies, and doctors who perform implantations — reasons that Kessler (1989) found for women’s magazines’ lack of coverage of the hazards of tobacco use. The articles on implants included less information concerning support groups and steps that women could take to help themselves and more on why women chose to obtain implants and the regulation of implants. The comparative lack of attention to support groups fails to link the readers with a potential support system, leaving a gap between readers with implants and a potential aid for improving their environments. Furthermore, the disparity in sense-making approaches between cancer and implant coverage may support the notion that framing involves moral evaluation (Entman, 1993). Certainly, the greater presence of a woman-centered sense-making approach in cancer articles than in implant stories may reflect society’s perceptions that cancer patients deserve more help and sympathy than women who suffer from disorders allegedly caused by breast implants — despite the fact that a review of major studies concludes that there are no conclusive links between implants and connective-tissue, rheumatic, and arthritic diseases, as breast implant plaintiffs charged early in the implant controversy (“What the Committee Found,” 1999). Although it is beyond the scope of this study, further research should examine how the public perceives women suffering from cancer or implant disorders, and whether media framing affects those perceptions.

The women’s magazines were successful at including a variety of official and unofficial sources. This finding departs from those of past studies, which indicated the overuse of official sources (Ericson et al., 1989; Tuchman, 1977). Official sources, such as physicians, were still interviewed most often in the
women’s magazines; however, patients were the second largest group of sources interviewed in three of the four magazines analyzed. Furthermore, most of the patients interviewed were female, which contradicts earlier studies that found that men outnumbered women as sources (Rakow & Kranich, 1991). Although the magazines did make an effort to include unofficial sources and women, stories tended to shy away from controversy in source usage. Stories would have been more comprehensive and helpful to women had they included both pros and cons of new developments and sought interviews from opposing camps rather than relying primarily on either a patient’s personal story or a physician’s interpretation of new research. Because the literature indicates that the mainstream television and newspapers often fail to address health issues in ways that are meaningful to women (Parrott, 1996), it is critical that media targeted to women pick up the slack, even for issues that are deemed controversial. Future research should delve into how women interpret media frames and whether the differences in tone between cancer and implant coverage, such as we found in this study, affect their personal behavior.

In this study we analyzed only magazines; the next step is to compare magazine coverage with television, newspaper, and Internet coverage. As we move toward more public awareness of women’s health issues in the next 10 years it is imperative that the media provide a comprehensive look at issues that affect their audiences—and there is no better institution to provide this scrutiny than the media, as they pursue the public service function of providing women and the general population with necessary information to make informed decisions.

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