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Adult Daughters' Influence on Mothers' Health-Related Decision Making: An Expansion of the Subjective Norms Construct

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Abstract

This study of mother–adult daughter communication uses qualitative methods to explore the appropriateness of including adult daughters as referents in the measurement of subjective norms (a behavioral theory construct) related to the use of mammography and other health-related tests and services. The methods were chosen to approximate as closely as possible the mother–adult daughter relationship in the context of daily life. This inductive approach contrasts with the deductive origins of the construct. A sample of nine Mexican and Filipina immigrant and U.S.-born mothers and their adult daughters was recruited. Data were collected in two phases: (a) videotaped observations of mother–daughter dyads discussing health-related topics and (b) follow-up interviews designed to obtain an emic (insider) perspective of the videotaped interaction. Results show that adult daughters influence their mothers' ability to navigate the health care system and contribute to health-related decision making and behavior, suggesting that it may be appropriate to include adult daughters in the assessment of subjective norms.

Keywords

mother–daughter relationship; breast cancer screening; subjective norms

Breast cancer is the most commonly diagnosed type of cancer among Mexican and Filipina immigrant and U.S.-born women in California (California Cancer Registry, 2007). Compared to Whites, these women are more likely to be diagnosed at later stages and are more likely to die from this disease (American Cancer Society, 2008; California Cancer Registry, 2007). Late-stage diagnosis is attributed in part to lack of participation in early detection behaviors such as mammography screening, access to salient information and education necessary for optimal health choices, and successful navigation of the medical care system (Borrayo & Jenkins,

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2001). Health behavior research has developed a body of theory designed to explain and to predict practices such as the use of screening mammography and to inform interventions to increase screening (Rakowski & Breslau, 2004). However, concerns are frequently raised about the lack of attention to culture and social context in these theories and the extent to which the theories are meaningful among diverse communities (Kagawa-Singer, 2000).

The current research arose from our study titled Behavioral Constructs and Culture in Cancer Screening (3Cs), a mixed-method (inductive qualitative and deductive quantitative) intensive assessment of the cultural appropriateness of the five behavioral theory constructs most commonly used to explain breast cancer screening and to inform interventions to promote mammography: perceived threat, perceived benefits, intention, self-efficacy, and subjective norms. This analysis explores the specific case of mother–adult daughter communication and the mother's decision to undergo mammography related to the construct of subjective norms. Subjective norms is intended to reflect an individual's perception of the influence of significant others in the form of pressure to comply. The construct typically specifies referents for mammography as people most important to the woman, including best friend, sister, mother, husband, doctor, and important others (e.g., "Does your [referent person] believe that you should have a mammogram?"). Each of these beliefs is weighted by the individual's motivation to comply with that particular person ("How often do you try to do what your [referent person] believes that you should?"), with response options *never*, *seldom*, *about half the time*, *usually*, and *always* (Grube, Morgan, & McGree, 1986).

The 3Cs study used in-depth ethnographic research to explore the meaning and relevance of these constructs within the social context of U.S. Filipina and Latina women, in contrast to most behavioral theory research that explicitly seeks to decontextualize behavior by focusing on individual attitudes and beliefs. Pasick, Burke, et al. (2009) provide an overview of the study background, methods, and overall findings. As indicated in Figure 1, the 3Cs study design, initial analyses of interview data identified adult daughters as potentially important referents in their mothers' mammography screening decisions leading to this supplementary study designed to inductively explore this referent relationship.

SUBJECTIVE NORMS

Used primarily in the theory of planned behavior (Azjen & Fishbein, 1980; Fishbein, 1975) and with origins in social psychology, normative beliefs are individuals' beliefs about the extent to which other people who are important to them think they should or should not perform particular behaviors. In general, researchers who measure normative beliefs also measure motivations (or pressure) to comply—how much individuals wish to behave consistently with the prescriptions of important others. Each normative belief about an important other is multiplied by the person's motivation to comply with that important other, and the products are summed across all of the person's important others to result in a general measure that predicts subjective norms (Azjen & Fishbein, 1980; Fishbein, 1975). Subjective norms is a predictor of intention to perform a behavior. Intention is regarded as the primary predictor of actual behavior.

As noted by Stewart, Rakowski, and Pasick (2009), the 3Cs multiethnic quantitative and deductive analyses of subjective norms found screening to be more strongly associated with normative beliefs than with motivation to comply in a cross-sectional analysis. Women who reported that their best friend, sister, mother, husband, doctor, or people important to them believed in annual mammography had about twice the odds of getting regular mammograms than those without such influences. Screening was also associated with trying to act on the beliefs of one's sister or doctor but not of one's best friend, mother, or husband. Associations with screening did not differ by race/ethnicity for subjective norms regarding specific people

(e.g., mother, husband). However, there was a differential effect of subjective norms regarding "most people important to you" by race/ethnicity, which may be because of the classification of different types of people as important.

Complementing the deductive analysis, Pasick, Burke, et al. (2009) inductively explored the appropriateness of the constructs of intention and subjective norms for Latina and Filipina women. They found the importance of significant others for health behavior to be consonant with a major domain of social context (sociocultural forces that shape people's day-to-day experiences and that directly and indirectly affect health and behavior; Burke, Joseph, Pasick, & Barker, 2009) and relational culture (the processes of interdependence and interconnectedness among individuals and groups and the prioritization of these connections above virtually all else; Pasick, Barker, et al., 2009). However, in terms of pressure to comply, respondents spoke of relationships not as being the source of pressure but as more of an integral part of the decision process.

In addition, in these interviews, respondents frequently mentioned the importance of adult daughters in the lives of older women, indicating that this relationship could have relevance for the subjective norms construct. Because the study was designed to identify and explore previously unknown contextual influences on behavior, we reviewed the literature on adult daughters and their mothers in the process of health decision making.

MOTHER–ADULT DAUGHTER RELATIONSHIPS

Mother–daughter relationships across the lifespan can be characterized as being the closest both psychologically and emotionally relative to other intergenerational pairings (Fingerman, 2001; Rossi & Rossi, 1990). The mother–daughter bond is a symbiotic one that transitions from idealized interconnectedness during the daughter's youth to complex interdependence in later life as both women pursue separate identities and (re)negotiate their roles (Miller-Day, 2004). Closeness in this relationship is shaped in part by the fact that both partners play a central role in broader kinship networks and share similar experiences as women (Fingerman, 2001). Throughout the lifespan, mothers and daughters establish patterns of communication that shape their sense of self and perceived relationship quality. Parameters that govern communication and interaction processes between mothers and daughters are well defined when daughters are very young. During that period, communication is typically one way and reflects a mother's nurturance and socialization of her children. However, these patterns become more fluid over time and are influenced by cultural values, family norms, personality traits, and relationship history (Kenen, Arden-Jones, & Eeles, 2004; Miller-Day, 2004).

Much of the literature in the realm of mother–adult daughter relationships has focused on daughters' role in caregiving (Cicirelli, 2003; Walker & Allen, 1991). Research to date on these relationships is limited in the extent that it can be used to inform behavioral theory for the following reasons. First, mother–daughter studies have typically been grounded in psychodynamic or social learning models (Chodorow, 1999), which Blieszner, Usita, and Mancini (1996) argued "problematically confines mother–daughter relationships to prescribed explanations that do not empower women nor allow them to describe how they actively shape their lives" (p. 8). Other scholars have observed that parental relationships are examined one dimension at a time and have failed to simultaneously explore multiple roles, contexts, and dimensions of these relationships (Holstein & Gubrium, 1994; Miller-Day, 2004). In addition, studies on mother–daughter relationships usually rely on structured interview data and have largely been limited to White women (Walker, Manoogian-O'Dell, McGraw, & White, 2001; Williams & Nussbaum, 2001).

Few studies have examined communication and interaction processes in mother–daughter relationships across the lifespan (Fingerman, 1996; Henwood & Couglan, 1993; Miller-Day,

2004). Studies on the nature and function of storytelling among women and their adult daughters have been instrumental in showing the significance of narrative and patterned communication in the establishment of feminine identity (Langellier, 1992; Miller-Day, 2004). Fingerman (1996) examined intergenerational bonds and areas of tension in mother–daughter dyads. The multiple data collection methods used in this study, including individual interviews with mothers and daughters, administration of questionnaires, and a joint follow-up interview with each dyad, provided unique insights into mother–adult daughter relationships. Miller-Day (2004) studied communication processes in grandmother–mother–adult daughter triads to illustrate how maternal relationships are experienced at different points in a woman's life and understand patterns of communication that link mothers and daughters across generations.

These studies have contributed to our understanding of communicative interaction in mother–daughter relationships; however, to date, little has been written about communication and interaction processes in mother–adult daughter relationships as they specifically relate to health behavior (Cicirelli, 1991; Fingerman, 2001; Williams & Nussbaum, 2001). An exception is Cicirelli's (1993) study on dyadic decision-making processes in caregiving relationships of 50 mother–adult daughter pairs (dyads). Results of this qualitative study showed that a decline in the health of elderly mothers affected communication patterns in these relationships and further resulted in paternalistic decision making by adult daughters. Although Cicirelli's study included only White women, the results are noteworthy on several levels. First, adult daughters who made decisions on behalf of their mothers partly relied on their relationship history, including previous interaction and perceived quality of communication to make these decisions. Second, changes in the mother's health status redefined communicative behavior within these relationships (Cicirelli, 1993). Our study builds on this work by exploring communication and lines of influence in non-White mother–adult daughter dyads while mothers are still healthy. Our primary question, framed with reference to mammography screening is, how do adult daughters influence their mothers' health-related behavior? In addition, we sought to observe some variation in relationships so we could begin to understand how the type of mother–adult daughter relationship is affected by a daughter's ability to influence her mother's health.

METHOD

Our approach was designed to approximate as closely as possible the mother–adult daughter relationship in the context of daily life. This form of research distinguishes among what people say should be the case (their opinions and beliefs), multiple perspectives on what has happened in the past, and actual practices (via observation) (Burke et al., 2009). Thus, rather than directly querying mothers and daughters about their relationship around the topic of mammography, as would be done in most qualitative health studies, we chose to explore the meanings of health and illness in the context of actual mother–daughter discourse (Burke et al., 2009).

Informed by anthropological methods including inductive analysis and multiple coders, we used a combination of observational and interview methods that allow for a rich understanding and interpretation of verbal and nonverbal aspects of communication in mother–adult daughter relationships (Bernard, 2005). Data were collected in two phases: (a) videotaped observations of mothers and adult daughters discussing health-related topics in general and mammography specifically and (b) open-ended, semistructured follow-up interviews designed to obtain an emic (insider) perspective of the videotaped interaction. Informed consent was obtained from all respondents, and each participant was given $35 in appreciation of her time as well as a gift of fresh fruit and snacks to share with her family. Study protocols were reviewed and approved by the Committee on Human Research at the University of California, San Francisco.

Participants

We recruited mother–daughter dyads via social networks and recommendations from community gatekeepers who had previously participated in the parent study. Consistent with the main 3Cs study, San Francisco Bay Area women who self-identified as Mexican, Mexican American, Filipina, or Filipina American were eligible to participate. The choice of these two ethnicities was based on low rates of breast cancer screening in these groups (Jacobs, 2005; Kagawa-Singer et al., 2007). This study, like the main 3Cs study, was designed to neither characterize nor compare Filipina and Latina women. As such, we do not attempt to identify differences by ethnicity in our analysis. Our sample, consisting of nine dyads (five Mexican or Mexican American pairs and four Filipina or Filipina American pairs), yielded sufficient data to provide initial answers to our study question.

Data from the initial round of 3Cs inductive interviews with community gatekeepers and women suggested that adult daughters' age was important in terms of their ability to influence mothers' health-related decision making. In particular, daughters who were 30 or older were more likely to influence their mothers' health. Thus, for homogeneity, adult daughters' age in this study was restricted to 30 or older. The actual age range was between 31 and 51. The majority of daughters were college educated, worked outside the home, and spoke fluent English. With the exception of one daughter, daughters were married and had children of their own. Three daughters were immigrants (one was a single mother); the rest were U.S. born. Mothers were between the ages of 53 and 76. The majority was retired or very close to retiring (some had been stay-at-home mothers at various points in their lives). One woman was recently widowed. Seven of the nine mothers were immigrants. Of these women, most had lived in the United States for at least 20 years and spoke fluent English. With regard to level of education, five mothers were college graduates, three had a high school diploma, and one had a grade school education only. Mothers self-reported being relatively healthy and did not require care or assisted living. All participants had health insurance.

Only one member of each eligible dyad was approached by a research associate. The person contacted (i.e., mother or daughter) was based on information provided by community gatekeepers and social network members. Nine of the ten women contacted agreed to participate. Of those nine, six women agreed to participate as a dyad without consulting their mother or daughter first. The remaining three consulted with their mother or daughter subsequent to being contacted and followed up with a research associate via telephone within a few days to confirm or decline participation. Some mothers had more than one adult daughter. In this situation, the daughter's participation was based on availability.

Video Observations

The use of videotape revealed verbal and nonverbal cues and patterns in communication that could not be captured in audiotaped interviews. Similar methods were used by McGraw and Walker (2004) to examine aging mother–caregiving daughter relationships and conflict resolution in these relationships. An advantage of using video interactions was the capability to repeatedly review them rather than relying on field notes alone. Prior to data collection, input was sought from community gatekeepers on the appropriateness of topics chosen for discussion and how to conduct observations in a manner that was comfortable and conducive to open communication. Based on other gatekeepers' input, video observations were conducted in settings chosen by participants and included their homes, local churches, and community centers.

Observations consisted of two parts: (a) open-ended topic-based discussions and (b) a task-oriented assignment. In the first part of the observation, mothers and daughters were asked to discuss a series of general health-related topics, each posed in the form of a question on a

handout provided to the dyad. Examples of questions included, What do you do to stay healthy? What concerns do you have about health? and What advice would you give each other on ways to stay healthy? In the second part of the observation, dyads were asked to open an envelope containing health education material related to breast cancer and mammography. Apart from being asked to review and discuss the printed material, no guidance was offered for this component. The rationale for this was to observe how dyads reacted to the material provided, who lead the discussion, and whether there was respectful negotiation or tension. Observations ranged from 10 to 90 minutes in length. Variation was because of the open-ended nature of the discussion topics and assignment.

Observations and follow-up interviews were conducted in English, Spanish, or Tagalog based on participants' expressed language preference. Of the nine dyads, two were conducted in Spanish and one in Tagalog. Each was subsequently transcribed into English to facilitate analysis. No other video observations were transcribed. Our rationale for this was based on our desire to maintain broad connections with observations rather than reduce them to text only. Three members of the research team independently reviewed video observations for verbal content and nonverbal cues to develop comprehensive notes on the observation. The team then met to discuss each observation in detail, compare notes, and develop questions related to specific themes or concepts identified (e.g., aspects of relationship dynamics and the task-oriented assignment) for exploration in subsequent follow-up interviews.

Follow-Up Interviews

Audiotaped follow-up interviews were conducted with mother and daughter separately approximately 2 weeks after each video observation to gain individual perspectives on the perceived nature and quality of communication in their relationship. In addition to asking a core set of questions aimed at assessing communication in all these relationships, questions developed through analysis of video observations of each mother–daughter pair were asked to further illuminate how mothers and daughters communicate with each other regarding health and health-related decision making. Field notes were taken by bilingual research associates (in English) following each interview and subsequently merged with notes from video observations. The full content of each interview was transcribed by a transcription agency. Team members individually reviewed transcripts line by line and coded them for relevant concepts, themes, and categories. The coders then met to reconcile their individually developed codes. Reconciled codes were created and entered in ATLAS.ti qualitative software to organize textual data and facilitate analysis. The coding scheme was revised as new codes emerged. Key themes identified in transcript data were merged with themes identified in video observations and field notes and subjected to additional analysis and interpretation. Summary statements or theoretical memos were then produced from this triangulation. It is from this process that the findings were generated. Throughout the project, research associates met biweekly with the project director and principle investigator to discuss recruitment strategies, develop follow-up interview questions, and examine emerging themes.

RESULTS

On completion of nine sets of observations and interviews, we found that we had sufficient data to conclude that the adult daughter warranted consideration as a subjective norms referent. Major findings can be grouped under two themes: (a) types of influence and (b) types of mother–daughter relationships.

Types of Influence

Health-Related Information and Advice—Several mothers in our sample consistently consulted their daughters for health-related information and advice on a variety of topics

ranging from dietary supplements to menopause and chronic health conditions to increase their general knowledge of a given topic and facilitate decision making. When asked why mothers consulted their daughters, most said their daughters were better educated, were more familiar with medical terminology, and had better access to information and resources such as the Internet. Credibility was not based on mothers' perception of daughters' expertise on a given topic or the accuracy of information shared but rather the daughters' ability to access relevant information. Mothers also expressed a preference for discussing personal health problems with their daughters because of their strong emotional ties, shared experiences as women, and understanding of women's health.

Some daughters sought health education materials or books on health-related topics in accessible language to facilitate their mothers' understanding of a health concern. One 31-year-old daughter, a project manager in the biotech industry, described a time when she looked up symptoms and terminology related to her mother's arthritis diagnosis in a medical dictionary.

> We looked up some stuff so she could feel a little bit better. Because I think it's this whole, you know, you go to the doctor and they're just spitting out these words and your average person doesn't understand. And you get scared because they're using all these complicated words you don't hear on a daily basis. And so it's just trying to break things down for her.

The same daughter also searched the Internet and consulted coworkers with medical training. Once obtained, information was then relayed back to her mother.

> I have a fast Internet connection. So, I'll just find something and I'm like, "Okay, I'm sending you the Web site… . Just read it and I'll see what else I can find." Also, [my friend] at work, various people that I know that are MDs or that have their degrees, I'll ask them. I'm like, "What do you know about this? What do you think about that?" And then of course it's like, "Mom, I talked to my friend and this is what she was saying." So that works too.

When asked why she used this approach, she said that it was convenient and that she could rely on what she perceived to be trusted sources.

Another 31-year-old daughter lived 2 hours away from her mother and thus was not able to accompany her to medical appointments. Before a physician's visit she would help her mother develop a list of questions to ask the doctor. In doing this, the daughter was able to assist her mother in navigating the health care system.

> Usually I'm talking to her on the phone before she goes in [to see the doctor] and after she comes out. And I'm like, "All right, when you go, have your list of questions. Make sure you ask him this or that. Ask him about a referral for this" or various things, depending on what it is.

Motivation to Seek Health Care—Daughters also influenced their mothers' choice of health care practitioner and the quality of care they received via their personal relationships with medical practitioners and/or involvement with care. One 32-year-old daughter, a nurse and mother of a toddler, talked about her role in her 65-year-old insulin-dependent mother's choice of physician:

> She's really up on going to the doctor and I think I had a lot to do with that, because I made her see him, and I made sure that he knew that I wanted him to watch her closely.

Although reluctant initially, the mother followed the daughter's recommendation. In the follow-up interview she stated,

> I didn't want to leave my other doctor. But she kept saying to me, "You know, he's more aggressive. This is better for you. You should go to THIS doctor." And after I saw him, and how he acted, I thought, "You know, you're right." So I did take her advice.

This mother was able to lose 30 pounds and reduce her dependency on insulin while under her new physician's care.

Influence was not limited to choice of health care practitioner. Daughters also motivated their mothers to seek medical care and in some situations facilitated their ability to do so by making appointments on their behalf and accompanying them to the doctor's office. A 50-year-old immigrant mother who works in the food service industry said the following about her 33-year-old daughter:

> When I was having the problems that I was having, I would tell [my daughter] and she would always push me to go to the doctor. And she goes, "I'll go with you if you don't want to go by yourself." Because I would always use the excuse, "I'm tired when I get off of work. I don't want to go." She goes, "Mom. I'll pick you up from work and take you." … So lots of times she had more access to the phone than me … and she would make the appointments because [the] hospital sometimes keeps you on hold forever. It's very hard to get an appointment.

A single 31-year-old daughter talked about role reversal in health-related communication with her mother and described "getting on her case" as a motivational strategy for encouraging her to go to the doctor.

> Depending on the subject, sometimes it kind of makes me wonder who's really acting the role of the mother. You know? Health. That's definitely a big one because I'm like, "All right, have you been to the doctor? Why not? You need to go. How come you're not going?"

Our results show that daughters influenced their mothers' choice of health care practitioner as well as when to seek care and how often to visit a health care provider. In some cases, their influence was aided by their ability to fluently speak English.

Language Broker—Two mothers in our sample were monolingual Spanish-speaking immigrants from Mexico. Both women immigrated to the United States as adults and were dependent on their adult daughters to help them negotiate the world outside their Spanish-speaking community. During an individual follow-up interview, a 73-year-old mother affectionately referred to her daughter as her "nurse, interpreter, everything." This woman's daughter assumed the role of interpreter when she was a child and was responsible for helping her mother shop for groceries, attending parent–teacher conferences, accompanying her mother to gynecological appointments, and attending at the birth of siblings.

Although both immigrant mothers had medical insurance, limited English language ability often presented challenges in navigating the health care system. Bilingual, bicultural daughters (who were also mothers themselves) facilitated their mother's access to care by making medical appointments on their behalf and interpreting for them during physicians' visits. As interpreters, daughters assumed the role of language broker and attempted to bridge a gap in doctor–patient communication. In the context of a physician's examination, daughters mediated communication by relaying mothers' questions and concerns to the physician and explaining the meaning of a physician's use of medical terminology in ways their mothers could understand. In some situations, they were privy to information (e.g., gynecological health) that might not be discussed with other family members or within the context of the mother–daughter relationship. One 35-year-old daughter, who was a health care practitioner

herself, talked about being placed in an awkward position where the mother's physician held her accountable for her mother's health behavior.

> When I take her to the doctor, I interpret for her… . I don't like going with her because her doctor is looking at her chart and yelling at me, telling me that your mom's cholesterol is up and you should be making sure—you know, kinda putting the responsibility on me… . I'm like, "Mom, I'm not gonna go in with you if you keep doing all this stuff you shouldn't be doing because [the doctor's] gonna yell at me."

Although trained interpreters are required by the National Standards for Culturally and Linguistically Appropriate Services in Health Care in federally funded medical encounters (U.S. Department of Health and Human Services, Office of Minority Health, 2001) and recommended in all others where patients are of limited English proficiency, it is frequently the case that family or others equally unqualified to handle medical translation are called on to mediate and/or interpret. Consistent with what we know about relational culture, it is probable that adult daughters (or other family members) will want to be present whether needed as a language broker or not.

Our results show that daughters' ability to influence mothers' health behavior depended on several factors including daughters' age, marital status, and motherhood status. Daughters who were older, were married, and had children of their own were more likely to be involved in their mothers' overall health-related behavior. Furthermore, mothers who had strong emotional ties with their daughters were more likely to follow their daughters' health-related advice. Below, we explore ways in which daughters facilitate mothers' health-related decision making.

Health-Related Decision Making—During follow-up interviews, daughters were asked how they would convince their mothers to obtain a medical test. Mothers were asked how they would react if their daughters asked them to obtain a test and whether they would take it. The reference to a medical test was broad and open ended so that participants could talk about tests in general or one related to a specific condition most relevant to them (e.g., for diabetes). This enabled us to get a sense of how daughters approached mothers to address their health concerns. Responses were compared for concordance and suggest that adult daughters may be in a position to influence their mothers' health-related decision making, particularly with regard to taking tests aimed at prevention and early detection monitoring. Seven of the nine mothers said they implicitly trusted their daughters and would follow through with their daughter's suggestion to take a test without hesitation. One daughter stated that a strategy was not necessary as her mother would follow her recommendation to obtain screening.

> I don't think I'd really even need to use a strategy. I'd just say, "You know what? Because you're telling me this and this and this, there's this test that does this. You should just do it!" And she'd say, "Okay."

The mother's response was consistent with her daughter's. She simply stated, "She'd just tell me about it and then I'd listen and I'd say, 'Okay.'"

A 35-year-old immigrant daughter, an accountant and mother of two, said she would take a directive stance with her mother:

> If I knew that something was going on with her and I found out that there's this test that maybe she's afraid to take, doesn't really want to take, but I feel like she needs to take it, then I would just talk to her. I'd basically say, "Look, you know, you can ignore it if you want to but you know that it's there. This test is gonna help clear things up."

When asked how she would react if her daughter suggested that she take a test, the mother said, "I'd probably do it. If she was concerned enough about it, [and] felt that I needed it, I would do it."

Another 33-year-old daughter, a professor and mother of a 9-month-old infant, acknowledged that different strategies may be necessary, depending on topic and context.

> Depends on what it is. But my mom's pretty open… . I just saw something recently. It was about diabetes or something. I saw it on TV, and I mentioned it to my mom. She goes, "Oh, really?" And she's open to it. But then I think I'd have to either bring her something to read or explain to her what it is… . And then almost have to tell her where to go… . And then even maybe have to take her.

The mother in this dyad also expressed that she would take a test if her daughter suggested it. When asked why, she simply stated that she trusts her daughter's judgment. As we explore below, daughters' ability to influence their mother's health was in part attributed to the type of relationship.

Types of Mother–Adult Daughter Relationships

After detailed analysis of the videotaped observations and follow-up interviews, we categorized the relationships we observed in three ways: cohesive, emotionally distant, and tense. Strong emotional ties were observed in six of the nine mother–daughter pairs. In general, mothers in cohesive relationships were more likely to be influenced by their daughters and more likely to follow their health-related advice. During video observations, mothers and daughters in these relationships appeared to be very comfortable with each other, sat close to one another, maintained eye contact, intently listened to thoughts and ideas expressed by the other person, and often finished each other's sentences. In addition to engaging in joint family activities, these women often spent leisure time together. Communication in cohesive mother–adult daughter relationships was typically open and direct and enhanced the perceived quality of the relationship. When asked, most mothers and daughters said that they could not recall a time when they disagreed on something. Others admitted having trivial disagreements that did not affect perceived relationship quality nor preclude discussion of sensitive topic areas. With regard to health-related communication, mothers in cohesive relationships felt comfortable discussing personal health problems with their daughters and were more likely to follow their daughters' advice.

Two mother–daughter pairs clearly got along but did not appear to know each other well despite the fact that they lived relatively close to one another and saw each other frequently. In follow-up interviews we learned that both dyads were characterized by a history of daughters being geographically separated from their immigrant mothers for prolonged periods of time during childhood. In video observations, communication between emotionally distant pairs was less intimate and there was less eye contact and less sharing of ideas and joint problem solving compared to cohesive mother–daughter dyads. Furthermore, mothers in these relationships were less likely to follow their daughter's health-related advice.

Tension was expressed both directly and indirectly during a video observation with a 35-year-old U.S.-born daughter and her 76-year-old immigrant mother. This mother–daughter pair could not agree on several discussion topics including how they spent time together and personal health practices. The daughter raised her voice occasionally, rolled her eyes, talked over her mother, and abruptly changed topics several times. Such behavior was not observed in other dyads. In addition to the core set of questions aimed at assessing communication in mother–adult relationships, we asked both women in this particular dyad to elaborate on specific sources of tension in their relationship and how they are resolved during follow-up interviews. The amount of clutter in the mother's household was clearly an issue. The daughter

viewed it as an ongoing health risk for potential falls and expressed frustration with her mother's failure to acknowledge the problem or follow her suggestions on ways to make her home environment safer. The mother also agreed that clutter was a source of tension. Unlike her daughter, however, she did not feel that it posed a health threat and thus was not inclined to follow her daughter's suggestions. For her, the primary source of tension stemmed from feelings of resentment engendered by her daughter's persistence in broaching a topic she perceived as being a nonissue. Despite tension around this topic, it was clear that both women cared very deeply for one another. When asked how they could resolve their differences, both agreed that it would be easier to agree to disagree and avoid discussion of household clutter altogether. Although results cannot be generalized based on one or two dyads, our findings suggest that relationship quality has an impact on daughters' ability to influence their mothers' health-related behavior. As we discuss in the next section, more research is needed to broaden our understanding of the role of relationship quality on health-related communication and decision making in mother–adult daughter relationships. In emotionally distant or tense relationships, daughters may be less involved in their mothers' overall health and thus may not influence their health-related decision making.

DISCUSSION

This study explored the use of inductive anthropologic research methods of observation and semistructured interviews to examine health-related communication and lines of influence in Mexican and Filipina immigrant and U.S.-born mother–adult daughter dyads as these relate to the construct of subjective norms. In general, mothers considered their daughters to be credible and trustworthy sources of information and frequently consulted them on a variety of health-related topics to facilitate their decision making. Credibility was not based on mothers' perception of daughters' expertise on a given topic per se but rather the daughters' ability to access relevant information and the level of comfort, familiarity, and mutuality in the relationship. The latter is consistent with and presents a specific case of the major finding from the 3Cs study, that the context of relational culture has many direct and important implications for cancer screening and other health-related behaviors (Pasick, Burke, et al., 2009).

Daughters influenced their mothers' health in both subtle and obvious ways including facilitating their ability to navigate the health care system, motivating them to seek care, and contributing to decision making. For mothers of limited English proficiency, bilingual, bicultural daughters functioned as language brokers. Relationship quality and daughters' geographic proximity to mothers' place of residence were also factors in health-related communication and lines of influence in mother–adult daughter relationships.

Our findings represent only a first step in refining the subjective norms construct for women of diverse backgrounds. However, we believe they provide support both for the inclusion of adult daughters in assessments of subjective norms as related to cancer screening and for the methods that more closely portray behavior as it occurs in daily life compared to the typical origins of behavioral constructs in expert opinion. Current measures of the subjective norms construct have included best friend, sister, mother, partner, and doctor as potential influencers of a woman's decision to obtain cancer screening; however, they have not included adult children. Results of this study show that adult daughters can influence their mothers' health-related decision making. The complexity of mother–adult daughter relationships and interactions raises questions about the rather simplistic dimensions of the common subjective norms constructs: (a) What does your (referent person) think of mammography? and (b) How often do you do what your (referent person) thinks you should do? Our results suggest that it would be appropriate to develop and test quantitative survey measures that include adult daughters as referents in a woman's mammography practices. In addition, these questions should also consider life stage, geographic proximity, relationship quality, and motherhood

status of daughters. It is likely to be beneficial to explore these potential modifiers among existing referents as well.

Although the research methods used in this study illuminated lines of influence and provided insight to how communication takes place, the potential to generalize from our findings is limited by the small size and purposive nature of our sample. Women in this study were educated and had access to health insurance and thus did not represent U.S. Filipina and Mexican women with financial access barriers. Also, because participants were observed in a constructed research environment, further exploration should observe communication in real-life settings.

Most important, we believe that this study demonstrates the richness and complexity of behaviors and relationships that have been treated, by comparison, with extreme simplicity in traditional behavioral theory. With even the small glimpses of mother–daughter dynamics provided in the above quotations, it is now difficult to imagine the value of the question, “How often do you do what your daughter wants you to do?” The inductive exploration of social context using a variety of methods holds great promise for understanding the behaviors and life circumstances relevant in confronting health disparities.

IMPLICATIONS FOR PRACTICE

Given that breast cancer is the leading cause of death among Mexican and Filipina immigrant and U.S.-born women in California, innovative approaches aimed at education and motivation regarding prevention and early detection are paramount. Research to identify and test new strategies should employ methods that allow for exploration of varied facets of family dynamics related to health and cancer screening. In the absence of such research, practitioners may wish to consider adaptation of tested methods to seek out family involvement. Our findings suggest that when communicating to older women who have adult daughters, the daughter may prove important or even pivotal in assisting the mother to adopt an important health behavior. However, as our findings show, not all mother–adult daughter relationships are the same. Differentiating those that can be helpful from others that may be problematic takes both familiarity and sensitivity. Given that qualification, development of interventions that leverage adult daughters’ influence could be a beneficial strategy in promoting mammography use. Such interventions may need to include communication directed to daughters on the importance of early detection for their mothers.

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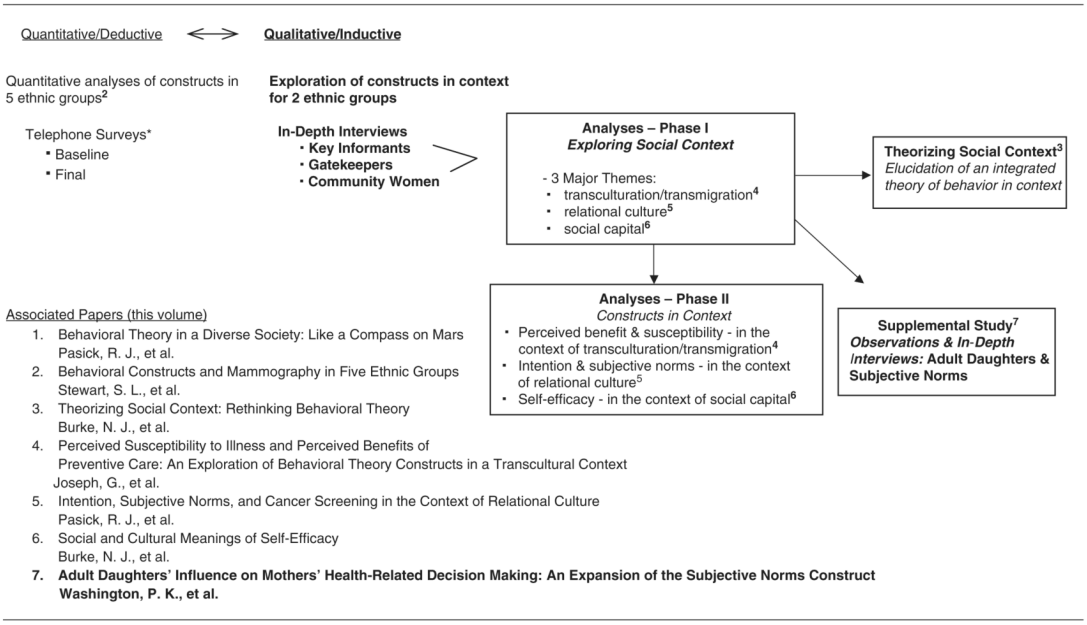

Figure 1.

Behavioral Constructs and Culture in Cancer Screening (3Cs) study design and associated reports[1].

*Access and Early Detection for the Underserved, Pathfinders (1998 to 2003), a mammography and Pap screening intervention trial under way when 3Cs began.