Transformative Learning Theory: Facilitating Mammography Screening in Rural Women

Mary Anne Purtzer, PhD, RN, and Lindsey Overstreet, MSW, PCSW

Purpose/Objectives: To use transformative learning to investigate what experiences serve as catalysts for mammography screening, the cognitive and affective responses that result from the catalyst, and how screening behavior is impacted.

Research Approach: A descriptive qualitative study.

Setting: Southeastern Wyoming.

Participants: 25 low-income, rural women aged 40 years and older.

Methodologic Approach: Four focus group interviews.

Findings: Cancer experiences triggered universal responses of fear by screeners and nonscreeners. The manner in which that fear response was interpreted was a critical factor in the facilitation of, or impedance to, screening. Dichotomous interpretations of fear responses provided the context for screening behavior. Immobilizing and isolating experiences were associated with nonscreening behavior, whereas motivation and self-efficacy were associated with screening behavior.

Conclusions: Transformative learning theory is a useful framework from which to explain differences in mammography screening behavior. Creating opportunities that facilitate dialogue and critical reflection hold the potential to change immobilizing and isolating frames of reference in nonscreening women.

Interpretation: To help women transcend their fear and become self-efficacious, nurses can assess how cancer and the screening experience is viewed and, if indicated, move beyond standard education and offer opportunities for dialogue and critical reflection.

Key Words: rural issues; prevention and detection; nursing research; qualitative research; breast cancer

ONF, 41(2), 176–184. doi:10.1188/14.ONF.176-184

About one-third of women in rural areas of western states report not receiving mammography screening in the past two years compared to 25% of women nationwide (Centers for Disease Control and Prevention [CDC], 2010). Rural women who are at low income and educational levels remain at high risk for underusing mammography (CDC, 2010), which places them at higher risk for detection of late-stage breast cancer in spite of improvements in access to care. In addition, the voices of medically underserved, rural women are not prominent in the literature.

Since a call for an increased emphasis in research was made by Rimer (1994), theory-driven approaches to explain and predict women's mammography screening behavior have been the standard. Consequently, a vast body of research using theoretical frameworks has contributed to the understanding of screening decisions and behavior. Pasick and Burke (2008) conducted a critical review of the research regarding the most frequently used health behavior theories. The purpose of their review was to understand theoretical contributions to effective interventions within the context of breast cancer health disparities. Pasick and Burke (2008) reviewed the Health Belief Model, theory of planned behavior, social support theory, social-cognitive theory, the Precede-Proceed model, and the transtheoretical model. The transtheoretical model explains the process of behavioral change (Prochaska, DiClemente, & Norcross, 1992) and has been adapted to mammography screening (Rakowski et al., 1997) with relatively good success (Champion et al., 2003; Rakowski et al., 1998). In spite of the promise of these theoretical models, underuse of mammography and associated breast cancer disparities persist, particularly in rural areas. Evidence suggests that use of behavioral health theories to underpin interventions may not be fully effective for underserved populations because of limitations inherent in the individual cognition focus of these theories (Pasick & Burke, 2008). Expanding theoretical approaches to include the sociocultural context may offer a more comprehensive means to understanding behavior and addressing health disparities (Burke, Joseph, Pasick, & Barker, 2009; Pasick & Burke, 2008; Sorensen et al., 2003). Social context involves individual psychosocial factors as well as interpersonal factors

(Sorensen et al., 2003). The authors suggest that the examination of change within a social and cognitive context, as well as the possible effects on forward change movement, holds potential for shifting the way people think about behavioral change. A theory typically not found in the mammography screening literature is transformational learning, a theoretical change process that embraces individual cognition and psychosocial factors, as well as social context through interpersonal interaction and cultural norms.

Transformative Learning Theory

Transformative learning theory is a process by which change is initiated through the critical examination of one's thoughts and feelings for the purpose of revising assumptions and becoming open to new perspectives (Mezirow, 2000). Central constructs include a disorienting dilemma, frames of reference, habits of mind (HOM), critical reflection, and dialogue. A disorienting dilemma is an acute or insidious event or crisis that triggers the transformative process. Frames of reference include conscious or unconscious HOM or assumptions through which one views the world, and result from the manner in which one interprets personal experience (Mezirow, 2000). Six interrelated HOM encompass individual factors, as well as social context that provides a reference from which to interpret one's experiences. Individual factors include psychological traits and emotions (psychological HOM), values and beliefs (philosophic and aesthetic HOM), and learning styles and preferences (epistemic HOM). Social context includes cultural norms and language use (sociolinguistic HOM) and moral-ethical norms (moral-ethical HOM) (Mezirow, 2000). Within the context of these HOM, transformative learning and change are propelled forward when critical reflection is facilitated by dialogue (Mezirow, 2003).

Transformative learning theory typically occurs in formal and informal adult educational settings; however, it also has been used in health and healthcare settings to understand the experience of chronic disease. A metasynthesis project resulted in a model of transformation involving three phases: "initial response, embracing the challenge, and integration of new ways of being" (Dubouloz et al., 2010, p. 287). In addition, Purtzer (2012) investigated the mammography screening decision-making process of rural, low-income women and found two phases, a dormant period of nonscreening behavior (phase 1) and a transformative learning process that resulted in screening (phase 2) (Purtzer, 2012). Studies such as this set a precedent for additional application of transformative learning theory to health behavior, including a means to enhance understanding of the complexities entailed in underuse of mammography screening.

Table 1. Mammography Screening Stages of Change

Stage	Definition
Precontemplation	Never screened with no intent to screen
Relapse	Has screened; is off schedule with no intent to rescreen
Relapse risk	On schedule with no intent to rescreen
Contemplation	Never screened with intent to screen or has screened, but is off schedule and intends to screen
Action	Has had one mammogram and intends to screen on schedule
Maintenance	Has had two mammograms on schedule and intends to rescreen on schedule

Note. Based on information from Rakowski et al., 1996.

The purpose of the current study was to investigate the responses to experiences that perpetuate nonscreening or facilitate screening within the context of transformative learning theory. The study objectives were to determine what experiences serve as disorienting dilemmas for mammography screening, the cognitive and affective responses that result from the disorienting dilemmas, and how screening behavior is impacted.

Methods

The current study conducted focus groups using a descriptive, qualitative methodology. Focus groups are particularly useful for inquiries regarding sensitive subjects, complex issues, and those involving "beliefs and attitudes that underlie behavior" (Carey, 1994, pp. 225–226). A single-category focus group design was implemented (Krueger & Casey, 2000). It was anticipated that each focus group would consist of 5–10 women who did or did not screen. Nonscreening was defined as mammography screening behavior that aligned with stages of change such as precontemplation, relapse, risk of relapse, and contemplation. Screening was defined as mammography screening behavior that aligned with stages of change such as action or maintenance. The number of focus groups was dependent on saturation or redundancy.

Because of the complexities involved in behavior and change, the study design used transformative learning theory to guide data collection and analysis. The decision to adapt this theoretical guide was based on findings from the literature that recommended additional study about transformative learning constructs as a means to explain mammography screening behavior (Purtzer, 2012). Using theory from the literature to guide data

collection and analysis is an option for qualitative study designs (Richards & Morse, 2013). Institutional review board approval was obtained from the University of Wyoming.

Participants and Setting

Participants resided in southeastern Wyoming. Inclusion criteria included low-income women aged 40 years and older. Mammography screening history was based on the stages of change as described by Rakowski et al. (1996) (see Table 1). Mammography history was obtained through self-report. Face-to-face participant recruitment took place in partnership with two government and nonprofit agencies that serve people who are low-income. Each agency director advocated for participation in the study by allowing face-to-face access to their clients. Because of the sensitive nature of the subject, face-to-face access with the researchers was essential in developing rapport and gaining trust. In addition, attempts at recruiting women through use of signage requesting that women call the researcher were not successful. Several participants recruited a friend or sister to join the focus groups. The focus group interviews were conducted at these respective agencies, easing access and logistic barriers. Each focus-group interview was 90 minutes, and a cash incentive was provided to each participant at the beginning of their interview.

Introduction and Transition

1. Please share with us your pseudonym and tell us the first thing that comes to mind when you hear the word *mammogram*.

Key Topics

2. Most of you have had periods of time in which you did not get a mammogram every year or two. Think back to these times of nonscreening, and tell us about who or what influenced your decision not to get a mammogram.
3. Thinking back, what or who influenced you to start thinking about getting a mammogram?
4. Some women discuss mammograms with others and some don't. Please share your experience talking to someone about getting mammograms.
5. Tell us about the feelings and thoughts you experienced in anticipation of getting a mammogram.
6. Tell us about the feelings and thoughts you experienced as a result of getting a mammogram.
7. Did your beliefs about mammograms change when you started to get mammograms and, if so, how?
8. Did the mammogram experience effect you in terms of wanting to protect your health in other ways and, if so, how?
9. What information is important to share with women about early detection of breast cancer so that they can make an informed choice for themselves?
10. Who or what might be the best source for sharing this message?

Ending

11. Did this summary capture the most important things that were said? Please share your thoughts.
12. Is there anything that you want to say that you didn't get a chance to say?

Figure 1. Interview Guide

Data Collection and Analysis

Each participant completed an enrollment form that solicited contact information, demographic data, mammography screening stages of change, and experience with breast cancer. Pseudonyms were used throughout the interview, transcription, and data analysis processes. The moderator for the focus groups works as a nurse researcher and the assistant moderator is an advanced practice social worker, and both have skills in therapeutic communication and interviewing techniques. The moderator led the focus-group interviews and the assistant moderator took field notes and summarized major themes. The interview guide format was drawn from Krueger and Casey (2000) and included introductory and transition, key, as well as ending questions (see Figure 1). Open-ended questions were used to encourage rich description, and "think back" questions were used at the beginning of the interview to help participants reflect on their personal experiences (Krueger & Casey, 2000). Questions were based on constructs from the literature regarding transformative learning and health, which includes disorienting dilemmas, cognitive and affective responses, social support, and dialogue (Dubouloz et al., 2010; Mezirow, 2000; Purtzer, 2012). Probing questions were used to draw out additional reflection and description. Interviews were digitally recorded and transcribed verbatim. Information regarding free mammography resources was available to participants following the conclusion of each focus-group interview, a referral strategy recommended by Morrison-Beedy, Côté-Arsenault, and Feinstein (2001).

Data collection and analysis were conducted concurrently. Field notes, summaries, and group transcripts were used to conduct analysis. Each transcript was read to gain a holistic perspective and serve as a memory aid. Analysis was conducted using a constant-comparison method. As the categorizing and sorting took place, the need for additional conceptual delineation was identified. A Microsoft Excel® document was used to record raw data, categories, and analysis. Diagrams were developed by the authors to illustrate relationships between categories and related themes, which resulted in the development of Figure 2.

Trustworthiness was obtained through the application of Lincoln and Guba's (1985) strategies, which included convening four groups; using a detailed interview guide; encouraging participants' perspectives; sharing summaries of major themes with participants,

noting verbal and non-verbal feedback; and conducting moderator and assistant moderator debriefing sessions. Dependability strategies included use of the same interview guide and environment with each group and obtaining digital recordings with verbatim transcription. Transferability strategies included providing direct quotes and the sample and setting information in this report. In addition, confirmability strategies included creating a trail of evidence, including field notes taken on the process and during the focus-group sessions, procedures, and researchers' thoughts.

Results

Four focus groups were conducted; three groups consisted of five participants and one group consisted of 10 participants for a group total of 25. Participant demographic characteristics and mammography screening stages of change are provided in Table 2. Each focus group was comprised of participants who were currently nonscreening, as well as those who screened every one to two years. Saturation or redundancy was achieved with the four focus group interviews.

Results revealed that the manner in which participants interpreted cancer experiences along with their fear responses to cancer influenced two dichotomous paths to screening behavior. Nonscreening behavior was associated with immobilization and isolation, and screening behavior was associated with motivation and self-efficacy.

Universal Negative Perceptions of Cancer Experiences and Fear Responses

Negative cancer-related experiences served as disorienting dilemmas for nonscreeners and screeners, including experiences with breast and other cancers and the associated ramifications of treatment-related adverse effects. These negative cancer-related experiences increased participants' awareness of breast cancer, motivated some participants to seek a mammography, and triggered a universal fear response.

> My son's stepmother . . . was diagnosed with bilateral breast cancer. So, she had both breasts removed . . . and that's really made me come aware. It has even grounded me more as far as getting my yearly exams. . . . [Breast cancer] brought up a lot of fear for myself because the first thing I thought about is, "My God, it spread to the lymph nodes and it's pretty serious." . . . It brought up a lot of fear for me because I don't know if I could handle that.

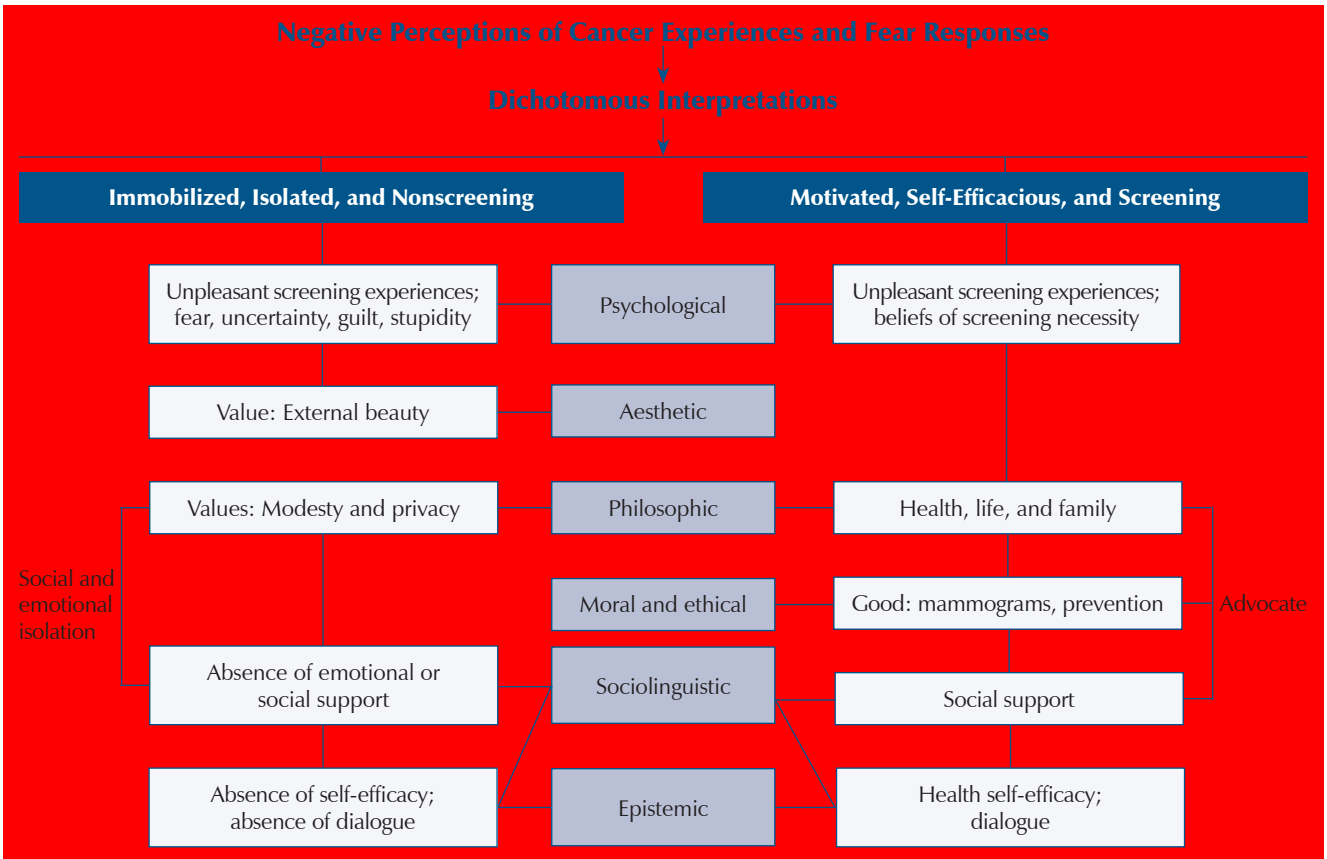

Figure 2. Universal Interpretations of Fear Responses

The fear response may require repeated exposures to disorienting experiences before a mammogram is sought. The following example illustrates an escalation of fear as disorienting dilemmas became more personal over time.

> The lady sitting beside me was nine years older than I am and . . . they had to take off both her breasts. . . . [I felt] something terrible. . . . And then six years ago, my sister . . . had to have a mastectomy. . . . I'm just really apprehensive. [I'm] scared to death [of cancer]. Just the fact that [my sister] had it, and it was just found routinely. . . . My sister took the chemo and that was just God awful. . . . I had a mammogram done a couple years ago because when I went to the doctors, they found a lump in my breast. . . . I had [been thinking about a mammogram] for a while and that just kicked it in and made me do it quicker.

In contrast, nonscreening participants were not able to overcome their fears as demonstrated through an immobilizing effect of avoidance in spite of the knowledge that mammography was important.

> I just don't want them to find [anything]. . . . I've heard [a mammogram] was uncomfortable. . . . I know it's free to go get it done. I just don't want to. I'm just stuck that way. [I] just don't want to do it. And I know it's important. I just don't want to. . . . I had my sister die with cirrhosis of the liver. . . . I'm not trying to worry about my breasts. . . . There's nothing wrong with them that I know of. . . . I'm just scared. . . . My dad had leukemia and passed away at 46 years old.

Dichotomous Interpretations of Fear Responses

Participants interpreted their fear responses through dichotomous frames of reference. The manner in which this fear response was interpreted by participants was a critical factor in the transformative trajectory. An immobilizing frame of reference contributed to nonscreening behavior, and a motivating frame of reference contributed to screening. These frames of reference were expressed through the six HOM; however, characteristics within HOM differed between nonscreening and screening participants. HOM were interrelated, which resulted in social and emotional isolation as well as diminished health self-efficacy for nonscreening participants and self-advocacy and health self-efficacy for screening participants.

Immobilized, isolated, and nonscreening: The psychological HOM were evidenced by fear of cancer and its adverse effects. In addition, nonscreening participants expressed other negative feelings associated with the mammography procedure. One nonscreening participant stated, "I conned myself out of [a mammogram] because I was afraid." Fear and uncertainty also were expressed by a screening participant, "I kind of had trepidations to what they might find . . . you always worry every time."

Guilt was expressed by a participant who learned that she probably had her metastatic breast cancer for two years prior to diagnosis. She said, "I made an appointment to get one and then I decided, 'No, [I] don't want it—not going to do it.' So, two years later, I decided to get one. So, [I feel] guilt because I didn't do it." A nonscreening participant stated, "I have the means to [have a mammogram]. It makes me feel bad. I don't feel like I should complain about it because I could make the appointment and go, whereas some people might not be able to do that."

Feelings of stupidity related to embarrassment or a perceived need to save face were described by another participant.

> I have the financial means, but don't want to go back. I felt a little stupid for getting [a mammogram] done because I thought, "I'm fine." The next time . . . I felt even dumber, "I'm fine." So, it's harder for me to go back knowing that I'm fine. I know I'm supposed to do it, but I don't feel there's anything wrong. You'd almost rather have them say, "There's a little something there, it's probably not cancer."

Table 2. Demographic Characteristics and Mammography-Screening Stage of Change (N = 25)

Characteristic	$\bar{X}$	Range
Age (years)	53	43–77
Characteristic		**n**
Race or ethnicity		
Caucasian		18
Hispanic		3
African American		2
American Indian		2
Education		
Less than high school		6
High school graduate		10
Some college		8
Bachelor's degree		1
Income ($)		
Less than 19,000		24
Greater than 19,000		1
Stage of change		
Precontemplation		2
Relapse		5
Relapse risk		4
Contemplation		1
Action		3
Maintenance		10

Fear and mistrust also were expressed related to healthcare-provider competency and mammography accuracy, including provider error and false positives.

> My first time was a bad experience because they made me come back . . . they thought, "Your [cancer is really] bad." . . . That scared the heck out of me. . . . [But] they're thinking that [the film] was just double exposed.

Related to these negative emotional responses to mammography are the aesthetic HOM. The possibility of experiencing a mastectomy was on the minds of participants who voiced concern regarding the loss of external beauty.

> After [my sister] went through [a mastectomy] . . . she said the worse part of it was the scar. . . . She said, "You just cannot imagine the scar, and it's never going to go away, ever."

For nonscreening participants, values of modesty and privacy inhibited dialogue and contributed to a sense of social and emotional isolation. For some, cancer holds a stigma that something is wrong with them. One participant said, "Growing up being modest we were always . . . covered up. Yeah, [you] have to be covered up. You didn't talk about things. . . . [A mammogram is] so private and it's so exhausting."

> To me . . . it's deep and personal to the woman, and they don't feel like it's going to help to talk about it or they don't need to know that there's something wrong with me. . . . It's just something I think most women keep private because they don't want to be talking about, "Okay, I'm going to go have a mammogram tomorrow." . . . That's the reason why they want to talk about it—if something happened. But, at the same time, they might be thinking in their heart [that] it's just too personal. . . . They can't get the words out. . . . They even have a hard time talking to their doctor, let alone talking to someone else.

Fear of verbalizing was associated with the anticipation of a negative result as expressed by one participant who said, "Verbalizing, for me, is bringing on something that I don't want to deal with." Findings also demonstrated that when dialogue did occur, it often was negative.

> [When] we talk about our experiences with mammograms like, "Well, it hurt," or "Well, they had to do this," and then we're all going, "Oh God, a mammogram. You wouldn't believe what they did to me." If I were to go today and just get [it] done, I wouldn't even tell anybody I did it.

In addition, participants who did not screen reported an absence of feeling valued and supported, which extended beyond the mammography experience, saying, "I had no one," and "[I] wake up every day wanting to talk to somebody and there is nobody."

> Our families are somewhat aloof, distant . . . and I think that . . . really makes a difference . . . on what we need to do. . . . Maybe, if they were a little more supportive and maybe, if they, you know, went in and said, "Well, . . . Aunt, Grandma, you got to do this." We're not hearing "We love you and we want you to be around."

The values of modesty and privacy along with the lack of productive dialogue and an absence of support contributed to epistemic HOM that were void of critical thought and reflection. Therefore, nonscreening participants did not have the tools to create opportunities for dialogue, which have the potential to facilitate the questioning of their negative assumptions regarding mammography.

Motivated, self-efficacious, and screening: Although both nonscreening and screening participants articulated negative perceptions about the mammography experience, screening participants were self-efficacious, as demonstrated through seeking mammography in spite of their fears. Screening participants expressed values consistent with health, life, survival, and family and connected the purpose of mammography to these values, which motivated them to screen. In addition, screening participants expressed the value of early detection through a moral perspective, saying things such as, "I've done a good thing for me."

> [A mammogram] is the necessary thing that you have to have done. . . . I would rather have [breast cancer] found now when it was so little instead of the size of a potato, which you could feel. . . . I don't understand women that are afraid to go in and have a mammogram because if you don't have that mammogram and you find a lump that you can feel in your breast, you're going to have to go through so much more.

Three participants were breast cancer survivors and advocated for mammography as an early detection tool necessary for life and survival, with one saying, "I feel that by having my yearly mammogram, I saved my life." Other screening participants also advocated for mammography, with one participant saying "[A mammogram] is for your safety and your health. Plus, if you have family and kids, you know they love you, you don't want to leave them behind."

> If you talk to somebody who's experienced [breast cancer] . . . you want to [have a mammogram] because you don't want to go through that. You're like, "Oh no, my health." So, it's all about your health.

Knowledge Translation

Cancer experiences trigger universal fear responses by both screeners and nonscreeners. Nonscreening behavior was associated with immobilization and isolation, and screening behavior was associated with motivation and self-efficacy.

Dialogue and critical reflection can positively impact screening behavior; whereas the absence of these can negatively impact screening behavior.

Facilitating dialogue and critical reflection within the context of women's goals and values may help them transcend their fears related to cancer and the screening experience.

Participants who screened also voiced positive perceptions regarding the mammography experience in terms of allaying fears of possible breast cancer, one woman said, "It apparently saved me from some of my fears [because] I had a discharge and lumps, and [it was] scary."

In contrast to the absence of social support and dialogue characteristic of nonscreening participants, screening participants expressed the interrelatedness of support for and the ability to discuss mammography. The social support shared by participants who screen lends itself to the questioning of assumptions regarding personal vulnerability to breast cancer, characteristic of the epistemic HOM. Screening participants created opportunities to advocate for mammography through discussion with friends, family, and healthcare providers. Several participants were not only positive, but assertive in their dialogue regarding mammography. Participants also discussed mammograms with their female friends and began questioning whether they also might be at risk for breast cancer.

> My friends . . . sit and talk. We know there's eight of us—we keep thinking. Then, my sister got [breast cancer], so that was our one in eight. A couple [women] go, "Oh, yeah," and they start talking about [mammograms].

Another participant viewed dialogue with her healthcare provider as a comfortable extension of conversations with her mother during her youth.

> I come from a family of seven with four girls. . . . And when you started to turn a certain age, we had mom's rules. . . . [A self-breast examination was] just something that she [taught]. . . . It wasn't understandable at first, but then . . . I started to see what she was saying. . . . At times, when I take showers, [I would] feel [something] kind of lumpy . . . but it wasn't [anything]. . . . I appreciated it because of the fact that it made me feel like my mom was paying attention to me. . . . Going to the doctor . . . [they] tell you how to do all these things, [it] is basically like following up with what my mom did. . . . So, that made me feel like, "Oh, hey I can, you know, talk to somebody instead of just holding back and trying to figure it out myself."

Discussion

Transformative learning theory was used as the framework to examine experiences that served as disorienting dilemmas for mammography screening, responses that resulted from disorienting dilemmas, and the manner in which screening behavior was impacted. The authors found that disorienting dilemmas associated with cancer were universal among nonscreening and screening participants and fear was a universal response to these disorienting dilemmas. Interpretation of this fear response was different for screening and nonscreening participants, resulting in dichotomous frames of reference (i.e., nonscreening participants viewed mammography through a negative, immobilizing, and isolating frame of reference, and screening participants viewed mammography through a positive, motivating, and self-efficacious frame of reference). The current study suggests two new findings pertinent to understanding mammography underuse. First, dichotomous frames of reference within the context of HOM offer informative and holistic means through which to view screening and nonscreening behavior. Second, the presence or absence of dialogue and critical reflection can positively or negatively impact the clarification of goals and values, as well as the discovery of a means to transcend fear.

Fear has the potential to trigger the search for new meaning and behavioral change (Cameron, Leventhal, & Love, 1998) and can either motivate or inhibit mammography screening (Ackerson & Preston, 2009; Champion, Skinner, Miller, Goulet, & Wagler, 1997; Consedine, Magai, Krivoshekova, Ryzewicz, & Neugut, 2004). Champion et al.'s (2004) breast cancer fear scale measures the extent to which fear predicts the screening decision. Additional tools relevant to study findings include a mammography processes-of-change (POC) scale and a self-efficacy scale. Consistent with study findings, the POC scale, framed within the stages of change (Prochaska et al., 1992), includes items regarding information sharing and communication (Pruitt el al., 2009; Rakowski et al., 1996). The mammography self-efficacy scale includes the relevant items of obtaining a mammogram in spite of fear, confidence in being able to talk about concerns, and knowledge regarding what to expect (Champion, Skinner, & Menon, 2005). Changes in self-efficacy are related to forward stage movement within stages of change (Menon et al., 2007).

Findings from the current study suggest two essential mechanisms, dialogue and critical reflection, that support forward stage movement. Consistent with this, a meta-synthesis supports dialogue as a means to share the value of mammography and facilitate screening (Corcoran, Crowley, Bell, Murray, & Grindle, 2012). The authors also know that change in perceptions of fear were inversely associated with forward stage movement (Menon et al., 2007). That suggests that the target of an intervention should not be to diminish fear, but rather to help women transcend their fears through meaning-making.

Meaning is found through the evaluation of values and goals (Skaggs & Barron, 2006) and entails looking inward and questioning one's assumptions (Mezirow, 2000). Discovering meaning can be accomplished through "dialogue that involves an assessment of one's beliefs, feelings, and values" (Mezirow, 2003, p. 59). The current findings indicate that participants who screened sought information and dialogue regarding mammography that fit their health values and goals. Participants who screened also reported a sense of self-efficacy in obtaining a mammogram consistent with health self-efficacy theory (i.e., people's perceptions of their ability to achieve their goal is more important than whether or not negative emotion is motivating or discouraging) (Bandura & Cervone, 1983). Future research entails testing strategies to facilitate health self-efficacy through dialogue with nonscreening women, which may encourage articulation of and reflection on their goals and values.

Study findings also offer the screening experience from the rural woman's perspective. Rural women may experience a sense of disenfranchisement (Findholt, 2010) and may be isolated from opportunities for dialogue (Purtzer, 2010). In addition, rural nonscreening women's frame of reference is in sharp contrast to that of healthcare providers who are socialized into a culture that embraces practices of health promotion (Spector, 2009). Healthcare providers should be informed regarding differences in these frames of reference to minimize misunderstandings and distrust, as well as missed opportunities for dialogue and referral. Nurses are in a key position to facilitate dialogue by integrating this strategy into their patient-centered practice.

Limitations

Study limitations are inherent in the qualitative research design in that the small sample size may not be representative of the larger population. A potential limitation may be the inclusion of three breast cancer survivors. Although not discovered in the analysis, the breast cancer survivors may have had an influence on the participants' thoughts and contributions to the focus group interviews. In addition, outside the scope of the study, no comparisons of frames of reference are available for urban women, which may be an area of future research.

Implications for Nursing

Study findings suggest that helping women transcend their fears within the context of the mammography screening experience is a critical element in the stages of change process. Study findings also suggest that the provision of patient-centered mammography care necessitates dialogue and opportunities for critical self-reflection. Pertinent areas of dialogue between the nurse and patient include how the mammography experience is viewed and how fear informs mammography screening behavior. Dialogue can be facilitated by skills that nurses possess, such as therapeutic communication techniques. Examples of therapeutic communication techniques include active listening, asking relevant and open-ended questions, sharing hope, giving information (Potter & Perry, 2009), and verbal persuasion, which may enhance self-efficacy (Ziner et al., 2012), an attribute possessed by women who screen.

A strategy that facilitates critical self-reflection is motivational interviewing (Miller & Rollnick, 2002). Training nurses to use motivational interviewing holds the potential for helping women articulate their fears, values, and preferences, as well as helping them align their mammography screening behavior with their values and preferences. Articulation of values and preferences is a critical component of evidenced-based practice (Melnyk, Fineout-Overholt, Stillwell, & Williamson, 2009) and moves beyond the use of mammography screening guidelines intended for the average woman to a patient-centered approach to care (Pellissier & Venta, 1996).

Conclusion

This study adds important insights into women's perceptions of the mammography screening experience. Through discovering differences in nonscreening and screening women's HOM, healthcare providers will learn about contrasting frames of references and contributing factors that perpetuate a nonscreening status quo. Examination of frames of reference is critical in providing client-centered care, moving beyond standard education to create opportunities for dialogue and critical reflection.

Mary Anne Purtzer, PhD, RN, is an assistant professor in the Fay W. Whitney School of Nursing and Lindsey Overstreet, MSW, PCSW, is an assistant lecturer in the Social Work Department, both at the University of Wyoming in Laramie. This study was funded, in part, by grants from the National Institutes of Health National Center for Research Resources (5P20RR016474-12) and National Institute of General Medical Sciences (8 P20 GM103432-12). Purtzer can be reached at mpurtzer@uwyo.edu, with copy to the editor at ONFEditor@ons.org. (Submitted April 2013. Accepted for publication May 27, 2013.)

References

Ackerson, K., & Preston, S.D. (2009). A decision theory perspective on why women do or do not decide to have cancer screening: Systematic review. *Journal of Advanced Nursing, 65,* 1130–1140. doi:10.1111/j.1365-2648.2009.04981.x

Bandura, A., & Cervone, D. (1983). Self-evaluation and self-efficacy mechanism governing the motivational effects of goal systems. *Journal of Personality and Social Policy, 45,* 1017–1028.

Burke, N.J., Joseph, G., Pasick, R.J., & Barker, J.C. (2009). Theorizing social context: Rethinking behavioral theory. *Health Education and Behavior, 36*(5, Suppl), 55S–70S. doi:10.1177/1090198109335338

Cameron, L.D., Leventhal, H., & Love, R.R. (1998). Trait anxiety, symptom perceptions, and illness-related responses among women with breast cancer in remission during a tamoxifen clinical trial. *Health Psychology, 17,* 459–469.

Carey, M.A. (1994). The group effect in focus groups: Planning, implementing, and interpreting focus group research. In J.M. Morse (Ed.), *Critical issues in qualitative research methods* (pp. 225–241). Thousand Oaks, CA: Sage.

Centers for Disease Control and Prevention. (2010). Women aged 40+ who have had a mammogram within the past two years. Behavioral Risk Factor Surveillance System Survey Data (BRFSS). Retrieved from http://apps.nccd.cdc.gov/brfss/list.asp?cat=WH&yr=2010&qkey=4421&state=All

Champion, V., Maraj, M., Hui, S., Perkins, A.J., Tierney, W., Menon, U., & Skinner, C.S. (2003). Comparison of tailored interventions to increase mammography screening in nonadherent older women. *Preventive Medicine, 36,* 150–158.

Champion, V., Skinner, C.S., & Menon, U. (2005). Development of a self-efficacy scale for mammography. *Research in Nursing and Health, 28,* 329–336.

Champion, V.L., Skinner, C.S., Menon, U., Rawl, S., Giesler, R.B., Monahan, P., & Daggy, J. (2004). A breast cancer fear scale: Psychometric development. *Journal of Health Psychology, 9,* 753–762. doi:10.1177/1359105304045383

Champion, V.L., Skinner, C.S., Miller, A.M., Goulet, R.J., & Wagler, K. (1997). Factors influencing effect of mammography screening in a university workplace. *Cancer Detection and Prevention, 21,* 231–241.

Consedine, N.S., Magai, C., Krivoshekova, Y.S., Ryzewicz, L., & Neugut, A.I. (2004). Fear, anxiety, worry, and breast cancer screening behavior: A critical review. *Cancer Epidemiology, Biomarkers, and Prevention, 13,* 501–510.

Corcoran, J., Crowley, M., Bell, H., Murray, A., & Grindle, L. (2012). U.S. Latinas' knowledge and attitudes toward mammography: Meta-synthesis. *Journal of Human Behavior in the Social Environment, 22,* 671–689. doi:10.1080/10911359.2012.655959

Dubouloz, C.J., King, J., Paterson, B., Ashe, B., Chevrier, J., & Moldoveanu, M. (2010). A model of the process of transformation in primary care for people living with chronic illnesses. *Chronic Illness, 6,* 282–293. doi:10.1177/1742395310383340

Findholt, N. (2010). The culture of rural communities: An examination of rural nursing concepts at the community level. In C.A. Winters & H.J. Lee (Eds.), *Rural nursing concepts, theory and practice* (3rd ed., pp. 367–376). New York, NY: Springer.

Krueger, R.A., & Casey, M.A. (2000). *Focus groups: A practical guide for applied research* (3rd ed.). Thousand Oaks, CA: Sage.

Lincoln, Y.S., & Guba, E.G. (1985). *Naturalistic inquiry*. Newberry Park, CA: Sage.

Melnyk, B.M., Fineout-Overholt, E., Stillwell, S.B., & Williamson, K.M. (2009). Igniting a spirit of inquiry: An essential foundation for evidence-based practice. *American Journal of Nursing, 109*(11), 49–52. doi:10.1097/01.NAJ.0000363354.53883.58

Menon, U., Champion, V., Monahan, P.O., Daggy, J., Hui, S., & Skinner, C.S. (2007). Health Belief Model variables as predictors of progression in stage of mammography adoption. *American Journal of Health Promotion, 21,* 255–261. doi:10.4278/0890-1171-21.4.255

Mezirow, J. (2000). Learning to think like an adult: Core concepts of transformation theory. In J. Mezirow & Associates (Eds.), *Learning as transformation: Critical perspectives on a theory in progress* (pp. 3–33). San Francisco, CA: Jossey-Bass.

Mezirow, J. (2003). Transformative learning as discourse. *Journal of Transformative Education, 1*(1), 58–63. doi:10.1177/1541344603252172

Miller, W.R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change* (2nd ed.). New York, NY: Guilford Press.

Morrison-Beedy, D., Côté-Arsenault, D., & Feinstein, N.F. (2001). Maximizing results with focus groups: Moderator and analysis issues. *Applied Nursing Research, 14,* 48–53. doi:10.1053/apnr.2001.21081

Pasick, R.J., & Burke, N.J. (2008). A critical review of theory in breast cancer screening promotion across cultures. *Annual Review of Public Health, 29,* 351–368. doi:10.1146/annurev.publhealth.29.020907.143420

Pellissier, J.M., & Venta, E.R. (1996). Introducing patient values into the decision-making process for breast cancer screening. *Women and Health, 24*(4), 47–67.

Potter, P.A., & Perry, A.G. (2009). *Fundamentals of nursing* (7th ed.). St. Louis, MO: Mosby Elsevier.

Prochaska, J.O., DiClemente, C.C., & Norcross, J.C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47,* 1102–1114.

Pruitt, S.L., McQueen, A., Tiro, J.A., Rakowski, W., Diclemente, C.C., & Vernon, S.W. (2009). Construct validity of a mammography processes of change scale and invariance by stage of change. *Journal of Health Psychology, 15,* 64–74. doi:10.1177/1359105309342305

Purtzer, M.A. (2010). Processes inherent in mammography-screening decisions of rarely or never-screened women. *Western Journal of Nursing Research, 32,* 199–217. doi:10.1177/0193945909350740

Purtzer, M.A. (2012). A transformative decision-making process for mammography screening among rural, low-income women. *Public Health Nursing, 29,* 247–255. doi:10.1111/j.1525-1446.2011.00994.x

Rakowski, W., Andersen, M.R., Stoddard, A.M., Urban, N., Rimer, B.K., Lane, D.S., . . . Costanza, M.E. (1997). Confirmatory analysis of opinions regarding the pros and cons of mammography. *Health Psychology, 16,* 433–441.

Rakowski W., Ehrich, B., Dubé, C.E., Pearlman, D.N., Goldstein, M.G., Peterson, K.K., . . . Woolverton, H. (1996). Screening mammography and constructs from the transtheoretical model: Associations using two definitions of the stages-of-adoption. *Annals of Behavioral Medicine, 18,* 91–100. doi:10.1007/BF02909581

Rakowski, W., Ehrich, B., Goldstein, M.G., Rimer, B.K., Pearlman, D.N., Clark, M.A., . . . Woolverton, H. (1998). Increasing mammography among women aged 40–74 by use of a stage-matched, tailored intervention. *Preventive Medicine, 27,* 748–756.

Richards, L., & Morse, J.M. (2013). *README FIRST for a user's guide to qualitative methods* (3rd ed.). Los Angeles, CA: Sage.

Rimer, B.K. (1994). Mammography use in the U.S.: Trends and the impact of interventions. *Annals of Behavioral Medicine, 16,* 317–326.

Skaggs, B.G., & Barron, C.R. (2006). Searching for meaning in negative events: Concept analysis. *Journal of Advanced Nursing, 53,* 559–570. doi:10.1111/j.1365-2648.2006.03761.x

Sorensen, G., Emmons, K., Hunt, M.K., Barbeau, E., Goldman, R., Peterson, K., . . . Berkman, L. (2003). Model for incorporating social context in health behavior interventions: Applications for cancer prevention for working-class, multiethnic populations. *Preventive Medicine, 37,* 188–197. doi:10.1016/S0091-7435(03)00111-7

Spector, R.E. (2009). *Cultural diversity in health and illness* (7th ed.). Upper Saddle River, NJ: Pearson.

Ziner, K.W., Sledge, G.W., Bell, C.J., Johns, S., Miller, K.D., & Champion, V.L. (2012). Predicting fear of breast cancer recurrence and self-efficacy in survivors by age and diagnosis. *Oncology Nursing Forum, 39,* 287–295. doi:10.1188/12.ONF.287-295