








Hispanic Breast Cancer Survivors Share Their Perceptions About Endocrine Blocking Therapy Adherence

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1. Introduction

Breast cancer is the second most prevalent cancer among women in the U.S. after non-melanoma skin cancer, and the second leading cause of death in this population¹. The Hispanic/Latino ethnic group includes any person of Latin American or Spanish culture or origin, regardless of race²; this article uses the term Hispanic. Among Hispanic women in the U.S., breast cancer stands as the primary cause of cancer-related mortality, accounting for 14% of fatalities (n = 3100), and the most frequently diagnosed cancer, representing 29% (n = 28,100) of cases³. Although breast cancer prevalence is lower in Hispanic than in non-Hispanic White (NHW) women, documented ethnic-based disparities between the two groups affect breast cancer outcomes⁴. Hispanic women tend to be diagnosed with breast cancer at younger ages and at more advanced stages than NHW women^{3,5}. They also experience lower 5-year relative breast cancer survival (88%) than NHW women (92%)^{3,6} and are less likely to receive adequate and timely treatment³.

Structural socio-economic barriers, limited English proficiency, and cultural beliefs contribute to the challenges and misperceptions of breast cancer among Hispanic women^{7,8}. Hispanic women face difficulties accessing quality healthcare due to resource barriers (limited insurance, burden of cost, and lack of information)^{8,9}; also, they often report feeling overwhelmed by medical information and are less involved in decision-making⁸. Moreover, acculturation, the process of individuals adapting to a new society, can influence their healthcare decisions in that, higher acculturation reflects higher assimilation to the new culture and vice versa¹¹. Evidence suggests that lower acculturation is associated with a lack of communication or understanding of breast cancer diagnosis and treatment among Hispanic women¹².

Hormone receptor-positive (HR+) is the most common subtype among Hispanic women, accounting for 62.6 % of cases¹. Oral endocrine blocking therapy (EBT) is a standard adjuvant treatment for HR+ breast cancer, including tamoxifen or Aromatase inhibitors (AIs) that prevent tumor recurrence by blocking estrogen and progesterone hormones involved in cancer growth¹³. EBT is a long-term daily treatment (5 to 10 years); potential side effects include hot flashes, vaginal dryness, changes in the menstrual cycle, bone pain, and secondary cancers among others¹⁴. Tamoxifen reduced both breast cancer recurrence by 40% and mortality by 34% when compared to patients receiving placebo¹⁵; additionally, 10-year therapy with Tamoxifen showed lower risk of cancer recurrence as compared to 5-year therapy¹⁶. In postmenopausal women, AIs compared to tamoxifen led to 33% fewer recurrences and 15% fewer breast cancer deaths during the first decade¹⁷. Despite proven benefits, many breast cancer survivors do not take EBT as prescribed, leading to risk of

recurrence and reduced survival^{18, 19}. Factors contributing to non-adherence include side effects, medication safety concerns, limited access to medication, perception of cancer recurrence, and quality of patient-provider relationship.^{20, 21}

Compared to other ethnic/racial groups, Hispanic breast cancer survivors have higher non-adherence to EBT and higher discontinuation rates^{4, 22}. Only 36% of Hispanic women were adherent to the recommended 5-year long-term EBT treatment²³. They often unintentionally missed doses and had limited knowledge of EBT benefits^{7, 24}. Because non-adherence to EBT has been shown to negatively affect survival outcomes and increase mortality rates^{25, 26}, differential utilization of EBT may contribute to the disparities in Hispanic breast cancer outcomes. Therefore, it is crucial to have a better understanding of the multi-dimensional factors for EBT non-adherence in Hispanic breast cancer survivors. The study aims to explore the perceptions of Hispanic breast cancer survivors regarding EBT use and factors influencing adherence.

2. Methods

Study Design

This qualitative study explored Hispanic breast cancer survivors' perspectives on EBT adherence. This manuscript followed the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines²⁷.

Conceptual Framework

The *Conceptual Model for Medication Adherence* (CMMA) was used to guide the interview script and data analysis²⁸. This model describes medication adherence as a phenomenon influenced by the interaction of: *Patient-related factors* (knowledge, attitudes, beliefs, perceptions, and expectations of the patient); *condition-related factors* (severity of symptoms, level of disability, and progression of the disease); *medication-related factors* (side effects, complexity of the treatment, and duration of the treatment); *socioeconomic factors* (poverty, level of education, employment status, social support); and *health system/healthcare provider-related factors* (patient-provider relationship, healthcare characteristics, quality of healthcare services)²⁹.

Research Team

This study team comprised two Hispanic doctorate-prepared oncology nurses (CGC, ERR); a Hispanic professor of medical oncology and health equity researcher (AML); a population science researcher (KYW); a research coordinator (RS); a research assistant (RP); and a qualitative senior research scientist (RF). All the interviews were conducted by CGC, a doctorate-prepared oncology nurse practitioner and nursing associate professor who was awarded the aforementioned NIH Diversity Supplement grant. CGC's positionality as a first-generation college graduate, middle-income class Hispanic woman raised in Colombia, fluent in Spanish and English, living in the U.S. for about 30 years, informs her perspective in this study.

Participant Selection and Setting

Participants were female cis-gender women diagnosed with breast cancer who a) self-identified as Hispanic/Latina/Latino/Latinx, b) spoke English and/or Spanish, c) were 18 years old or older, d) had a breast cancer diagnosis, e) were receiving or had received EBT, and f) had access to a cell phone and/or the internet. Recruitment was conducted between April and August 2022 and included social media invitations, email blasts to Hispanic breast cancer survivors at Jefferson Health (Philadelphia region and South New Jersey), and email invitations shared with various Hispanic cancer support groups located in New Jersey, California, and Florida. The first author (CGC) screened potential participants for eligibility. Verbal consent was obtained. Each participant received a \$30 gift card at the end of the study to thank them for their participation.

Data Collection

A semi-structured interview guide, informed by CMMA²⁸ and a literature review, included open-ended questions on participants' EBT experiences (Table 1). The interview guide, written in English and Spanish, was piloted with the Latino Cancer Institute team members. Participants completed a short demographic questionnaire and the Marin Short Acculturation Scale for Hispanics³⁰. Interviews, lasting about one hour, were conducted in English or Spanish (participant's preference) by CGC, recorded, transcribed, and de-identified. CGC reviewed the transcripts against the audio recordings for accuracy.

Table 1. Semi-Structured Interview Questions

Type of Question	Questions and Probes
Open-ended	<ol style="list-style-type: none"> 1. Tell me about your experience with hormone therapy for the treatment of breast cancer. Probes: <ul style="list-style-type: none"> • What things or situation made it difficult? • What was helpful for you? • Who or what supported you during the treatment? • Which type of things did you do to take care of yourself? 2. Are you currently taking hormone therapy for breast cancer? If yes: Which factors made you decide to keep taking the medication? If no: Which factors made you decide to stop taking the medication? 3. If you were to explain to a woman diagnosed with breast cancer about the reasons of why hormone therapy is recommended to treat breast cancer, what would you say to her? 4. Thinking about your experience taking hormone therapy to treat breast cancer, is there anything that your healthcare team could have done differently to make your experience taking the hormone therapy a bit easier?

Data Analysis

Responses to open-ended questions were analyzed using content analysis.³¹ Spanish transcripts were reviewed by Spanish-speaking researchers (CGC, ERR). Codes were developed based on the conceptual model and line-by-line reading of a sample of transcripts²⁸. Each code was defined to ensure coding accuracy, and data saturation was determined by deployment of a constant-comparison approach. Saturation (no new data emerged from later interviews)³², was confirmed with a sample of 18 participants. Coding was facilitated using NVivo 20 software³³. The coding team (CGC, RS, ERR) met and resolved major discrepancies in coding. Final inter-coder reliability was calculated with NVivo (using k coefficient). A mean k value of 1 indicates complete agreement³⁴. Inter-coder reliability was found to be near perfect (k=0.95/1.00). The codes were organized into CMMA-informed thematic categories. Descriptive statistics were used for demographic questions and the acculturation scale.

3. Results

Sample Characteristics

The study participants included 18 Hispanic women mainly aged 41 to 70 and multi-race; incidentally they were split equally between Spanish and English speakers. Tables 2 and 3 display demographic characteristics and acculturation scores respectively.

Table 2. Demographic Characteristics of Participants

CATEGORIES	ENGLISH-SPEAKING (N=9)		SPANISH-SPEAKING (N=9)		Continues...					
	n	%	n	%						
Age						Income				
20-30	0	0	0	0	0-15,000	0	0	7	78	
31-40	1	11	0	0	15,001-30,000	0	0	2	22	
41-50	3	33	5	56	30,001-45,000	1	11	0	0	
51-60	4	44	2	22	45,001-60,000	3	33	0	0	
61-70	1	11	2	22	60,001-75,000	0	0	0	0	
71+	0	0	0	0	75,001+	5	56	0	0	
Race						Employment Status				
Black/Afro	0	0	5	56	Retired	1	11	0	0	
Hispanic										
White	2	22	0	0	Full time	2	22	1	11	
Mestiza	1	11	2	22						
Multi-race	6	67	2	22	Part time	1	11	3	33	
Education Level						Homemaker	1	11	1	11
Elementary	0	0	4	44	Disability	2	22	4	44	
Some high school	0	0	0	0	Unemployed	1	11	0	0	
High school completed	2	22	3	33	Other	1	11	0	0	
Some college	3	33	0	0	Table continues: EBT					
Technical	1	11	2	22	Tamoxifen	2	22	8	89	
College completed	1	11	0	0	Anastrozole	3	33	0	0	
Post-college	2	22	0	0	Letrozole	2	22	0	0	
Marital Status						Exemestane	0	0	1	11
Single	0	0	4	44	Taking EBT					
Divorced	0	0	3	33	Currently taking	9	100	6	67	
Widowed	0	0	1	11	Completed treatment	0	0	3	33	
Married	9	100	1	11	Stopped taking medication	0	0	0	0	

Note: While the study did not compare the two language-groups due to a small sample size, demographic and acculturation differences were observed. Generally, English speakers showed higher acculturation, education, and income levels compared to the Spanish-speaking group.

Table 3. Marin Short Acculturation Scale in Hispanic Women Diagnosed with Breast Cancer

Category	English Speaking Mean (SD) n=9	Spanish Speaking Mean (SD) n=9	t (16)	p
Preferred Language Used in Personal Life	3.22 (0.75)	1.62 (0.57)	5.052	<.001
Preferred Language Used for Media	3.92 (0.59)	1.66 (0.92)	6.146	<.001
Preferred Language for Ethnic Social Relations	3.51 (0.58)	1.77 (0.86)	5.010	<.001

This study found that the English-speaking group of Hispanic breast cancer survivors have statistically significantly higher acculturation levels for each subcategory than the Spanish-speaking group including personal language (3.22 ± 0.75), $t(16) = 5.052$, $p < 0.001$; media language (3.92 ± 0.59), $t(16) = 6.146$, $p < 0.001$; and social language (3.51 ± 0.58), $t(16) = 5.010$, $p < 0.001$). Higher scores reflect a higher level of acculturation while lower scores reflect lower level of acculturation. Scores in the middle indicate bi-culturalism.

Thematic Categories

Data analysis revealed 9 themes grouped into five categories CMMA-based: Patient factors, socioeconomic factors, medication-related factors, healthcare factors, and cancer-related factors. Below, the themes and subthemes are supported by participant quotes in Table 4.

3.1 Patient Factors

Themes: Cancer survival, self-care, and support system.

Theme: Cancer Survival. The main driving force for all participants to adhere to EBT was to increase their chances of cancer survival and consequently to improve their likelihood of spending more time with their loved ones (Table 5). One participant (P8) said, “Just to know that if I take the pill, it is going to stop the cancer and I am going to continue living.” Several participants wanted to survive to be with their family, especially their children. A participant (P2) said, “My daughter is the biggest factor; she's so young that I have certain milestones set. The first one is making it to that kindergarten graduation.”

Theme: Self-Care. Participants embraced self-care behaviors by making time for themselves post-diagnosis, adopting exercise routines, creating healthier diets, and managing their emotional care by spending time with their families, receiving counseling, or helping others (Table 5). But for most, faith in God was the main approach. One participant (P7) expressed, “First of all, I had God’s support. I felt that He was with me. His support, when we are in the middle of the night and one cries, and one feels asphyxiated, suffering, He is there to support you.”

Participants learned to self-advocate with doctors, some initially feeling intimidated but gaining confidence through peer support. One participant (P14) said, “Talk to your doctors and slowly ease yourself in and ask a ton of questions and don't be afraid to advocate for yourself; and if you're not happy with the answer you have, ask again. If you still don't like the answer, go somewhere else and don't stop.”

Self-accountability was stressed by another participant, who emphasized the patient’s responsibility to take the medication (P7), “You can’t just go and blame the doctor if something happens if you didn’t take the medication. One is responsible for our own decisions, and your decision can take you to survival or to dying. It’s that easy.”

Theme: Support System. Participants valued support from their families, support groups, and various sources (Table 5). Family support varied, with some prioritizing open communication to express their needs while others hesitated to share emotions for fear of invoking sadness in their families. Besides family, support groups were greatly beneficial, but could be distressing when learning of peers experiencing cancer recurrence or death. When participants lacked family support, the group offered them the comfort they needed. Also, support groups were valued as a source of education to learn how to manage certain side effects caused by the EBT, especially for those participants who did not receive information from their doctors about symptom management. Additional support came from church and breast cancer organizations.

One participant (P16) talked about receiving text messages being helpful to not feeling alone, “One of the ladies that I met through my church group sent me affirmative messages, things like, you can do this. God loves you. Stay strong, little snippets... getting that message. I knew that somebody was thinking of me, that I wasn't alone, that I was loved.”

3.2 Socioeconomic Factors

Themes: Hispanic culture; health insurance and financial issues.

Theme: Hispanic Culture. Participants discussed how their Hispanic culture influenced their cancer experience and how they managed their diagnoses and related treatment. They shared their beliefs about natural remedies, family values, female values, and faith in God.

Natural remedies. Some participants reported using home remedies either because they believed these could cure their disease or because they were given the remedy by a friend or family member (Table 5). For example, one participant (P10) reported getting advice from her neighbor, “It’s very easy for women in the Hispanic community to take advice from people who are not in the medical field. Your neighbor seems to know more than your doctor does.” (P2)

Family values. Participants talked about how their Hispanic culture, involving deep family values, affected their management of cancer treatment. For example, women’s strong dedication to their family made them neglect themselves (Table 5). One participant (P11) said, “I think our culture as Hispanics is work, work, provide, and it’s not, oh my God, let me stop. Let me take care of myself.” Another family value among Hispanics is the influence of men in decision-making. One participant (P9) explained “Well, my husband told me to take it [EBT]. I did it because he told me so. Usually, I do whatever he tells me to do.”

Women values. Participants talked about the influence of Hispanic culture on their values as women including how they feel about their femininity, womanhood, and resilience (Table 5). One participant (P13) expressed it emotionally, “It doesn’t help me much when I think that Latina women are feminine, very sensual, very sexual; we make ourselves beautiful. Right now, I am not at the best time of my life. It is a disadvantage for me.”

Theme: Health insurance and financial issues. While most participants had health insurance and access to medication, they struggled to pay for the costly medication copays. Uninsured participants faced delays in receiving oncology care and limited ability to afford medications. (Table 4).

Table 4. Themes, Subthemes, and Supportive Quotes

Patient-Related Themes	Subthemes	Participant Quote
Cancer survival		"I told the doctor that I wanted to do all I could to prolong my life." (P13)
Self-care	Physical care Emotional care Faith in God Self-advocacy Self-accountability	<p>"I became a little bit selfish. I am a person who always does things for other people and keeps pleasing the entire world. But now with my disease, I am taking care of myself first". (13)</p> <p>"My greatest form of meditation is exercise, and it has to be a somewhat intense exercise so that I don't think of anything else as I'm doing it. That to me is the best form of self-care". (P2)</p> <p>"Now I know how to advocate a little bit more. And I can tell my doctors this is what's happening... I couldn't advocate for myself before, and they [support groups] have taught me. I've just been listening to their stories or them giving me advice of whatever it was like I'm saying." (P3)</p> <p>"A cancer diagnosis is a tragedy, but I prayed and had faith in God." (P6)</p>
Support System	Family Support groups	<p>"I have the support of my family, my children, my grandchildren. They live in another state, but they came to stay with me. They helped me a lot". (P4)</p> <p>"I found them [support groups] very rewarding because I can ask or say anything and then know that there will be no judgment whatsoever because someone more than likely has been there or can relate, and all I'm going to get back is understanding of what I'm going through on whatever given day." (P1)</p> <p>"My church family came together and supported... They cooked meals for my children for three months, which was amazing because that meant that I didn't have to do it. I'm a single mom, obviously, so that was helpful...I also had the Breast Cancer Association that does different things for women that are going through the struggle." (P16)</p>
Socioeconomic Factors		
Hispanic Culture	Natural remedies Family values Women values	<p>"The truth is that I have been taking soursop leaf tea because they say that it helps to reduce the tumors; my sister sent it from Mexico because it is difficult to find it here." (P10)</p> <p>"If you are feeling anything in your body, as a woman, go to the doctor; don't put that behind just because you have to go with your parents or your kids... I did that, I put myself in the back. I have to cancel my appointment because I have to take care of all that stuff." (P3)</p> <p>"There are things that are very painful and will continue to be painful...stop breastfeeding my baby...and my beauty, my body. I am a dancer, and I was very beautiful...now I look at myself in the mirror and I don't recognize myself." (P13)</p> <p>"A woman who is used to fight, and I say this, as Latinas, we move on and always look for alternatives; at least that has always been my case, but when they told me I had cancer, it was devastating." (P8)</p>
Health insurance and financial issues		<p>"My husband had lost his job and because I was self-employed, I didn't have insurance; we had state aid. It took a long time to get to see an oncologist...I was just on my own. (P3)</p> <p>"I'm thankful that I work at a company that allows me to have good health care. It is expensive. It's the most expensive bill in my regimen. So when insurance changes and I have to meet deductibles, it does add up...It is a bit more challenging sometimes." (P16)</p>
Medication-related Factors		
Side effects Impact	Intimacy Mood Swings	"Obviously the dryness, the vaginal dryness and the lack of energy, the lack of sexual energy obviously is no longer there. It completely goes away. And it's very difficult if you are in a relationship, to go through that as a human and as a woman. It's really difficult because you go from not having a perfect relationship by having some sort of like a rapport with your partner and then to completely disengage." (P18)

Table Continues:		“If you don't take your pills at the same time every day, you get mood swings. Your hot flashes are out of control. You suffer in silence because you're like, I need to take this medicine”. (P11)
Healthcare System/ Healthcare Providers Factors		
Communication with doctors	Education or lack of confidence in doctor	<p>“It is pretty horrific...they [doctors] don't tell you that. Nobody told me your vagina is broken until you figure that out and you're just like, what in the world is going on? It's awful.” (P14)</p> <p>“Nobody ever told me anything about side effects back then...I just suffered. I just suffered with all, especially the female part or the internals and the problems of the constant urinary infections, of the constant tearing down there that pains and stuff that I felt. It was just me. I didn't know doctors never offered and I never asked at that time.” (P3)</p> <p>“God first, but I had confidence in my doctor. If she studied and learned about the medication, I should trust her and take the medication.” (P6)</p>
Medical staffing		“I think that in the cancer center where I receive care, there is a shortage of healthcare workers. There is a shortage of administrative staff. I feel that the process to give me a final diagnosis could have been faster, so my doctor could have made a quicker decision about my treatment.” (P13)
Cancer-Related Factors		
Cancer recurrence		“Because, it helps you get into a calmer place... Where you know these medications are trying to stop something from happening to you so you get a little peace of mind along with the brutal treatment of it.” (P18)

3.3 Medication-Related Factors

Theme: Side Effects Impact. All participants discussed the physical and emotional consequences of side effects from EBT medication (Table 5). Fatigue, hot flashes, and joint pain were described as minimal-to-moderate side effects, but vaginal dryness and mood changes were reported intensely by most participants.

Intimacy. During the interviews, many women reported vaginal dryness as the most dramatic side effect, which made intercourse very painful and affected their intimacy with their husband/partner. The language and emotion these women used reflected the depth and breadth of their suffering. This situation was worsened by their medical teams' failure to inform participants about this side effect and its management. One participant (P1) spoke about how this situation affected her relationship with her husband, “It's still difficult to manage, not just for me. I understand the why, but trying to explain it to my husband—there's nothing to do with you. It's me. Yes, it's just not something that he understands. I mean, he may claim he does, he doesn't, I assure you, he doesn't. I think if he ever actually got to feel what it feels like, he would never once ask for sex ever again, but unfortunately, I can't do more than describe it to him. It feels like they're stabbing you.”

Mood swings. Some women felt emotionally unpredictable and conflicted about having to take the medication despite its side effects. One participant (P3) talked about the impact of her mood swings on her child, “I realized that I did have mood swings. I had anger issues, but I didn't associate it with that medication...after the five years ... and then one day he goes, ‘Mommy, you're not mad anymore.’ That's like my poor baby, right? Because it was like I didn't mean to. Nobody tells you that, right? Sometimes you are just in this mode. And for a child to notice.”

3.4 Healthcare System/Healthcare Providers Factors

Themes: Communication with doctors, medical staffing.

Theme: Communication with doctors. Participants had mixed feelings about their experience with their oncologists. Some were distressed because of the lack of education by their doctors, while others felt satisfied because they trusted and felt supported by their medical team. Many expressed frustrations with their oncologists over not explaining the EBT side effects, believing proper education about their treatment and symptom management could have alleviated their

suffering.

Some participants felt that patient-doctor communication was vital for treatment adherence, yet some doctors failed in this aspect. One participant (P11) said it clearly, “We are not educated enough... Whether it's in side effects, what to do for the hormones as far as immediate menopause symptoms, diet change, appetite, depression, mood swings—you have so much from the hormone therapy that the doctor doesn't say.”

Another participant felt her doctor did not listen to their symptom-related complaints, reporting (P12) “Even when the cancer was coming back to my bones, he [doctor] didn't say anything. The doctor in the hospital didn't help me much, because if he did, he would have ordered an MRI and not wait until I fractured my bones.”

However, other participants felt that their doctors and cancer care team were helpful, particularly that confidence in their doctor was crucial for taking the treatment as prescribed (Table 5). One participant (P16) said, “I didn't know it at the time, but I was not alone. The nurses, for one, and the oncologist were amazing.”

Theme: Medical staffing. Some participants reflected on how the health institution staffing and personnel shortages affected their cancer experience. One participant (P3) said, “We are in a rural area and a lot of these doctors come [and go]. They do their time here, so their debt is lowered or whatever, so we get a lot of turnover doctors ... So, when I had that [cancer], I know that I was just being another number... you know you're not going to get something that is medically necessary.”

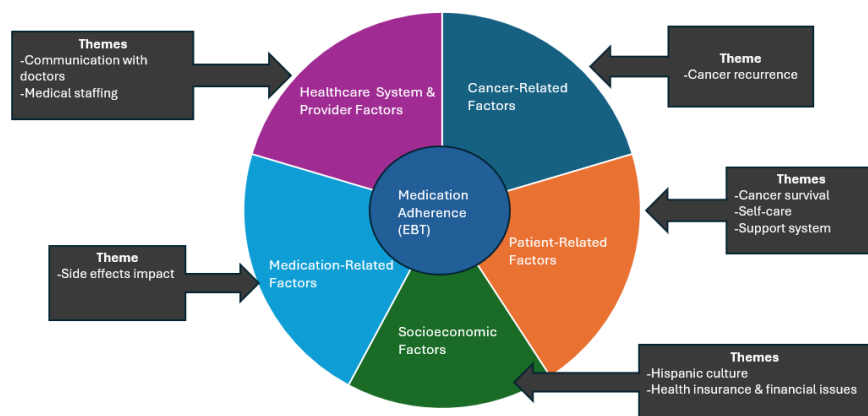
3.5 Cancer Related-Factors

Theme: Cancer recurrence. Fear of cancer recurrence was a major factor for participants to take EBT. One participant (P5) said, “I don't want to go through this all over again. I take it [EBT] thinking that it [cancer] is not going to return.”

4. Discussion

This qualitative study examined the perceptions of 18 Hispanic breast cancer survivors about taking EBT with emphasis on factors that facilitated and/or obstructed their adherence to treatment. The demographics and acculturation scale data showed that Spanish-speaking women had lower acculturation levels, which is not surprising given that the Marin acculturation scale is based mostly on language. Additionally, Spanish speaking participants were most likely to have lower levels of education and lower annual income than the English-speaking women. Importantly, while there were differences in the demographics and acculturation levels between the Spanish-speaking and English-speaking participants, no qualitative comparisons were made between the groups due to the study's purpose and the small sample size. This study identified multiple themes and sub-themes that influence the long-term use of EBT to treat breast cancer in Hispanic women. We will use the CMMA classification for this discussion²⁸ (Figure 1).

Figure 1. Themes using the Conceptual Model for Medication Adherence



Peh KQE, Kwan YH, Goh H, et al. An adaptable framework for factors contributing to medication adherence: results from a systematic review of 102 conceptual frameworks.

Patient-related themes: Cancer survival, self-care, and support system.

Improving cancer survival and being present for their loved ones were principal motivators for taking EBT for all participants, aligning with studies showing better adherence when patients believe in the treatment's benefits^{35, 36}. Breast cancer patients who trusted the importance of taking the EBT for their personal benefit were more likely to adhere to the treatment³⁷.

Self-care is the individual's ability to promote their own health and to cope with illness, with or without professional healthcare support³⁸. In this study, women demonstrated strong self-care abilities. Some adopted new routines of exercise and nutrition while others reinforced or discovered their capacity to advocate for themselves. These coping strategies and self-care behaviors are beneficial to improving medication-adherence particularly in patients with chronic illnesses³⁹. Considering faith is significant for most Hispanics, many participants relied on spirituality, viewing it as a source of strength and resilience.⁴⁰ Some participants spoke about being Catholic, the main faith among Hispanics in the United States.⁴¹

Family members were a major support system for many participants, while peer support groups were essential for others. Similar to our findings that either in-person or online peer support groups were a safe environment for sharing experiences and learning, those from a systematic review in which cancer peer-support groups were perceived useful by cancer survivors because of the opportunities for helping others, sharing information to manage the symptoms, and promoting humor⁴². Additionally, peer-support groups have been found to enhance patients' empowerment, leading to increased medication adherence and patient-provider communication⁴³. However, participants found it distressing when confronted with peers' death or suffering, and some online groups pose risks of information and financial exploitation⁴⁴.

Socio-economic Themes: Hispanic culture (natural remedies, family values, women's values), and health insurance and financial issues.

Hispanic culture was reflected in the use of natural remedies, family values, and women's values. Some participants attributed consuming natural remedies as part of their Hispanic heritage, though not all did. Those who did so paired them with prescribed medications without informing their healthcare providers. Similarly, results from the Study of Women's Health Across the Nation (SWAN) reported that 88.8% (n=107) of Hispanic women used herbal remedies for

their overall health and only 14% (15) of them reported their use to their doctors⁴⁵.

Some participants expressed family values, such as familismo and machismo. *Familismo* is a core Hispanic value that emphasizes the family unit in terms of support, respect, and obligation, and as such, it can be both a protective factor and a risk factor^{46, 47}. Most participants in this study felt supported and protected by their families, yet some expressed frustration when, on a daily basis, they neglected their own care by putting their family first, as expected in Hispanic families. *Machismo*, more common among less acculturated Hispanics, promotes male dominance and was noted by one participant who spoke about taking EBT because her husband told her to do it⁴⁸. Despite this, many participants in our study spoke about the relevance of adopting self-care and self-advocacy behaviors after being diagnosed with cancer.

Femininity and *hembrismo* are significant gender-role values in Hispanic culture. For Hispanic women, *femininity* emphasizes power through physical beauty, and motherhood, expressed through love, breastfeeding, and biological reproduction⁴⁹. One participant felt that the cancer-related body changes she experienced robbed her not only of her beauty but also of the experience of breastfeeding and having children. Among Hispanic women, this sentiment is augmented by conflicting changes between traditional and modern definitions of femininity⁴⁹. For example, the current ideal of Hispanic beauty, the ‘Maja,’ is a Hispanic woman with curvy but thin features⁵⁰. This idyllic image of the Hispanic woman challenges the realities of Hispanic women physically affected by breast cancer and its treatments. Another participant spoke about the resilience and strength traditionally present in Hispanic women. Described in the literature as *hembrismo*, this participant’s stand explains how Hispanic women historically have lived through socio-political injustices, oppression, and marginalization and have overcome the challenges through empowerment and leadership⁴⁹.

Health insurance and financial factors included difficulty navigating the health system to access medications at lower prices and experiencing lack of health insurance. Evidence shows Hispanic women with breast cancer often receive inappropriate care due to limited access to healthcare and socio-economic barriers^{51, 52}.

Medication-related Themes: Side effects impact

Consistent with the literature, all our study participants experienced EBT-induced side effects, ranging from mild to severe, such as joint pain, vaginal dryness, fatigue, hot flashes, and/or mood changes²⁰. These symptoms, when severe, can affect mental wellbeing⁵³. Aligning with other studies, some participants adhered to their medication, but some reported conflicting feelings about balancing improved survival with a lower quality of life²⁰.

Vaginal dryness and mood swings emerged distinctly among the side effects. Several participants shared how severely vaginal dryness affected their sexuality and intimacy with their partners. This is consistent with research reporting high rates of sexual dysfunction in Hispanic and non-Hispanic breast cancer survivors (26%)⁵⁴, which often goes underdiagnosed because they do not report their symptoms or undermanaged because symptoms are poorly managed by their medical providers^{54, 55}. Overall, reporting of sexual dysfunction tends to be higher in younger women and in early cancer stages⁵⁴.

Similar to other findings in a qualitative review, mood swings impacted the participants’ relationship with their children, with some distressed by unintentional emotional interactions and being unaware of them. This highlights the daily challenges EBT side effects have on relationships⁵³.

Healthcare system/Healthcare Providers Themes: Communication with doctors and medical staffing.

Although several participants were satisfied with communication with doctors and the information they offered, many were not. They were surprised when experiencing intense side effects and receiving minimal guidance to manage them.

Other studies reported women's struggles to understand the severity of menopausal symptoms induced by EBT⁵³. Similarly, women in other studies felt well-informed about their treatment but received insufficient support when managing EBT on their own^{53, 56}. Like some of our participants, women in other studies felt that their concerns were minimized or ignored by their doctors⁵³. A good patient-physician relationship is crucial for improved medication adherence⁵⁷. In our study, all participants adhered to their treatments, but better communication would have minimized uncertainty and suffering.

The medical staffing theme in our study reflected how structural issues and personnel shortages in the healthcare system impacted participants' care, with doctor rotation creating fragmentation of care and feelings of depersonalization in patients. Another study reported that women who received breast cancer care mainly by one physician were most likely to adhere to EBT and experience continuity of care²⁰. While some participants in our study experienced this, others perceived their care as fragmented.

Cancer-related themes: cancer recurrence

Several participants reported fear of recurrence as a motivator to adhere to EBT despite its side effects. Similarly, a systematic review found that individuals who were fearful of cancer recurrence were more diligent following cancer care recommendations⁵⁸.

Limitations

There were limitations to this study. The sample size was not large enough to generalize the findings to all Hispanic women; however, recruiting from four different regions in the U.S. made the sample diverse. Selection bias may have occurred as many participants were recruited from one cancer center where care was provided by one well-recognized Hispanic provider in the region, potentially influencing their similar experiences and the study results.

5. Conclusion

Guided by the CMMA, this study identified multiple factors that influence EBT adherence in Hispanic breast cancer survivors. These findings reflect pervasive gaps in care in this patient population. Persistence in these gaps suggests that the interventions provided to improve education, symptom management, and support to Hispanic breast cancer survivors are not effective, or that their needs are not being addressed. This study reported the participants' strong desire for a reliable relationship with their doctors that for many was not met. Structural health system issues are difficult to tackle but lack of education and support by their medical providers are not. It is essential that medical providers build a strong and trustworthy patient-provider relationship by providing the appropriate information about EBT side effects and symptom management, including referring to a sexologist when appropriate, regularly assessing patient's needs, and having relevant conversations about medication adherence.

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Ethics Approval: This study was approved by Thomas Jefferson University Institutional Review Board (IRB) (45 CFR 46.101 Control #19F.265-1). The approval verifies that the IRB operates in accordance with applicable federal, local, and institutional regulations that govern IRB operations.

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