


RESEARCH ARTICLE



## Coping strategies and psychosocial resources among women living with metastatic breast cancer: A qualitative study

Blanca S. Noriega Esquivas, PhD<sup>a</sup> , Emily A. Walsh, MS<sup>a</sup>, Frank J. Penedo, PhD<sup>a,b</sup>, Jessica L. Thomas, MA<sup>c</sup>, Fiona S. Horner, MS<sup>d</sup>, Joanna B. Torzewski, PhD<sup>e</sup>, William J. Gradishar, MD<sup>f</sup>, David E. Victorson, PhD<sup>c</sup> and Patricia I. Moreno, PhD<sup>g</sup>

<sup>a</sup>Department of Psychology, University of Miami, Coral Gables, Florida, USA; <sup>b</sup>Department of Medicine, University of Miami Miller School of Medicine, Coral Gables, Florida, USA; <sup>c</sup>Department of Medical Social Sciences, Northwestern University Feinberg School of Medicine, Chicago, Illinois, USA; <sup>d</sup>Department of Psychology, Carnegie Mellon University, Pittsburgh, Pennsylvania, USA; <sup>e</sup>Department of Psychiatry and Behavioral Sciences, Northwestern University Feinberg School of Medicine, Evanston, Illinois, USA; <sup>f</sup>Department of Medicine, Division of Hematology and Oncology, Northwestern University Feinberg School of Medicine, Evanston, Illinois, USA; <sup>g</sup>Department of Public Health Sciences, University of Miami Miller School of Medicine, Coral Gables, Florida, USA

### ABSTRACT

**Objective:** Despite more women living with metastatic breast cancer (MBC), this population is underrepresented in cancer survivorship research. Few studies have assessed how women with MBC cope with their cancer experience. This qualitative study describes the coping strategies and psychosocial resources utilized by women living with MBC.

**Methods:** Twenty-two women with MBC participated in four focus groups. Transcripts were analyzed using a general inductive approach. Codes derived from participants' responses were subsequently condensed into themes.


**Results:** We identified 12 coping strategies and psychosocial resources and grouped them into five themes: *Behavioral Coping Strategies* (i.e. stress management, active coping and planning); *Cognitive Coping Strategies and Psychological Resources* (i.e. cognitive reappraisal, optimism, mindfulness, positive thinking, and religious coping); *Existential Approach-Oriented Coping* (i.e. acceptance, values-based living, and identity integration); *Avoidance* (i.e. avoidant coping); and *Interpersonal Resources and Seeking Social Support* (i.e. social support).

**Conclusions:** Women living with MBC utilize several engagement and disengagement coping strategies, as well as intrapersonal and interpersonal resources. This study provides useful perspectives of women living with MBC that may inform the development of psychosocial interventions. Further research is needed to assess coping strategies and psychosocial resources across different subgroups of MBC patients and determine their impact on cancer outcomes.

### KEYWORDS

Breast cancer; coping strategies; metastasis; psychological adaptation; survivorship

**CONTACT** Patricia I. Moreno  [patricia.moreno@miami.edu](mailto:patricia.moreno@miami.edu)  University of Miami Don Soffer Clinical Research Center, 1120 NW 14th Street, 10th Floor, Miami, FL 33136, USA.

 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/07347332.2023.2254754>.

© 2023 Taylor & Francis Group, LLC

## Introduction

The number of women living with metastatic breast cancer (MBC) has increased.<sup>1,2</sup> There are approximately 168,000 women living with MBC in the U.S., and estimates suggest a 55% increase in the MBC prevalence by 2030.<sup>3</sup> This rise of women living with MBC is likely due to improvements in early detection and treatment, demographic changes, and lifestyle behaviors changes.<sup>4</sup> Most MBC cases (75%) are diagnosed later in the disease course as a distant recurrence, while approximately 25% are diagnosed at initial diagnosis (de novo).<sup>2</sup> Importantly, women living with MBC may face unique psychosocial and physical challenges as they are suffering from an incurable disease. They may also experience existential concerns and uncertainty about how long cancer treatments can extend their life and live with the fear that cancer will spread further. Ongoing treatment-related symptoms can be debilitating and further compromise health-related quality of life (HRQOL).<sup>5-8</sup> In fact, relative to women with early-stage breast cancer, women with MBC report worse HRQOL, greater symptom burden for pain, lack of energy, nausea, shortness of breath, as well as greater depression and anxiety.<sup>9,10</sup> Given that women are surviving MBC longer than ever before, expanding our understanding of the factors that could enhance their HRQOL and symptom management are critical for the development of interventions to improve their survivorship experience.

Existing research suggests that coping strategies and psychosocial resources are important predictors of treatment-related symptom severity, health behaviors, and HRQOL in patients with cancer.<sup>11-13</sup> Coping strategies refers to a person's efforts to deal with stressors and reduce their psychological impact.<sup>14,15</sup> These strategies are commonly organized into several domains, including problem-focused (i.e. attempts to change or eliminate a stressor), emotion-focused (i.e. efforts to reduce or regulate the emotional response to a stressor), and meaning-focused (i.e. efforts to derive meaning from a stressor to sustain well-being).<sup>16</sup> Coping strategies can also be broadly categorized as active coping (i.e. efforts to manage a stressor directly), and avoidant coping (i.e. efforts to distance oneself from a stressor).<sup>15,16</sup> Psychosocial resources are intrapersonal and interpersonal factors upon which individuals can draw in the face of stressful events, including self-esteem, optimism, a sense of mastery, and social support.<sup>17</sup> The use of specific coping strategies and psychosocial resources among women with breast cancer differs and is influenced by several factors, such as cancer stage, cancer treatment, the individual's culture, and their perceptions about disease.<sup>18</sup> So far, few studies have used a qualitative methodology to deeply explore potential variations in coping strategies and utilization of psychosocial among women living with MBC.<sup>6,20-23</sup> The

limited coping research in this population has used a quantitative approach that may not fully capture the experiences of these women.<sup>19</sup> Furthermore, most of the work examining coping in MBC has been conducted prior to 2010, which may not reflect recent advances in MBC treatment and corresponding longer survival, and has focused on issues related to palliative care and the end of life. Thus, the purpose of this qualitative study is to characterize the coping strategies and psychosocial resources used by women living with MBC. This study was conducted as part of a larger project that sought to inform the development of an Acceptance and Commitment Therapy (ACT) intervention tailored for women living with MBC.

## **Methodological approach**

### ***Sampling and recruitment***

Women were recruited either by (a) consent to contact lists from the Northwestern University Enterprise Data Warehouse service or Northwestern University investigators; (b) MBC support groups hosted by the Robert H. Lurie Comprehensive Cancer Center of Northwestern University; and (c) community-based organizations (Gilda's Club). Inclusion criteria for this study were adult women (aged  $\geq 18$  years) diagnosed with stage IV (M1) breast cancer, who had received or were receiving any cancer treatment (e.g. hormone therapy, radiation, chemotherapy, and immunotherapy), and were able to speak and read English. Exclusion criteria included severe cognitive impairment or physician-anticipated life expectancy of less than 6 months.

A letter and a flyer introducing the study were mailed to women identified as potentially eligible via EHR review. An email with an attached flyer was sent to members of support groups and community-based organizations. Of 106 potentially eligible women, 71 women were approached by phone to complete the screening process. Fifteen declined screening, and 56 completed the phone screening (13 were ineligible). Of 43 eligible women, 25 women consented to participate in the study, and 22 participated in a focus group (3 no-shows):  $n=7$  first focus group,  $n=5$  second focus group,  $n=6$  third focus group, and  $n=4$  fourth focus group.

### ***Procedures***

This study was approved by the Northwestern University Institutional Review Board (STU00209333). Participants completed informed consent either online or in-person before participating in focus groups. Four in-person focus groups were facilitated by a licensed clinical psychologist with

extensive experience in oncology and were conducted at the Northwestern University medical campus in downtown Chicago, IL. In the first two focus groups, the facilitator followed a semi-structured interview guide with open-ended questions related to the challenges of living with MBC, coping strategies and psychosocial resources, and body image and sexuality concerns (see [Supplementary Table 1](#)). The data collected were used to develop the preliminary structure and content of an ACT intervention tailored for this population. In the second two focus groups, participants discussed coping strategies, psychosocial resources, and relaxation techniques, as well as provided feedback regarding the preliminary intervention structure and content (see [Supplementary Table 2](#)). Focus groups lasted approximately two hours and were audio recorded. Field notes were taken by a co-investigator, and a masters-level research coordinator. Participants received \$50 and a parking reimbursement at the end of each focus group.

### **Data analysis**

We analyzed the qualitative data of all four focus groups with a general inductive approach.<sup>24</sup> To familiarize with participants' responses, two authors read the first two transcripts multiple times. An initial codebook was subsequently developed with codes (meaningful units) that emerged from participants' responses (e.g. Active Coping, Seeking Social Support). The codebook was presented to the research team and refined based on their feedback. The two coders independently analyzed the first two focus groups transcripts and met on a regular basis to discuss ratings and revise the codebook. New codes were added to the codebook based on the participants' responses to the second interview guide. We used the same coding process for the last two focus groups transcripts. Transcript coding and data analysis were performed with Dedoose software (version 8.0.35). Data were exhaustively coded; however, responses regarding how participants cope with MBC (i.e. coping strategies, psychosocial resources utilized, and relaxation techniques) were most pertinent to the aims of this study. Codes were then condensed into themes. Previous research has demonstrated that 80% of themes are discoverable within three to six focus groups.<sup>25</sup> As such, we expected to reach data saturation with four focus groups. To assess intercoder agreement, the coders used about 40% of the four focus group transcripts, and the percentage of agreement was calculated by the number of times both coders assigned the same code to a text segment.<sup>26</sup> The initial percentage of agreement between coders was 80%, reaching 100% consensus through group discussion. The Consolidated Criteria for Reporting Qualitative Research (COREQ) and the Standards for Reporting Qualitative Research (SRQR) guided the reporting of the study methods and results.<sup>27,28</sup>

## Findings

### **Participant characteristics**

Twenty-two women with MBC participated in the four focus groups. Participants' mean age was 60.3 years (SD = 12.2, Min = 34, Max = 84), and mean time since MBC diagnosis was 6.6 years (SD = 6.0, Min = 0.4, Max = 20.5). Women were predominantly non-Hispanic/Latina White (86.5%). Almost half of women were diagnosed with MBC de novo (45.5%), and 54.5% of women were diagnosed with metastatic disease following breast cancer recurrence. Women were receiving chemotherapy (59.1%), hormone therapy (50.0%), radiation (9.1%), or immunotherapy (4.5%) at the time of their participation in this study.

### **Coping strategies and psychosocial resources**

A total of 12 codes emerged from participant comments regarding coping strategies and psychosocial resources and were collapsed into five themes. Illustrative quotes are provided in [Table 1](#).

#### **Theme 1: Behavioral coping strategies**

**Active coping and planning.** Women living with MBC emphasized the importance of setting goals and making plans for the future. They focused on things they can control, such as changing their lifestyle behaviors (e.g. diet, exercise), organizing recreational trips, or completing a degree. These strategies gave them a sense of accomplishment: *“having goals is a great idea, because it does give you something to look forward to... there's a future, meaning, purpose and something to live for and keep you going”* (#08/FG:2). Some women found it most helpful setting short-term goals, starting with small achievements (e.g. walking vs. running a 5k), and making a list of specific tasks. Others found it most useful establishing long-term goals, *“setting a higher bar”* (#06/FG:1), and resetting your goals.

Most women agreed on staying busy as a useful way to cope with their disease and its challenges: *“I just keep myself occupied so that my mind doesn't wander into this area of anxiety”* (#13/FG:3). Other activities that have helped them to cope with their cancer were participating in research studies and having a routine: *“I like routine now. I like it quiet. And it relaxes me to have an idea I guess of what's going to happen”* (#01/FG:1). Women also noted that going through a to-do list is not always fulfilling and tried to add some enjoyable activities into their lives (e.g. *“getting a massage on Friday”* (#11/FG:2)).

**Stress management.** Women described several relaxation techniques and self-care activities. For example, women reported practicing meditation to *“calm*



**Table 1.** Illustrative Quotes.

Themes	Codes	Illustrative Quotes
<b>Behavioral Coping Strategies</b>	Active Coping & Planning	"My doctor and I had a goal... My daughter was only 4 when I [was] first diagnosed... I said – we'd do little goals, like I want her to be 10, and... 'I just need to see her graduate high school! So then when she graduated high school, we're like – 'Ok now what?' I go – I don't want to be greedy! I wanna reach our goal! And he's like 'You're entitled to be greedy! What is our next goal?' He goes 'I need to know what our next goal is because I need to prepare like the long treatment plan.' I'm like 'I don't know! Ok college! Alright, alright I gave in. So now she's finished her first year of college, So, we've got a college goal now. Nothing wrong with that!' (#02, FG 1)
	Stress Management	"I like those things [diet and nutrition] because I can control them. I really like the diet and nutrition because I'm a huge believer in it and I think it is delicate because I think some people aren't, I think that's fine. But I just love thinking at least I'm probably being the healthiest I could possibly be to fight this. And that's what helps... it feels so good for me because I can control it." (#07, FG 1) "The mindfulness-based stress reduction program I did with my early diagnosis was through one of the ...cancer wellness centers... it is really helpful, it is a practice though, to remind—to be mindful is a constant – just like meditation right? You think you're not meditation right or your mind's wandering – that's what your mind does. It's the bringing the mind back which, that's meditation, so there's your practice. But I think it is important, because I think that does help to calm the body and the mind and... you know, you try to be mindful... but I think having some of that practice that's easier for me to bring myself back. Because After I kind had my freakout moment, like 'oh I'm going to be late!' like [breathes deeply], it doesn't really matter if I'm late." (#08, FG 2)
<b>Cognitive Coping Strategies and Psychological Resources</b>	Cognitive Reappraisal	#08: I don't know if you want to call it a gift really, it's a gift in strange wrapping paper maybe? There's a book by that title... it's definitely a lesson to be learned: on how to live your life, and how to prioritize, and how to put certain things first... #12: And other things last.
	Optimism	#09: Yes that's true, it makes it easier for you to decide what you're going to do and what you're not going to do. (FG 2) "I'm pretty optimistic and I gotta goal to live to be a hundred. I'm not dying from this, this is not what's gonna get me, it's gonna be ripe old age of a hundred plus." (#08, FG 2)
	Mindfulness	"Being present is really important because you miss that when you're always thinking ahead or thinking about the past, which is no longer here." (#22, FG 4)
	Positive Psychology	"Two other things that have helped me is journaling... having a gratitude, thankfulness journal is helpful. I can't remember the other thing. But having a gratitude journal really does help" (#21, FG 4)
	Religious Coping	"My faith community has been very important to me. And it helps me when I wake up and see the greens greener, and the yellows yellower, and everything, as a result of having cancer. I know I do. And I feel more... part of the whole earth and the whole humanity. And somehow that calms me." (#12, FG 2)

(Continued)

**Table 1.** Continued.

Themes	Codes	Illustrative Quotes
<b>Existential Approach-Oriented Coping</b>	Values-based Living	"When that final thing comes, and he says 'Ok, we've run out of options,' I want to have felt like I've done as much as I could. And that I was myself the whole time. And I want to teach my kids – I think I've taught them how to live, but I want to teach them how to die too." (#12, FG 2)
	Acceptance	#17: I think that people totally underestimate the fact that you're walking around. Like there's this book on Amazon that I'm getting sent it's called <i>Dying in Public</i> , and I get yelled at by my family thinking that, "Well, that's really morose, and why would you think like that?" And I'm like, "No that – that shit got real, like that's happening right now. Like that's the reality that we're living in right now. And it's a matter of that it could be three years or five years or whatever, but it's all happening, right, and you feel it every day." And I can't agree more in the fact that it's such an emotional process... I went to this place called a wellness center in Hinsdale specifically because it's totally for cancer patients and their family members, and it's only at that place that I've found people that really understand – truly understand – that this is something that you can never get away from. And even other trained therapists I find are not really kind of in-sync with the fact of what it takes day to day to just get through your day and carry on, and take care of family, and all kinds of stuff, so.
		#18: That point was so good about very well-meaning people who love you a lot, [and] want to say, "Don't think that way! oh don't be morose" and you just want to slap them, you know?(Multiple participants: Mm-hmm)
		#18: I have to think this way, this is my reality.
<b>Avoidance</b>	Identity Integration	#17: Right. (FG 3) "And so, I have wanted to be me as much as I can. I remember when I was first diagnosed, people would call me 'cancer patient'... I am not, I'm [full name]. I am not a cancer patient, I am me. And I have really held onto that as much as I could through everything! And I think that, to me, that was helpful." (#12, FG 2)
	Avoidant Coping	"I guess I haven't done as much of the formal stuff, partly cuz when I was first diagnosed so young, it was less done, and I had family members, and so I've just kind of gone that way. The other thing I do too much of, at this point in my life, is—denial worked for so long I just, should be making plans more than I am financially and get the will made and all that. And I've been sort of avoiding that and all that stuff, um, reupping that." (#19, FG 4)

(Continued)



Table 1. Continued.

Themes	Codes	Illustrative Quotes
<b>Interpersonal Resources and Seeking Social Support</b>	Social Support	<p>"And that's another thing, it's having social support, it's having the people. So whether it's our church communities, whether it's our supportive families—the not supportive families. I think it's really important – and I was always an open book and always let everyone know what was going on and here's where it's at, and here's what you could do for me. And so, people want to help? Yeah, I'll tell you what to do. But having people that you know you can count on and that you can talk to, and certainly there're some friends you can talk to at a different level than others... I just think that social support is key. Not feeling alone and having other people that are dealing with something similar or just something, and I do tell people a lot like, 'Just 'cause your thing isn't cancer doesn't mean it's any less important or less impactful to you... we all have our things.'" (#08, FG 2)</p> <p>#06: But I have a really tight, very small support group. But I would say cultivate—you know like your daughter? Cultivate</p> <p>#03: Yes. It can be small#06: It can be one person! Two people, three people... Three people, my daughter, her husband, and then my best friend who happens to be a guy, but he's my best friend.</p> <p>#03: Yeah and then I have my best friend who's a guy, and my husband, right before he died when the fire department was taking him from the house, and he turned to me and said "You stay close to your friends." And he was talking about a few of them but this one in particular, he talks to me all the time. He doesn't go to the treatments, but he talks to me all the time. And I agree with you. You gotta have this small group, like a nucleus.</p> <p>#06: you can't carry this alone.</p> <p>#03: No, you can't.</p> <p>#06: Right? I don't know if everyone would say that... It's too heavy</p> <p>#03: I think you need somebody to talk to.</p> <p>#05: Yeah, you need somebody to talk to (FG 1)</p> <p>"So I had a doctor up in Wisconsin, she was my general practitioner, and she was terrific. And she must have gotten the notes from my oncologist. And she called me up and just talked on the phone for me for 45 min, and I kept on just like – what went wrong? How did this happen? She just talked, and it was just really good." (#03, FG 1)</p>



*the body and mind*” (#08/FG:2) feel *“refreshed, and peaceful”* (#19/FG:4), and sleep better. They used multiple tools to receive some meditation guidance, including free online podcasts, relaxation apps, and wearable devices. Meditation classes were also available in their communities and cancer centers. Other relaxation techniques were group hypnosis, acupuncture, breathing exercises, and massages, which were not covered by their insurance and for which they had to pay out of pocket.

In addition, women highlighted the importance of managing their stress through physical activity. They noted that any kind of physical activity was helpful, including yoga, walking, high-intensity interval training, swimming, and weightlifting. Women also reported adopting various self-care strategies, including outdoor activities (e.g. gardening), performing arts activities (e.g. playing an instrument, singing in the church choir, dancing, improvisation), attending cultural events (e.g. movies, lectures, art museums), participating in community programs (e.g. reiki, cooking classes), and other leisure activities (e.g. coloring books, reading, taking naps, having coffee with a friend). Some women found useful spacing out their activities as way to reduce their stress. One woman expressed the idea of being retired was associated with being relaxed.

## **Theme 2: Cognitive coping strategies and psychological resources**

**Cognitive reappraisal.** Women offered numerous interpretations of living with MBC that aid in their psychological coping. Frequently, women commented upon their shift in perspective on life after being diagnosed with MBC and their increased appreciation for the positive aspects and lessons related to their disease: *“everybody seems to have taken cancer to be a teacher as opposed to a nemesis to be feared”* (#10/FG:2). Participants described that they were particularly inspired by hearing stories of others living their lives fully with MBC. They also compared themselves to others without MBC. Specifically, women noted that by observing the struggle of others in the world, they may feel more encouraged by their own situations: *“think about people who are homeless, ... And then just send prayers to them... Sometimes I find myself spiraling... thinking negative thoughts in terms of ‘Oh what if I... This is too much for me,’ then I realize and I say, ‘Why am I focus[ing] on myself so much?’ and I change it. And I think about other people or about myself in a more positive light”* (#05/FG:1).

**Mindfulness.** Women reported on present-moment awareness and motivators to remain present in coping with MBC. Women commented on using mindfulness to manage difficulties (i.e. *“it’s just being aware of what you’re feeling in the moment and feeling it so that it can pass”*, (#02/FG:4)) and to enhance the quality of the present (i.e. *“make the most of each day”* (#01/FG:1)).

**Optimism.** In addition, optimism came up related to values, goals, as well as treatment options and their impact on medical outcomes: *“I try to do exactly what my doctor tells me to do, and I just keep my fingers crossed that it’s going to work”* (#01/FG:1). Women also reported hopes for future activities that they will be around to complete.

**Positive psychology.** They also employed positive psychology strategies to describe their experiences with MBC, namely gratitude and humor. For example, one woman described: *“the fact that we’re still living is great, and I’m so thankful that I’m still here basically”* (#11/FG:2). Women found shared humor about their experiences with cancer: *“I think another important piece is laughter. And there is humor in what we all go through. I mean, maybe sick humor but – nothing wrong with sick humor!”* (#20/FG:4).

**Religious coping.** Faith and prayer were described as sources of strength during difficult times. Women spoke about praying or asking for support from God or a higher power to live long enough to see milestones in their lives. Moreover, women saw religion or faith as a place to turn to for support when in need, either individually (e.g. *“if you have the Lord, it makes it a little bit easier to go through things”* (#14/FG:3)) or from others of similar faith (e.g. *“My faith is more important to me than anything else. For me, faith comes first, then my family, then my studies.”* (#06/FG:1)).

### **Theme 3: Existential approach-oriented coping**

**Values-based living.** Women identified several activities through which they found meaning and value: traveling, volunteering, supporting other MBC patients, fortifying social relationships, working, furthering educational goals, and remaining as active as possible. Underlying these activities, women grappled with the idea of if what they were doing was enough, at times questioning their underlying motives and priorities: *“What do you love, what do you care about? What do you want to get done?”* (#06/FG:1). Women spoke about maintaining who they are throughout the entirety of the cancer experience and endorsed the values of connecting with and contributing to society, being intentional, and enjoying their lives, regardless of MBC.

**Acceptance.** Women underscored nuanced experiences related to MBC and the process of accepting this illness. They spoke openly about a wide array of experiences and emotions related to MBC: *“[it’s] possible to live with it and to live a happy, healthy life with it... I feel like I’ve gotten to a pretty good place with it”* (#08/FG:2). Women also commented on their control in

accepting the situation (e.g. *“there’s a big arsenal of things that we have still left over and not many things, but there’s new things every day, and if they don’t work, then they don’t work”* (#11/FG:2) while balancing the emotions that arise throughout (e.g. *“acknowledging it, feeling it, and letting go, just let it pass”* (#22/FG:4)). Conversations with families regarding mortality, life-limiting prognoses and planning for death were also highlighted: *“my husband said to me, ‘You know, you’re not alone, everybody dies!’ ... it sounds cruel, but really it made me stop feeling sorry for myself. And I keep that in mind all the time. I mean there’s no little pocket in this world of people who are going to live forever, they’re not hiding out in some cave or something”* (#01/FG:1).

**Identity integration.** Women also emphasized the importance of staying connected to their sense of self and who they are beyond their MBC diagnosis. Furthermore, women described discomfort at times with labels, such as *“cancer patient”* or *“cancer survivor,”* that felt reductionistic or constraining: *“I don’t want to be everyone’s cancer-having friend”* (#10/FG:2), *“I don’t want the cancer cloud around me”* (#09/FG:2). Some women chose not to publicly share their diagnosis to avoid these labels and described the importance of not defining themselves as *“sick.”* Women described a dialectical *“ebb and flow”* (#10/FG:2) in their desire for others to know that they have cancer because they also want others to acknowledge and understand their experience and the challenges of living with MBC: *“this feeling that you wanted to be normal but yet you wanted everyone to know that you have cancer”* (#11/FG:2).

#### **Theme 4: Avoidance**

Women reported coping through avoidance strategies, including denial as well as cognitive and behavioral disengagement. Women described using denial to cope with the risk of recurrence following their initial non-MBC diagnosis and, more recently, as a way to avoid making plans before end-of-life (e.g. *“since I had the original [not metastatic] diagnosis, I was quite young, just 30. And I really dealt with that by denial. I just said, ‘It’s over.’ And so, it was for 15 years, and went on with my life”* (#19/FG:4)). Behavioral disengagement, such as watching TV in pajamas all day, was also described as a strategy for coping with low mood. However, behavioral disengagement and avoidance strategies were also used as a way to protect themselves from unsolicited advice and unhelpful information regarding their cancer diagnosis: *“You should do this, you should do that, there’s so many people send you so many things you get so tired! You’ve got to shut them down, right? I don’t pay attention”* (#06/FG:1).

Women also reported avoiding cancer-related information that they deemed unhelpful and anxiety-provoking, including statistics regarding estimated survival and overly detailed information regarding their diagnosis and treatments. Participants emphasized that every woman's diagnosis of MBC is different, and that general information is often not useful.

### ***Theme 5: Interpersonal resources and seeking social support***

Women endorsed the importance of social support and identified family members, friends, spouses, children, and local communities (e.g. church) as useful interpersonal resources. Women also noted trust in their care teams and often elicited support from their doctors, including asking questions, receiving information, and advocating for themselves. Individuals with similar experiences were often helpful to relate to and feel understood. Women were especially drawn to others with experiences of cancer or MBC: *"I have met so many interesting people back in the infusion area and gotten those stories and shared my story with them, and that's always a good time to connect"* (#13/FG:3). Support also included advice giving or assistance with decision making: *"I'll do what someone I trust tells me to do"* (#01/FG:1).

## **Discussion**

The purpose of this study was to describe the coping strategies and psychosocial resources used by women living with MBC. Data were also used to inform the tailoring of an ACT intervention for women living with MBC. The results of this study indicate that women utilize several coping strategies, including behavioral (e.g. active coping and planning), existential approach-oriented (e.g. acceptance), cognitive (e.g. cognitive reappraisal), and avoidant, as well as intrapersonal and interpersonal resources (e.g. optimism, social support).

Engagement coping (e.g. active coping, planning, mindfulness, cognitive reappraisal, and acceptance) appears to be fundamental for women living with MBC. Participants highlighted how setting attainable goals, keeping themselves busy, and practicing meditation and relaxation techniques were helpful to cope with their disease. Previous literature has found an association between reengaging with new goals and higher positive affect and lower depression among women with advanced breast cancer.<sup>29</sup> Consistent with our finding that relaxation techniques may be beneficial in this population, greater mindfulness was associated with less symptom burden (e.g. pain, fatigue, sleep disturbance, anxiety, and depression) among women with MBC in a randomized trial of mindful yoga.<sup>30</sup> In addition, women in this study noted that their cancer experience to be a stimulus

for personal growth. As such, women described reframing their lives and the way they see the world in a positive way, experiencing gratitude, and finding value and meaning despite their illness. Furthermore, the acceptance of a life-threatening disease appears to be another important strategy for these women. Positive reframing and acceptance have been associated with better HRQOL and less cancer-specific distress, anxiety, and depressive symptoms in advanced cancer patients.<sup>31,32</sup> Studies have also found a buffering effect of engagement coping on the relationship between symptom-related stress and mental HRQOL among women with advanced breast cancer.<sup>33</sup> Therefore, interventions tailored for women living with MBC that promote the use of engagement coping strategies may improve their HRQOL and reduce symptom burden. Future longitudinal studies and randomized controlled trials should be conducted to demonstrate the beneficial effects of engagement coping strategies and the mechanisms by which they relate to better HRQOL and less symptom burden in women living with MBC.

Participants also reported using disengagement coping strategies (e.g. avoidance strategies and behavioral disengagement). Although disengagement coping strategies have been traditionally viewed as maladaptive, some researchers suggest that certain disengagement coping strategies (e.g. positive distraction) could be a useful method for coping with certain life stressors.<sup>34</sup> A possible explanation for this might be that distraction could be conceptualized as an intentional form of disengagement that a person uses as a temporary relief to gather resources to actively cope with the stressor at a later time.<sup>34</sup> Conversely, avoidance over longer periods of time may reflect an individual's inability to mobilize other adaptive coping strategies and resources. As such, avoidance has been associated with higher distress and worse HRQOL among breast cancer survivors.<sup>35,36</sup> Further research should be undertaken to understand the timing and effects of different disengagement coping strategies on mental and health outcomes in women living with MBC.

Women sought out and received social support from others to cope with MBC. Social support in cancer survivorship literature has been operationalized in three different dimensions, including structural (the size of the social network), functional (the type of support people can provide, e.g. emotional, instrumental), and appraisal (satisfaction with social support).<sup>37</sup> Previous research has shown that social support is an important determinant of HRQOL among breast cancer survivors. Importantly, social isolation has been associated with elevated risk of mortality after a breast cancer diagnosis.<sup>38</sup> However, the effect of social networks on mortality among breast cancer survivors may depend on the quality of the relationships.<sup>39</sup> Furthermore, social support can act as a buffer for depression in MBC survivors with low levels of cognitive

function.<sup>40</sup> Thus, healthcare providers and supportive care programs should help patients to develop strategies for obtaining support from their family, friends, and medical care team and improving the quality of their relationships.

### ***Practice implications***

Previous research has focused on the negative health and HRQOL outcomes among women living with MBC, as well as their preparation for death. However, understanding which coping strategies and psychosocial resources women use to deal with the challenges associates with MBC and live a fulfilling life could help researchers identify intervention targets for future psychosocial interventions. As there are few psychosocial interventions targeting patients with MBC, randomized controlled trials should be conducted to test the effects of coping strategies and psychosocial resources on cancer outcomes (e.g. HRQOL, symptom burden, survival).

### ***Study limitations***

This research has been conducted with a small number of participants in a limited geographic region, which restricts the generalizability of our findings to the wider MBC population. However, qualitative studies are not intended for inferential or generalizable purposes. Furthermore, our sample was comprised of survivors who predominantly self-identified as non-Hispanic whites (86.5%), and all participants identified as female, which does not allow us to capture the experiences of men living with MBC and patients from racial/ethnic minority groups.

### ***Conclusions***

Women living with MBC utilize several engagement and disengagement coping strategies, including behavioral (e.g. active coping and planning), existential approach-oriented (e.g. acceptance), cognitive (e.g. cognitive reappraisal), and avoidance. They also rely on their family, friends, and medical team for support. Further research is needed to better understand the coping strategies and psychosocial resources used by different subgroups of MBC patients (e.g. men, racial/ethnic minorities, rural communities).

### ***Acknowledgments***

The authors would like to express their deepest gratitude to the women who participated in this research.

## Author contributions

All authors contributed to this research and article. Conceptualization: P. I. Moreno, B. Noriega Esquivas, E. A. Walsh, J. L. Thomas, and F. J. Penedo. Investigation: P. I. Moreno, J. L. Thomas, F. S. Horner, J. B. Torzewski, W. J. Gradishar, D. E. Victorson, and F. J. Penedo. Methodology: P. I. Moreno and F. J. Penedo. Data curation: P. I. Moreno, B. N. Esquivas, J. L. Thomas, and F. S. Horner. Formal analysis: P. I. Moreno, B. Noriega Esquivas, and E. A. Walsh. Validation: P. I. Moreno, B. Noriega Esquivas, and E. A. Walsh. Writing-original draft: B. Noriega Esquivas, P. I. Moreno, and E. A. Walsh. Writing-review and editing: B. Noriega Esquivas, P. I. Moreno, E. A. Walsh, J. L. Thomas, F. S. Horner, J. B. Torzewski, W. J. Gradishar, D. E. Victorson, and F. J. Penedo.

## Disclosure statement

Authors certify there are no competing interests to declare.

## Funding

Patricia I. Moreno was supported by an Institutional Research Grant (IRG-18-163-24) from the American Cancer Society, a National Institute of Minority Health and Health Disparities diversity supplement (R01MD010440), and a National Cancer Institute (NCI) career development award (K01CA258955). Dr. Noriega Esquivas was supported by an NCI training grant (T32, 5T32CA251064-03, MPIs: Penedo F.J. & Kobetz, E.).

## ORCID

Blanca S. Noriega Esquivas  <http://orcid.org/0000-0002-5865-4408>

## Data availability statement

The data supporting this study's findings are available from the corresponding author upon reasonable request.

## References

1. Caswell-Jin JL, Plevritis SK, Tian L, et al. Change in survival in metastatic breast cancer with treatment advances: meta-analysis and systematic review. *JNCI Cancer Spectr.* 2018;2(4):pky062.
2. Mariotto AB, Etzioni R, Hurlbert M, Penberthy L, Mayer M. Estimation of the number of women living with metastatic breast cancer in the United States. *Cancer Epidemiol Biomarkers Prev.* 2017;26(6):809–815. doi:10.1158/1055-9965.EPI-16-0889
3. Gogate A, Wheeler SB, Reeder-Hayes KE, et al. Projecting the prevalence and costs of metastatic breast cancer from 2015 through 2030. *JNCI Cancer Spectr.* 2021;5(4):pkab063.
4. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2020. *CA Cancer J Clin.* 2020;70(1):7–30. doi:10.3322/caac.21590
5. Willis K, Lewis S, Ng F, Wilson L. The experience of living with metastatic breast cancer—a review of the literature. *Health Care Women Int.* 2015;36(5):514–542. doi:10.1080/07399332.2014.896364

6. Lewis S, Willis K, Yee J, Kilbreath S. Living well? Strategies used by women living with metastatic breast cancer. *Qual Health Res.* 2016;26(9):1167–1179. doi:10.1177/1049732315591787
7. Tarbi EC, Meghani SH. A concept analysis of the existential experience of adults with advanced cancer. *Nurs Outlook.* 2019;67(5):540–557. doi:10.1016/j.outlook.2019.03.006
8. Moreno PI, Noriega Esquivas B, Thomas JL, et al. Characterizing unique supportive care needs among women living with metastatic breast cancer: a qualitative study. *J Psychosoc Oncol Res Pract.* 2023;5(1):1–10.
9. Reed E, Simmonds P, Haviland J, Corner J. Quality of life and experience of care in women with metastatic breast cancer: a cross-sectional survey. *J Pain Symptom Manage.* 2012;43(4):747–758. doi:10.1016/j.jpainsymman.2011.05.005
10. Hamer J, McDonald R, Zhang L, et al. Quality of life (QOL) and symptom burden (SB) in patients with breast cancer. *Support Care Cancer.* 2017;25(2):409–419. doi:10.1007/s00520-016-3417-6
11. Nipp RD, El-Jawahri A, Fishbein JN, et al. The relationship between coping strategies, quality of life, and mood in patients with incurable cancer. *Cancer.* 2016;122(13):2110–2116. doi:10.1002/cncr.30025
12. Greer JA, Jacobs JM, El-Jawahri A, et al. Role of patient coping strategies in understanding the effects of early palliative care on quality of life and mood. *J Clin Oncol.* 2018;36(1):53–60. doi:10.1200/JCO.2017.73.7221
13. Kenne Sarenmalm E, Öhlén J, Jonsson T, Gaston-Johansson F. Coping with recurrent breast cancer: predictors of distressing symptoms and health-related quality of life. *J Pain Symptom Manage.* 2007;34(1):24–39. doi:10.1016/j.jpainsymman.2006.10.017
14. Carver CS, Scheier MF, Weintraub JK. Assessing coping strategies: a theoretically based approach. *J Pers Soc Psychol.* 1989;56(2):267–283. doi:10.1037//0022-3514.56.2.267
15. Carver CS, Connor-Smith J. Personality and coping. *Annu Rev Psychol.* 2010;61(1):679–704. doi:10.1146/annurev.psych.093008.100352
16. Greer JA, Applebaum AJ, Jacobsen JC, Temel JS, Jackson VA. Understanding and addressing the role of coping in palliative care for patients with advanced cancer. *J Clin Oncol.* 2020;38(9):915–925. doi:10.1200/JCO.19.00013
17. Taylor SE, Broffman JI. Psychosocial resources: functions, origins, and links to mental and physical health. *Adv Exp Soc Psychol.* 2011;44:1–57. Elsevier.
18. Hajian S, Mehrabi E, Simbar M, Houshyari M. Coping strategies and experiences in women with a primary breast cancer diagnosis. *Asian Pac J Cancer Prev.* 2017;18(1):215–224.
19. Uchida M, Akechi T. Coping with advanced breast cancer. *Curr Breast Cancer Rep.* 2015;7(3):111–116. doi:10.1007/s12609-015-0188-x
20. Chunlestskul K, Carlson LE, Koopmans JP, Angen M. Lived experiences of Canadian women with metastatic breast cancer in preparation for their death: a qualitative study. Part I-Preparations and consequences. *J Palliat Care.* 2008;24(1):5–15. doi:10.1177/082585970802400102
21. Kenne Sarenmalm E, Thorén-Jönsson A-L, Gaston-Johansson F, Öhlén J. Making sense of living under the shadow of death: adjusting to a recurrent breast cancer illness. *Qual Health Res.* 2009;19(8):1116–1130. doi:10.1177/1049732309341728
22. Coward DD. The lived experience of self-transcendence in women with advanced breast cancer. *Nurs Sci Q.* 1990;3(4):162–169. doi:10.1177/089431849000300408
23. Davies M, Sque M. Living on the outside looking in: a theory of living with advanced breast cancer. *Int J Palliat Nurs.* 2002;8(12):583–590. doi:10.12968/ijpn.2002.8.12.10975
24. Thomas DR. A general inductive approach for analyzing qualitative evaluation data. *Am J Eval.* 2006;27(2):237–246. doi:10.1177/1098214005283748



25. Guest G, Namey E, McKenna K. How many focus groups are enough? Building an evidence base for nonprobability sample sizes. *Field Methods*. 2017;29(1):3–22. doi: [10.1177/1525822X16639015](https://doi.org/10.1177/1525822X16639015)
26. O'Connor C, Joffe H. Intercoder reliability in qualitative research: debates and practical guidelines. *Int J Qual Methods*. 2020;19:160940691989922. doi: [10.1177/1609406919899220](https://doi.org/10.1177/1609406919899220)
27. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19(6):349–357. doi: [10.1093/intqhc/mzm042](https://doi.org/10.1093/intqhc/mzm042)
28. O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: a synthesis of recommendations. *Acad Med*. 2014;89(9):1245–1251. doi: [10.1097/ACM.0000000000000388](https://doi.org/10.1097/ACM.0000000000000388)
29. Lam WWT, Yeo W, Suen J, et al. Goal adjustment influence on psychological well-being following advanced breast cancer diagnosis. *Psychooncology*. 2016;25(1):58–65. doi: [10.1002/pon.3871](https://doi.org/10.1002/pon.3871)
30. Zimmaro LA, Carson JW, Olsen MK, Sanders LL, Keefe FJ, Porter LS. Greater mindfulness associated with lower pain, fatigue, and psychological distress in women with metastatic breast cancer. *Psychooncology*. 2020;29(2):263–270. doi: [10.1002/pon.5223](https://doi.org/10.1002/pon.5223)
31. van de Wiel M, Derijcke S, Galdermans D, et al. Coping strategy influences quality of life in patients with advanced lung cancer by mediating mood. *Clin Lung Cancer*. 2021;22(2):e146–e52. doi: [10.1016/j.clc.2020.09.010](https://doi.org/10.1016/j.clc.2020.09.010)
32. Secinti E, Tometich DB, Johns SA, Mosher CE. The relationship between acceptance of cancer and distress: a meta-analytic review. *Clin Psychol Rev*. 2019;71:27–38. doi: [10.1016/j.cpr.2019.05.001](https://doi.org/10.1016/j.cpr.2019.05.001)
33. Yang HC, Brothers BM, Andersen BL. Stress and quality of life in breast cancer recurrence: moderation or mediation of coping? *Ann Behav Med*. 2008;35(2):188–197. doi: [10.1007/s12160-008-9016-0](https://doi.org/10.1007/s12160-008-9016-0)
34. Waugh CE, Shing EZ, Furr RM. Not all disengagement coping strategies are created equal: positive distraction, but not avoidance, can be an adaptive coping strategy for chronic life stressors. *Anxiety Stress Coping*. 2020;33(5):511–529. doi: [10.1080/10615806.2020.1755820](https://doi.org/10.1080/10615806.2020.1755820)
35. Kvillemo P, Bränström R. Coping with breast cancer: a meta-analysis. *PLoS One*. 2014;9(11):e112733. doi: [10.1371/journal.pone.0112733](https://doi.org/10.1371/journal.pone.0112733)
36. Pahlevan Sharif S, Ahadzadeh AS, Perdamen HK. Uncertainty and quality of life of Malaysian women with breast cancer: mediating role of coping styles and mood states. *Appl Nurs Res*. 2017;38:88–94. doi: [10.1016/j.apnr.2017.09.012](https://doi.org/10.1016/j.apnr.2017.09.012)
37. Cheng H, Sit JWH, Chan CWH, So WKW, Choi KC, Cheng KKF. Social support and quality of life among Chinese breast cancer survivors: findings from a mixed methods study. *Eur J Oncol Nurs*. 2013;17(6):788–796. doi: [10.1016/j.ejon.2013.03.007](https://doi.org/10.1016/j.ejon.2013.03.007)
38. Kroenke CH, Kubzansky LD, Schernhammer ES, Holmes MD, Kawachi I. Social networks, social support, and survival after breast cancer diagnosis. *J Clin Oncol*. 2006;24(7):1105–1111. doi: [10.1200/JCO.2005.04.2846](https://doi.org/10.1200/JCO.2005.04.2846)
39. Kroenke CH, Quesenberry C, Kwan ML, Sweeney C, Castillo A, Caan BJ. Social networks, social support, and burden in relationships, and mortality after breast cancer diagnosis in the Life After Breast Cancer Epidemiology (LACE) Study. *Breast Cancer Res Treat*. 2013;137(1):261–271. doi: [10.1007/s10549-012-2253-8](https://doi.org/10.1007/s10549-012-2253-8)
40. Dobretsova A, Derakshan N. Cognitive function and emotional vulnerability in metastatic breast cancer: moderating effects of age and social support. *Psychooncology*. 2021;30(9):1563–1571. doi: [10.1002/pon.5732](https://doi.org/10.1002/pon.5732)