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Processing Breast Cancer Experience in Under-Fifty Women: Longitudinal Trajectories of Narrative Sense Making Functions

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ABSTRACT

Cancer narration is an elective tool to construct sensemaking processes aimed at supporting adaptation to the experience. The literature lacks a longitudinal narrative sensemaking exploration of breast cancer experience (BC) at an age below 50 years old. We administered an ad hoc narrative interview during pre-hospitalization-T1/postoperative counseling-T2/adjuvant therapy-T3/follow-up-T4. This study is a qualitative analysis of how narrative functions, as semiotic connection processes at the base of adaptation to the experience, are articulated during the four phases. Results highlight that the function of the organization of temporality changes from a relieved mode-T1 to reconstructive/chronological/blocked-T4; the search for meaning changes from an internalized mode-T1 to an internalized/externalized/generalized/nonsense-T4; emotional regulation changes from pervasive mode-T1 to connected/pervasive/disconnected -T4; and orientation to action changes from uncertain mode-T1 to combative-T2-T3-T4. From a clinical health psychology perspective, the different natural sensemaking trajectories emerged suggest constructing a personalized narrative intervention to follow the natural path of adaptation during BC experience, not only at the end, to accompany phases of integration and fluidity and to support phases of psychic stiffening and disconnection.

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Introduction

Diagnosis and treatment of breast cancer (BC) before the age of 50 are critical experiences that can upset a woman's life during a phase that is typically defined by significant achievements (Martino, Lemmo, & Gargiulo, 2021). Cancer tests her ability to manage the physical and psychic consequences that seem to acquire specific characteristics.

The number of people diagnosed with cancer increases every year, and BC is the most common form in women. The highest incidence is in the 34–49 year age group (Global Burden of Disease Report, 2018), with an 87% survival rate.

Women under 50 who have BC have specific needs and clinical aspects. They often receive more aggressive diagnoses than the women over 50 years old. The young age in fact often determines a faster and more advanced growth of the tumor condition. In this study we take into consideration the therapeutic protocol most used for the treatment of infiltrating ductal carcinoma with the best prognosis, therefore will be excluded those conditions that require the insertion of neoadjuvant therapies in order to reduce the tumor mass before the surgical intervention.

Diagnosis, type of surgery (mastectomy or quadrantectomy), and type of treatment (radiotherapy, chemotherapy, hormone therapy) can generate physical and psychological effects regarding body image, fertility, early menopause, sexuality, and interactions with partners and children (Baucom et al., 2006; Black et al., 2020; Bolton & Isaacs, 2018; Fobair et al., 2006; Ganz et al., 2003; Helms et al., 2008; Holly et al., 2003; Peate et al., 2009). Studies link the risk of major traumatic outcomes to a more difficult psychological adaptation undermined by fear of recurrence, a particularly investigated construct (Cordova et al., 1995; Jones et al., 2014; Koopman et al., 2002; Simard & Savard, 2009; Vickberg, 2003). In the meantime, the literature also highlights chances for young women to experience personal growth during illness, transforming negative emotions into strengths and modifying their life priorities (Bellizzi & Blank, 2006; Di et al., 2016).

Another relevant aspect links the psychological impact of the disease to the specific characteristics of cancer as a stressor: the intangible and internal nature of the threat, the uncertainty about the disease outcome, its unpredictable trajectories, and the threat's chronological aspects (Gurevich et al., 2002), which prolonged the criticality over time, or in the different phases of the medical process (Martino & Freda, 2016; Martino et al., 2019a). These characteristics generate an "accumulated burden of adversity," which may significantly affect later psychological functioning. Thus, every medical phase, constituting a turning point of the medical treatment protocols, reflects turning points in the meaning of the woman's relationship with BC over time and the psychic challenges (Martino et al., 2019b).

In Phase I: facing the unknown, the woman is still undergoing diagnostic investigation of a suspected nodularity. In Phase II: impact of the critical valence of the disease, the woman learned about the severity of her pathology (receiving histological examination), has undergone surgery for malignant nodularity, and decides the therapeutic path to be taken. In Phase III: relationship with a changed body identity, the woman is faced with postoperative chemotherapy or radiotherapy treatments that affect her relationship with her body. In Phase IV: construction of a new continuity, the woman returns to the daily routine of life and integrates the maintenance phase, which will last for at least five years. During Phase IV, the woman finds herself recovering spaces of autonomy and gradually reducing dependence on the medical institution since she only goes for follow up.

From this perspective, we want to construct a longitudinal understanding of how the woman makes sense of the illness experience from semiotic and narrative perspectives.

The literature lacks a semiotic and narrative exploration of BC experience in young women, which can shed light on the narrative processes of sensemaking of their experience in the therapeutic pathway's specific phases.

Table 1. Socio-demographic characteristics of women.

Women	All participants (n=10)
Age	M=44.4 years SD= 4.5
Educational Level	
Primary and Middle School	5
High School	4
Degree	1
Job Position	
Housewife/unemployed	6
Employee	3
Self employed	1
Marital Status	
Single	1
Married	7
Divorced	2
Number of children	
Three	1
Two	7
One	2
Children's Age	M= 14.6 years

In a previous study (Martino et al., 2019c), we identified specific narrative modes in women below 50 years old in the initial phase of the disease's onset. This objective is not achieved in the literature in longitudinal terms. In the present study we follow the natural sensemaking process of adaptation and integration to the cancer experience for women under 50 during the first year of therapeutic treatment, identifying changes in the narrative modalities through the proposal to women of the same ad hoc in deep narrative interview within specific phases (Table 1).

Narrative device and critical cancer experience

Within a narrative constructivist perspective, cancer's critical experience generates a crisis affecting the basic elements that regulate the relationship between the internal and external worlds (Martino, Onorato, & Freda, 2015; Janoff-Bulman, 2004; Joseph & Linley, 2005), interrupting continuity over time. The crisis affects the sensemaking processes that support their personal life story and continuity of life (Martino, Onorato, & Freda, 2015; Brockmeier, 2000; Davis, 2008; Hjelmblick & Holmstrom, 2006; Kowalska et al., 2021; Neimeyer, 2006; Rasmussen & Elverdam, 2007). This experience imposes the narrative urgency on the mind, activating the need to synthesize new meanings and promoting the organization and connection of different elements of the experience (such as time, space, behavior, relationships, and actions; Freda & Martino, 2015).

Narration can create order between events to construct sense and meaning (Bruner, 1991) of one's experience to outline interpretative and pre-figurative coordinates of events, actions, and situations, constructing forms of knowledge that orient the subject to action.

"Narrative thinking" is a complex weaving of events, constructing relationships between past, present, and future experiences in the form of a story. This story is the object of possible interpretative and reconstructive hypotheses (Bruner, 1991). Therefore, the narration has, first of all, an epistemic function: it triggers processes of subjective elaboration, interpretation, understanding, and reenactment, giving events a form that

makes it possible to describe and tell them to others in light of the circumstances, intentions, expectations of the protagonists, giving them sense and meaning (McAdams, 2008).

Therefore, the device responds naturally to the human being's fundamental need (Bruner, 1991; McAdams, 2008) to experience a sense of continuity and coherence by constructing stories in an intersubjective space and culture (De Luca Picione et al., 2017, 2018; Martino et al., 2019d; Bruner, 1991; Smorti, 2007).

Specifically, Doise (1986) considered four functions of narrative analysis: the psychological or intrapersonal function, which is concerned with how the individual interprets the world; the interpersonal function, which considers the character of the interaction between individuals who are considered interchangeable partners in a situation; the positional function, which considers the different social positions of actors in situational interactions; and the ideological function, which considers the broader belief systems (Doise & Mapstone, 1986; Murray, 2000; Neimeyer, 2004).

Starting from the narrative literature and our previous study in the context of illness (De Luca Picione et al., 2018), we believe narration is an elective tool to construct sensemaking processes (Neimeyer et al., 2010) of the BC experience and reconfigure time perspectives (Brockmeier, 2000) during and after the illness (Gillies & Neimeyer, 2006; Hall, 2011; Waters et al., 2013). Narration aims to support adaptation, integrate the event, and construct resources, well-being, and active coping strategies (Angus & McLeod, 2004; De Luca Picione et al., 2018; Hermans & Dimaggio, 2004; Neimeyer, 2006).

In the present study we propose the same ad hoc in deep narrative interview during the different phases of therapeutic treatment. During the different phases of treatment we will ask to women to return to the same questions in order to allow the mind, in the different meetings, to be able to access portions and angles of the experience, "returning" to what was already narrated in the previous phase. In addition, the reason why is that we believe that, over time, the psychic function of "narrative repetition" (Smorti & Fioretti, 2016) clarifies the sense of the event, integrating its negative aspects into a self-schema (Frattaroli, 2006; Pennebaker et al., 1997; Pennebaker & Seagal, 1999). These processes can be considered transformative (McAdams, 2008) in their discursive tendency toward the search for a configuration that allows the patient to make sense, even if temporarily, of the experience of illness (Martino, Onorato, & Freda, 2015; Greenberg, Elliott, & Rice, 1993; Salvatore & Freda, 2011).

Finally, over the past 20 years, the narrative has become an elective tool for the cognitive and emotional processing of critical experiences (Neimeyer, 2006; Pennebaker et al., 2010; Smorti & Fioretti, 2016; Martino, Onorato, & Freda, 2015).

Semiotic perspective to interpret narratives within the oncological field

In this study, we are interested in a "process" vision, and for this reason, we embrace, alongside a narrative constructivist perspective, a semiotic perspective.

The focus of this study is on exploring sensemaking processes articulated in the relationship between emotion and thought. Based on the narrative functions, which we will present below, there is a generalization of the affective process. In the human processes of mental reflection (cognition) the central issue for thought is abstraction.

Abstraction implies a psychic operation that leads to generalization by producing categories defined by the similarity of their affective value.

The semiotic perspective allows us to pay attention to sensemaking processes and the relationship between effectivization and its declination.

The basic process of sensemaking is given by the role of effects that have a primitive nature and can be understood as embodied meanings. Therefore, sensemaking is a constitutive function linked to subjection, to the body, to embodied effects. Meaning-making performs an attributive function, associating semantic predicates with predetermined entities of external words. Meaning is an associative process between a sign and a referent of reality or the internal world, configuring itself as a function after sensemaking (Salvatore & Freda, 2011).

In other words, the meaning emerges from the sense, that is, from how the signs connect since meaning is not a question of content but associative link potentiality.

It is precisely in the transition from sense to meaning that the generalization of effect intersects with thought, finding its discretization. The narrative functions we create below allow us to move from effective generalization to the organization of thought with dimensionality.

By the term function, we mean the process that allows information to be manipulated at multiple levels and to respond to the ever-changing demands of the environment, processes that are essential for the individual's adaptation in support of mental health (Bion, 1962; Piaget, 1964; Vigotskij, 1931; Winnicott, 1945). Starting from the mentioned literature, we highlight the four key functions that define the process of semiotic connection among the different objects of the experience, which all constitute the fundamental aspects of adaptation and coping with the BC experience (De Luca Picione et al., 2018). Therefore, the narrative functions represent different ways of functioning of narrative thought (Bion, 1962).

Organization of temporality

This function refers to the possibility to organize cancer experience by subjectively connecting different temporal plans of own life, connecting and discussing the plan of the “before” and “after” the disease as a watershed that the onset of BC brings to the fore. The narrative embeds BC in a time frame, id est, the insertion of elements of the story of BC within a spatial and temporal framework (the temporization process) (Bülow & Hydén, 2003). Narration allows to bring together, in a tridimensional way, the different lines of time, past–present–future, giving to this link a subjective meaning (Martino, Onorato, & Freda, 2015; Brockmeier, 2000).

Search for meaning

This function refers to the connections in the interpretation of the event “BC,” finding meaning in the world in the face of a critical event, rebuilding shattered worldviews, and constructing connections between continuity and discontinuity (Bonanno et al., 2004; Davis et al., 2000; Janoff-Bulman, 2004, 1992). In other words, this function tries to construct a narrative meaning around what is happening. It refers to searching for an answer to the question “Why me?” and what relationship or perspective can

be created between oneself and the experience of the onset of cancer (Sherman & Cohen, 2006).

Emotional regulation

This refers to the narration process as a dynamic multilevel system regulating the relation between emotion and thought and the connections between emotion and event in light of the present. The narrative device allows a process of labeling emotions and realizing the important roles that these emotions play in the BC experience. This connection establishes the basis and containment for emotional regulation processes (Tronick, 2010; Valsiner & De Luca Picione, 2017) and meta-reflects on the new version of the experience.

Orientation to action

This refers to the relationship between oneself and the action meant to cope with BC. This function is the narrative construction of the ability to make decisions and choices and undertake behaviors that impact events. Therefore, the narration is an open and dynamic process of constructing, regulating, and transforming its agency (De Luca Picione et al., 2018; Brockmeier, 2009).

Aim

Within a longitudinal theory-driven research design, in this study, first of all, we identify how the aforementioned functions are articulated within four turning-point phases of the crossing of the experience of BC by women below 50 years old: pre-hospitalization (T1); postoperative counseling (T2); adjuvant therapy (T3); follow up (T4).

This study allows observing how the construction of these different connections can vary in the 4 phases considered turning points, highlighting the trajectories of women's narrative functions below 50 years old in the most critical phases of their course of treatment of the illness. This allows us to identify the type of changes that the repeated narration promotes and supports in the sensemaking process of illness, to build personalized support for women below 50 years old with BC and their needs (Villani et al., 2016).

Materials and method

Participants and procedure

The research was conducted at the National Cancer Institute Fondazione G. Pascale of Naples, the national reference for the treatment and care of neoplastic illness, in the frame of STAR Programme, financially supported by UniNA and Compagnia di San Paolo. The research was co-constructed in collaboration with the hospital's psychology service and breast unit surgery and approved by the National Cancer Institute's medical committee. The hospital's psychology service has provided its location and

facilities for monitoring meetings and taking charge of women who wanted to continue with the psychotherapeutic support over time.

The women who took part in this research were identified from medical reports and qualified according to the following criteria:

Eligibility criteria: First access to the hospital before the age of 50; diagnosis of infiltrating ductal BC.

Exclusion criteria: Metastatic disease (stage IV); Neoadjuvant Therapy; psychotherapeutic treatments in progress.

The women that met our eligibility criteria were contacted by a phone call and a request to participate in the 1 day meeting to explain in detail the research aim. The women were recruited during a 1-day meeting in the hospital to explain the whole path and the research aim by the two psychologists researchers and the psychologist of the psychological service of the hospital.

The women volunteered to participate by providing informed consent in a written form, and the hospital approved the privacy policy. The data was recruited during the year 2018; we recruited in the first phase of the research 50 women during the pre-hospitalization phase. During the study, the women undergo the four longitudinal phases are: 10 women below 50 years old ($M = 44.4$; $SD = 4.5$) during the pre-hospitalization phase (T1: 40–60 days before surgery) and then we met them again during the postoperative counseling phase (T2: 30–40 days after surgery) when the women received the histological examination results, during adjuvant therapy phase (T3: 25–35 days after the start of therapy can differentiate into chemotherapy, radiotherapy, hormone therapy) and at follow-up phase (T4: first checkup after about 8 months). The drop-out of women from the first phase of recruitment was due to changes in the hospital structures, worsening of the cancer condition, do not want to continue, do not have time. The meeting took place in a face to face modality, in an ad hoc room of the hospital.

Narrative ad hoc interview

We constructed an original *ad hoc* narrative interview, named the Early Breast Cancer-Processing Trauma Interview (EBC-PTI), to explore young women's narrative sensemaking processes within the BC experience (De Luca Picione et al., 2018) in every phase of their therapeutic path.

The same narrative interview proposed to women during T1, T2, T3, and T4, involved nine open questions that start from the initial request to narrate the disease's experience from the moment it appeared until the time of the interview. Each question was intended as a narrative prompt able to open construction of sense at each stage of the ongoing experience.

The interview was constructed to activate different ways of declining narrative discourse.

There is the alternation between questions that open up episodic narratives (e.g., *I would like you to choose three words/adjectives/idioms that come to mind when thinking about this phase of the experience. There is a particular event/episode to which you*

relate when she says ... We are interested in knowing, what happened, where she was, who else was with her, what she felt, what she thought at the time) and semantic narratives (e.g., *People sometimes imagine or have ideas about why they got sick ... do you have any idea about it or imagine something?*), thus activating the different narrative functions as modes of functioning of narrative thinking.

The questions are ordered to allow a gradual immersion in the critical experience, opening, in the final parts, a space for dialog on resources and changes (e.g., *Could you tell me if there is someone or something that you have felt to be particularly helpful? How? With whom do you find yourself talking about it? Of our meeting ... Could you tell me if there is one thing in particular that you feel you can draw from going through this phase?*). The interview was conducted in an *ad hoc* room of the hospital; it has an average duration of approximately 45 min and was recorded and then transcribed verbatim. The interview was conducted by two women psychologists who are experts in clinical psychology and narrative methodology. The same gender membership has represented a key point to promote the narrative of women. The researchers were young women; this allowed them to construct an empathic and exchange relationship with the patients.

Analysis approach of longitudinal process

We used a theory-driven methodology beginning with the conceptualization of narrative functions and articulation in the text. We took a qualitative narrative approach to an innovative, in-depth longitudinal analysis of the sensemaking processes (Salvatore & Freda 2011; Salvatore & Valsiner, 2011; Valsiner, 2007).

Three independent judges who are experts in the qualitative analysis of texts and share the conceptualization of narrative functions read for each woman. The four longitudinal interviews highlight how each narrative function is transversally articulated in the text during each phase, and then a final categorical label was attributed (narrative modes) after the agreement between the three independent judges. The agreement between judges is attested on 80%.

For each function, we have different narrative modes that express how the function is articulated, in a longitudinal way, in all the narrations. On the one hand, for each narrative mode emerged, an absolute frequency count is made used counting technique.

Secondly, a longitudinal graphic representation of the trajectories of narrative modes most salient in terms of frequency (predominantly) for each narrative function during different times of cancer experience (T1-T2-T3-T4), which allows us to highlight how narrative functions are presented in each time of experience, highlighting different flows of narrative sensemaking.

Results

In the first section of the results, we describe longitudinally for each narrative function all the modes that we have attributed to indicate how each narrative function is articulated in the narrations during different times, reporting each mode's respective exemplary narrative segments.

Table 2. Longitudinal analysis of functions: narrative modes emerging in each phases with absolute frequency count.

	Organization of temporality	Search for meaning	Emotional regulation	Orientation to action
Time 1	Relived 6	Non sense 2	Pervasive 7	Uncertain 7
	Chronological 3	Generalized 2	Disconnected 3	Dependent 2
	Suspended 1	Internalized 6		Combative 1
Time 2	Chronological 6	Generalized 6	Disconnected 8	Combative 7
	Interrupted 2	Externalized 2	Pervasive 2	Uncertain 3
	Reconstructive 1	Internalized 2		
Time 3	Chronological 2	Externalized 7	Embodied 7	Combative 8
	Reconstructive 8	Generalized 3	Connected 2	Dependent 2
			Pervasive 1	
Time 4	Chronological 4	Non sense 1	Connected 4	Combative 7
	Blocked 3	Generalized 2	Pervasive 2	Uncertain 2
	Reconstructive 3	Externalized 3	Disconnected 4	Revaluing 1
		Internalized 4		

This section of the results is useful to present all the different modalities that characterize the whole narrative universe under consideration, even those with less predominance, with which each function is divided into different phases. In particular, the phase in which a modality occurs for the first time (T) will be highlighted and whether it occurs again in other phases or is characterized as exclusive to a specific phase, taking in mind a criterion of predominance of a modality on the other.

In the second section, we illustrate, for each phase of the disease, how each narrative function is predominantly articulated in terms of narrative modes, which, discussed longitudinally, can offer the image of a narrative sense-making flow during different times.

A longitudinal interpretation through the functions at different times of the disease: a vertical interpretation

The function *Organization of temporality* takes the following modes: relived (T1), chronological (T1), suspended (T1), interrupted (T2), reconstructive (T3), blocked (T4), (Table 2).

The relived mode highlights a narrative by which the temporal framework links the current time of the experience in progress with a time of one’s past, in which cancer, or other painful experience, has already been experienced on an individual or family level. Through the narration, continuity is achieved with one’s past, which is configured as already expected. The present time of the disease actualizes worries connected to past experiences. This mode occurs in a peculiar way in phase 1, at the time of the diagnostic study (Table 3).

Chronological mode highlights a narrative by which the temporal framework is focalized on the eternal present. The narrative scans a time marked by medical practices, by the surgical operation that has taken place, by appointments for chemo and radiotherapies, for a time that is marked exclusively by medical practices. This method is present constantly in every time of the disease experience with a particular incidence in the time following the surgery in which the woman knows the treatment to be performed (Table 3).

Table 3. Functions and modes with examples of narratives.

Function	Modes	Narratives
Organization of temporality	relived (T1)	<i>I already come from grandparents, uncles, relatives, both from the side of mom and dad ... here he is.</i>
	chronological (T1)	<i>.in early July, in mid-July, they had already operated on me ... then, I started the therapies, then chemo, then radio.</i>
	suspended (T1)	<i>I struggle I don't remember well; I wait ... I live in a confused way; The problem is that you always have to wait.</i>
	interrupted (T2)	<i>Since I learned about it, my life has stopped I only think about the word chemotherapy.</i>
	reconstructive (T3)	<i>before I was super energetic, I did many things ... now I feel down; maybe it's the drugs too; The period does not help, the heat, I already don't love the heat it throws me down together with the therapies ... then it's August we go on vacation, so many things put together, not being able to take the girls to the sea because every week I have to stay there (in hospital) even in August, one is 9years old and the other 14 and a half years old. The 14-year-old goes to sea with friends and (I have arranged) that she will go to sea for a week with a friend of mine.</i>
Search for meaning	rejected (T4)	<i>I don't want to talk about it ... nothing happened, I don't want to say anything.</i>
	internalized (T1)	<i>Maybe a little ... I don't know, maybe it's that I always looked beyond always turned toward others and not toward myself.</i>
	generalized (T1)	<i>I don't think there is a particular reason why a person gets sick; it happens, it happens... that's enough.</i>
	Non sense (T1)	<i>I am not giving any explanation; it is not anyone's fault.</i>
Emotional regulation	externalized (T2)	<i>We have to take it with the lord, the will of the lord ... whatever God wants.</i>
	pervasive (T1)	<i>It's very disgusting, doctor ... this thing is too disgusting; I miss the air; I see everything black; I am still distressed by this thing, I live in this thing! It's not that I can distract myself, yes I get distracted but in the end we always talk about the same thing; I don't cook anymore, I don't play with my grandchildren ... this disease has invaded everything.</i>
	disconnected (T1)	<i>I have no words; I don't know; I don't know how to describe it, a very specific adjective ... nothing.</i>
	connected (T3)	<i>now I am realizing, I feel lucky. I am fine with this disease; unfortunately, there is someone who is not.</i>
	embodied (T3)	<i>(ah) Tiredness, vomiting, nausea, eh ... pains; they made me have side effects you have to unblock your hand because your fingers are blocked.</i>
Orientation to action	uncertain (T1)	<i>I can talk about it now, but then, we have to see if I have the strength to do it; It depends on what will be.</i>
	dependent (T1)	<i>These days make me feel discouraged; it is poignant. I need to trust, here I feel protected, in the structure, in my city, I have to rely.</i>
	combative (T1)	<i>You have to fight; you have to keep going. I get up in the morning and say I have to move on. You just have to face things; you cannot afford to break down; The only thing that is needed is strength; if you are not strong, you do not go forward. I have to be resolute because taking pills every night for 5years is so annoying.</i>
	revaluing (T4)	<i>There are so many useless actions that make you lose energy now. I focus on the essential things.</i>

The *suspended mode* highlights a narrative by which the temporal framework appears suspended and confused in the present, characterized by the expectation to still understand the gravity and destiny of the evolution of the disease. The narrative appears

to fail in its attempt to identify temporal connections. This mode occurs peculiarly at the beginning of the disease experience (Table 3).

The *interrupted mode* highlights a narrative by which the temporal framework focuses on the breakdown and fragmentation of the biographical flow following the onset of the disease. The two planes of time, past and present, are organized around aspects of discontinuity divided at first, and after the onset of illness. This modality presents itself in a peculiar way in the postoperative counseling phase, in which the woman knows the therapy to be performed (Table 3).

The *reconstructive mode* highlights a narrative by which the temporal plane is narrated by connecting the watershed of the before and after of the disease and the changes introduced by it. Likewise, illness enters as an object to be integrated into the future flow of family life and the outside world: this modality appears for the first time, predominantly during chemo and radiotherapy treatments, and then reappears at the time of follow up (Table 3).

The *blocked mode* highlights a narrative by which the temporal plan appears to be avoided and rejected. The narrative is articulated through a non-recognition of the time of the illness that has just passed and an impossibility to re-cross the experience and look back by representing the illness as a rejected area of one's experience. The narrative appears to fail in its attempt to identify temporal connections. This mode appears peculiarly in the last phase of the disease (follow up).

Regarding the *search for meaning* function, it is articulated narratively according to these modes: internalized (T1), generalized (T1), non sense (T1) externalized (T2).

The *internalized mode* is expressed in a narrative that connects the disease to dimensions of the self. This modality organizes a process of withdrawal and reflection on oneself. The search for the meaning of the current experience is within themselves. It is allocated in one's own body, genes, and story and in those proper behaviors that could have been different, thus ascribing the cause to himself. This modality occurs in all phases of the experience except during chemo and radiotherapy treatments (Table 3).

Generalized mode expresses itself in a narrative that seeks an anchor to a generic meaning. The shared/cultural/taken for granted dimensions of meaning to make the world traceable to stable mechanisms that govern it, considering the illness as something that is a part of life and is connected to the whole, without particular causes. It can perhaps be considered a proof (Table 3).

The shared/cultural/taken for granted dimensions of meaning are part of our belief system, assumptions that help us form judgments, values, make meaning, and draw conclusions about what is happening and what others are thinking. They are the invisible and form the culture context of a shared system and they help a system to performs in the life.

This modality occurs at every stage of the disease experience with particular relevance during the post-surgery phase and the communication of the severity of one's pathology.

Nonsense mode expresses itself in a narrative that organizes the impossibility of searching for meaning in words. There is a sense not attributable to what we are experiencing. This method is present at the beginning and at the end of the illness experience (Table 3).

The *externalized mode* is expressed in a narrative that opens the gaze outside of itself, moving it from itself. The narrative allows operating a process of removing causality from oneself, attributing it to the outside, identifying specific causes in fate, God, the environment, and uncontrollable external factors. This modality appears starting from the post-surgery phase and discovering the degree of malignancy of one's pathology, also remaining in the subsequent phases (Table 3).

The *emotional regulation function* is articulated in the following modes: pervasive (T1), disconnected (T1), connected (T3), embodied (T3).

The *pervasive mode* highlights a narration by which the emotion can put into words, but they express themselves in their raw state, invading the affective plane and the whole plan of the experience. This modality occurs in all phases of the disease experience, emphasizing the initial phase of onset (Table 3).

The *disconnected mode* highlights a narration by which the plan of emotions and events cannot meet. Through the narration, the woman expresses the difficulty of finding words to her hearing. The emotional plane is not connected to the experience. The narrative proposes adherence to the concrete level of the disease's experience disconnected from the emotional level. It is not yet possible to name the emotions connected to the event. There is no clarity on how it feels for them (Table 3). This modality occurs in all phases, except during chemo and radiotherapy treatments. We find this modality particularly incidence during the post-surgery phase and knowledge of the disease's severity.

A *connected mode* highlights a narration by which the function of emotional regulation connects various levels of life and allows us to feel emotions in the sense that an emotion is connected and integrate with the thought. The women meta-reflected on the new connections that are created in the *hic et nunc*. The emotion is regulated on the level of thought (Table 3). This mode is present during chemo and radiotherapy treatments and remains during the end of the experience.

The *embodied mode* highlights a narration where regulating emotions starts from a bodily feeling, from sensory elements. Putting into words a pain now inscribed on the skin; it is physical and emotional, presenting itself in images. It is the event's emotional impact that is told. These are intrusive sensorial traces related to the body, its losses, the medications to be taken autonomously, the body image, and the image of oneself. The pharmacological therapies lead to early menopause and have a series of side effects compared with which the woman tells her profound discomfort (Table 3). This modality occurs peculiarly during chemo and radiotherapy treatments.

The function of *orientation to action* is articulated in the following mode: uncertain (T1), dependent (T1), combative (T1), revaluing (T4).

Within the *uncertain mode*, narration organizes the uncertainty related to the future, the orientation to action find the uncertainty related to its positioning at that moment of the experience, in which the possibility to transform thought in action is not yet accessed and not touching the narrative question (Table 3). This mode occurs exclusively in the first two phases of the disease experience.

In the *dependent mode*, narration articulates aspects linked to experience based on impotence, mistrust, despair, and resignation. It refers to a position that translates into a dependency positioned toward the medical context. The woman expresses

overwhelming feelings and fragility but remains mostly blocked concerning the action (Table 3). This modality constantly occurs in all phases except for the post-intervention phase and knowledge of the pathology's degree of severity.

The Combative mode highlights a narration by which to connect herself and the action. A combative orientation takes on an imperative meaning of the illness's presence, linked to the patient's need to respond actively to cope with the treatment she will receive. So the orientation to action looks at what will have to happen in the flow of the disease experience (Table 3). This modality takes place starting from the first phase to remain and strengthen in all subsequent phases.

Revaluing mode highlights a narrative that connects the disease's current time with the time before the disease. It offers the opportunity to resume the disease's previous functions and give them a new meaning in the present (Table 3). This mode occurs only at the end of the illness experience.

A longitudinal reading through the phases in the different functions: an horizontal interpretation

In phase 1 (Figure 1), we can observe how the disease onset constitutes an event with a high emotional impact. The narrative frame of time turns its gaze toward the past by associating, through a process of emotional analogy, all the painful experiences, particularly illness, passed through in one's personal and past family life. The search for the reasons related to the onset of the disease is oriented within oneself, in one's family history, in one's behavior. The emotionality in its raw state, the pain, the anguish pervades every space of thought, making the narrative space for putting into words and containing aspects the patient has yet to process. Decision-making and action are also suspended in a waiting period of medicine that the narrative allows us to put into words (see also Table 3).

In phase 2, we can observe how the post-surgical phase and the histological response allow us to begin to build a time in disease history to begin narrating through the evolution of medical routines and actions. The search for meaning begins to expand beyond one's family history and interior to narrate in more general terms. The disease onset is narrated through the anchoring to aspects of existence over which the woman had no power. Furthermore, in this phase, emotionality needs to be kept separate from thought and events as a probable strategy for facing this phase. The orientation to action and decision-making show a combative quality. The woman narrates her descent into the field and the battle by drawing on her internal resources to face it (see also Table 3).

In phase 3, phase of chemo and radiotherapy treatments, we can observe an organization of time to reconstruct the events. The past time can be narrated, and, through the narration, new connections can be found, allowing us to reflect on the ongoing experience. The emotional plane is governed by dominion over the body, its sensations, and its effects because of the treatments. The narration tells of a mutilated body, first, and distorted afterward. Body sensations build embodied meanings aimed at searching for signs and words for one's feelings. The action plan and decision-making are based on a combative modality as before (see also Table 3).

In phase 4, at the end of the treatment process, there is variability in the modalities for each function. The woman starts on a new path: treatment termination, disease remission, and progressive reduction of dependence on the medical institution. It is a phase of regaining one's existence and opening toward the new continuity of life. The modalities move from a more developed side to a less developed side. She organizes time from a reconstructive mode of the entire experience to a chronological and blocked mode. The search for meaning shows all modalities from the suspended one to the internalized one; emotional regulation moves in the same line from a connected mode to a disconnected mode; the orientation to action and decision-making confirm on a combative mode as a trend of most of the sample (see also [Table 3](#)).

Discussion

This study, in an innovative way, unfolds through a binocular look: our method of analysis, that is, the functions and different modalities that emerged, on the one hand, offer us a vision through the functions in every phase of the disease path and, on the other, a vision through the phases in the different functions. Our method of analysis has allowed us to take a double look: on the one hand, being able to follow the narrative functions in the evolution of the different phases, on the other, being able to explore the different phases in the evolution of the different narrative functions.

By looking through the functions in the different phases of the disease, we observed the quality of the trajectories that emerged through repeated narration during four phases. We have found and interpreted the sensemaking process that each function goes through in different ways according to the experience.

On the one hand, these narrative functions, intended as markers of the narrative sensemaking process, signal a progression in which the narrative device activates specific psychic functions in each phase of the experience. They tend to integrate and construct an internal synthesis of meanings between the self and the world, activating previously unexplored strategies to face the illness.

On the other hand, these markers give us the chance to reflect on the most critical modes, which tend to be rigid and to crystalize, representing areas of risk as in emotion regulation function. Specifically, in the transition from T1 to T2 and in the transition from T3 to T4, we note a difficulty in connecting one's emotions to the events that are going through, which stands in a disconnected mode. This result allows us to highlight the critical issues in constructing the link between emotions and events, which starts from the moment of communication of the histological report and from the beginning of invasive and long-lasting therapies and which persists over time. These markers indicate the rigid structures of relationship with the events that are likely to remain during the crossing of different treatment times, possibly affecting the quality of life and adaptation to the experience.

As confirmed in the study of Cicolletta, Gammino & Palmieri (2017) regarding the longitudinal exploration of illness trajectories perception in the context of sclerosis, we want to highlight how the sensemaking process's trajectories show a common feature in the different functions (organization of temporality; search for meaning; emotional regulation; orientation to action) as illness experience evolves, highlighting

a common trend. On the one hand, the functions related to the early stages of the disease experience (T1-T2-T3) highlight some specific modalities more clearly; on the other hand, at the end of the T4 disease experience, they more clearly highlight a variegated assortment of modalities (Figure 1). This movement could be connected to a greater convergence of meanings linked to the disease's early stages and the medical process. At the end of the experience, the patient may articulate a greater variability of the experience related to the subjective to re-read it and configure the articulation toward a still uncertain future. It could also be linked to the aspects with which the woman articulates the relationship with her own experience in this phase and to the ways of reconstructing a new subjective position in her relationship with the disease, no longer mediated by the medical institution but subjectively connoted in her relationship with a new future (in remission and follow up).

Taking a look through the stages in the various functions, we also observed the specific aspects of every phase of the medical treatment; thus, it is possible to observe how not all the phases of the illness ring internally in an equal way in young women. It is possible to identify which phases of BC treatment appear to be more critical for women below 50 years old from a clinical point of view. Each phase is characterized by specific and peculiar psychic challenges, presented in the introductory part of our work that the woman must face. The research work presented represents at the same time a method of research and understanding of the experience of women in the different phases of the disease but also represents a method of clinical intervention to be developed in future works. As emerges from the analysis of the narrative, each phase of the disease generates specific processing tasks, trajectories of adaptation to experience, and integration of sense making between continuity and discontinuity of experience (Cipolletta, Gammino & Palmieri, 2017).

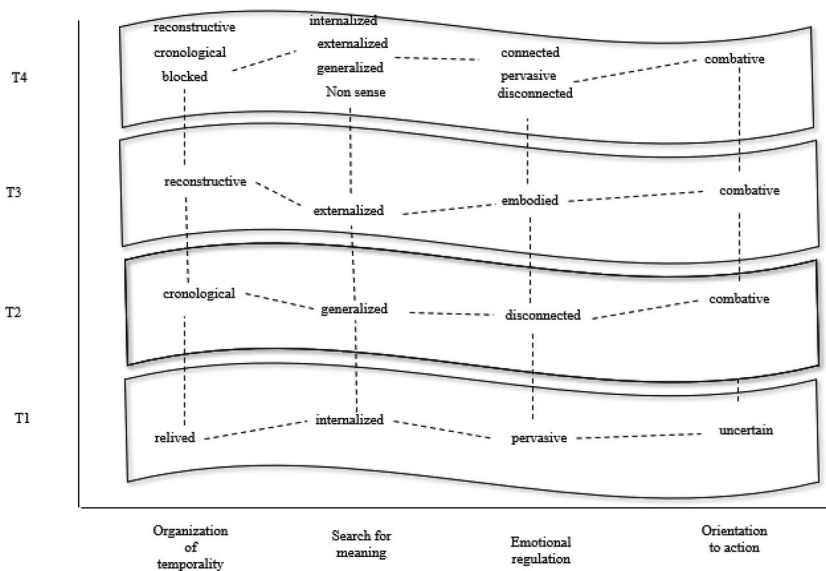


Figure 1. A longitudinal predominant narrative modes trajectories through the phases in the different functions.

Starting from these premises and based on the results that emerged from our analysis, we can advance some hypotheses on a clinical level. Within a framework of clinical psychology of health, we think of a narrative intervention based on the promotion of health and well-being aimed at diachronic processing of the experience, aimed at all women, as a possibility to support the coping functions of adaptation. Let's think about the possibility of reading and interpreting the different functions and methods that emerge in their mutual relationship to give the current experience meaning by integrating all functions. A type of narrative, diachronic and personalized intervention (Cipolletta, Gammino & Palmieri, 2017) based on the possibility of accompanying and supporting the construction of resources to elaborate the relationship with experience and helps to face the psychic tasks that this relationship poses, from time to time, in salience (White & Epston, 1990). By letting ourselves be guided by the most salient modalities that emerged in the different phases, we can advance some clinical suggestions.

Regarding the first phase of the disease, we can think of an accompaniment to welcome and actively listen to the disease onset. This allows the woman to cope with the sudden emotional impact of the experience (pervasive mode), emphasizing what the current experience reopens and updates, in temporal terms, compared to similar experiences in the past (relieved). The work will aim to discriminate between past and current experiences, consider ways of coping with similar past experiences and possibly build connections with the waiting and uncertainty that is part of the current experience (uncertain).

Regarding the second phase of the disease, following the knowledge of the degree of malignancy of the pathology, one can think of an accompaniment aimed at building a narrative space capable of asking the question of "why me?", oscillating, and not crystallizing, between an intra-subjective position and an intersubjective position (generalized). The construction of the subjective meaning of the experience arises precisely from recognizing emotions (disconnected). The recognition, differentiation, and narrative labeling of the emotions at stake also play an adaptive value concerning the experience. This process can begin with putting the problem at a distance, which allows building new ways of relating to it and supporting an active position, already present, toward the disease (combative).

Regarding the third phase of the disease we can think of an accompaniment to connect sensations, which now come from a body changed due to chemo and radiotherapy treatments, emotions, and events. Listening and speaking of the body's sensations will represent how to connect, on a more advanced level, with the emotions experienced (embodied). This connection process opens up to a re-crossing of the experience lived up to now (reconstructive) and a narrative reorganization to build a subjective emotional position toward events. This process allows regulating and balancing the relationship between emotions and events.

Regarding the fourth phase of the disease, the various modalities that emerged show a relationship based on the variability of the relationship with experience due to the disease's remission and an independent look toward the future. You can think of an accompaniment aimed at identifying the new links built up to now and meta-reflecting on them to integrate the experience into one's life story. This narratively allows the patient to transform and reorient, where necessary, her relationship with the direction

of actions. With the integration of experience, she can adapt to a new version of herself. This process allows, by revisiting the events experienced, to start a process of reevaluating one's experience and preparing for the future.

Conclusion

In the conclusion of our research work, we would like to highlight some key central aspects in constructing an intervention model aimed at promoting support in the coping and adaptation process during the illness experience.

First of all, we want to reflect on the use of the narrative interview. The interview turned out to be both an exploratory tool, as used in research, and a diachronic narrative assessment device capable of giving the clinician a trend in the relationship between psychic functioning and ongoing experience. With the interview, analyzing narrative functions serve as a diachronic map of the relationship with experience, which, in terms of future development, can be used by giving it a prognostic value, on the one hand, and risk prevention on the other hand.

In the evolution of our research, it will be useful to enlarge the sample of women and fine-tune and validate the model of intervention to construct a personalized narrative intervention practice to promote a well-being support or activate clinical pathway estimates.

This study's limits are related to the number of narrative groups that do not allow generalizing the results. This study proposes an in-depth vision of the individual narratives and favors a longitudinal vision. The *ad hoc* data analysis methodology and the narrative interview represent an original and innovative product of this study that will need further studies to validate the method terms.

Disclosure statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Notes on contributor

Maria Luisa Martino is the scientific coordinator of the project, she developed the theoretical framework of the present study, designed the research project, and contributed to the scientific supervision of the entire study. Daniela Lemmo and Anna Gargiulo contributed to the methodological approach, development of narrative interview, collection of data, and wrote the manuscript. Daniela Barberio, Valentina Abate support the construction of the introduction and interpretation of findings. Maria Francesca Freda supervised the work and the project. All authors discussed the results, commented the manuscript, and gave the final approval of the work.

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