

Public cancer screening services and participation: What meanings in users' narratives to promote engagement?

Maria Luisa Martino PhD  | Daniela Lemmo PhD  | Marcella Bianchi  |
Maria Florencia González Leone PhD  | Anna Rosa Donizzetti PhD  |
Maria Francesca Freda PhD  | Daniela Caso PhD 

Department of Humanities, University of Naples Federico II, Naples, Italy

Correspondence

Maria Luisa Martino, via Porta di Massa,
1, 80133, Naples, Italy.
Email: marialuisa.martino@unina.it

Funding information

Regional Prevention Plan (PRP Campania
2020–2025 Ministry of Health, Italy), project
MIRIADE, Grant/Award Number:
DGRN_403_9/12/2020

Abstract

Despite the effectiveness of cancer screening (CS) in providing timely diagnoses and early treatments, the participation of citizens remains very low in particular in Southern Italy. This study aims to investigate the meanings that intervene in the relationship between the individual and their active participation in CSs within public healthcare. A total of 101 ad hoc semi-structured interviews were collected with CS users in public service of Campania Region, Italy. The interviews were analyzed through a qualitative–quantitative methodology by T-Lab software. A cluster analysis and multiple matching analysis were conducted. Findings show five clusters: *prevention as a sensory and emotional burden*; *prevention as a strategy to manage the hereditary risk of death*; *individual's internal demand for health*; *the times and places of prevention*; and *the concreteness of doing prevention*; and two factors: *from the risk of disease diagnosis to preventive measures* and *from external healthcare settings to internal self-care settings*. Findings shed light on how to construct better well-being promotion strategies and foster a subjective health and prevention demand accounting for the continuous experiences of those participating in CSs to encourage greater citizen engagement.

KEYWORDS

cancer screening, engagement, meanings, qualitative–quantitative

Key points

- Despite their proven effectiveness in providing timely diagnoses, early treatments and the cost-free, participation and engagement of citizens in public cancer screening (CS) programs, in particular mammography, cervical, and colon–rectal ones, remain very low in Southern Italy as well as in the EU countries.
- Citizens' construction of decision-making to participate in CSs does not only depend on the accessibility of public health service but also on the meaning construction of individual self-engagement in CSs as a health practice. Results show how participation in CSs does not

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2024 The Author(s). *Nursing & Health Sciences* published by John Wiley & Sons Australia, Ltd.

appear just to be a *cognitive action to be performed* but rather a process of *emotional and sensorial burden* that implies the self, life continuity, and family history.

- From a clinical perspective focused on health promotion, it emerged the importance of building spaces suitable for supporting a coherent meaning construction for cancer prevention. This entails conducting training sessions within psychological and medical primary care settings for healthcare professionals—doctors, nurses, and health psychologists—to improve communication and relational skills aimed at supporting users' *intrinsic motivation to change*.

1 | INTRODUCTION

In Italy, cancer screening (CS) programs are public health services included in the essential levels of care (LEAs) to ensure citizens' right to safeguard their health. Within public healthcare, three types of CSs are offered at regular intervals to individuals of specific target populations: (i) women aged 50–69 are invited every 2 years to undergo a bilateral mammogram for breast cancer risk assessment; (ii) women between the ages of 25 and 64 are offered a Pap test for cervical cancer every 3 years; and (iii) for colorectal cancer, both men and women aged 50–74 are invited every 2 years to undergo a fecal occult blood test.

Despite their proven effectiveness in providing timely diagnoses and early treatments, only 41% of the Italian population are eligible for mammographic screening, 28% of women are eligible for cervical screening, and 30% of the target population for colorectal screening participate in organized CSs (WHO, 2022). This data show a further decline when Southern Italy is considered (PASSI, 2020).

Internationally, the last *Cancer Screening in the European Union* report (2017) confirms the low rates of participation across many European countries. For the three population CS programs, the European states have developed shared guidelines to identify the targeted population and the procedures and methods to be implemented to achieve the success of the population campaigns. According to such report, in 2016, these programs were adopted by 22–25 of the 28 countries and the majority of them have been financed by public health funds (free of cost for citizens) and generally proposed via an invitation letter. However, despite such efforts, even in Europe, the CS coverage is rather low or even very low in many of the member states, indicating a poor acceptance of these health interventions among the target population.

As suggested by the mentioned rates, a gap emerges between the proven medical effectiveness of CSs, the healthcare offering them for free, and the citizens' *health decisions*.

The literature points to several individual, emotional, and relational factors that can determine people's decision to participate in CS (Vallone et al., 2022; Bertaut et al., 2018; O'Donovan et al., 2021; Tur-Sinai & Shahrabani, 2020), as well as barriers and obstacles that make such decisions increasingly complex (Irina et al., 2023). Adopting the user's perspective, citizens have to decide *whether* to undergo the screening, *where* to do so, *which type* of screening to undergo among those offered, and *how* to relate to the timing proposed by the public intervention programs. In this regard,

the epistemological framework of shared decision-making (SDM; Kiviniemi et al., 2009) indicates that many CS decisions are increasingly recognized as *preference-sensitive*, meaning that because of closely balanced benefits and harms, the “right” decision depends in part on an individual's values and preferences for particular outcomes (Lillie et al., 2014; Sheridan et al., 2004).

Lastly, it is worth noting that the utilization of healthcare services is influenced by predisposing, enabling, and necessity factors (Andersen et al., 2020; Brzoska et al., 2020). These factors delineate actual accessibility criteria to healthcare, which can be understood as the degree of fit between an individual's health needs, the characteristics of healthcare providers, and the health service system.

1.1 | Narrative and meaning-making: A mediation between subject and public CS service participation

The decision to participate in CSs may subjectively represent a critical, high emotional impact experience for oneself (e.g., anxiety, fear, terror, and disgust), which opens up hypothetical uncertain scenarios and the possibility of suddenly discovering a risky condition and/or an illness (Martino et al., 2024). As documented in the literature, such negative emotions could interrupt the course of preventive action (Wilson & Gilbert, 2005). Within this scenario, the construction of subjective meaning-making represents a crucial aspect, which can give conscious direction to health-related actions and contain the negative emotions elicited. The narrative device supports the construction of a meaning-making framework for events, helping individuals adapt emotionally to potential health threats. It helps people identify and label the emotions underlying their experiences and understand the connection between them and their thoughts. Through this process, events can be interpreted within a more understandable and thought-provoking framework (Martino et al., 2022; Lemmo et al., 2022a). Creating a narrative and ascribing meaning to personal experiences also play a pivotal role in emotional regulation. It inherently compels individuals to engage with their emotions, imposing the need for adjustments not only while experiencing an event but also when such an event is later recalled and becomes a subject of narration. Studies have shown that attributing meaning is linked to improved coping and adjustment (Singer et al., 2013). Additional research has emphasized that integrating narratives, which contribute to a sense of coherence and continuity, assists individuals in effectively handling their emotional responses. Such narrative integration guides their actions and

offers increased control and predictability in their lives (Fivush et al., 2011).

Moreover, by fostering emotional literacy and management (Bion, 1994; Bruner, 1991), articulating emotions in words (Pennebaker, 1997), and facilitating social emotion sharing (Rimé, 2009), narration also enables individuals to identify, label, and engage with their emotions *from a certain psychological distance*. This capacity extends to the realm of thought, allowing the inclusion of the other(s) in one's mental processes. Consequently, it helps unravel potential barriers to action triggered by negative emotions, as it allows access to various interpretations of what a certain emotion means in the complex dynamics of self-balance. This process broadens the spectrum of potential actions and expands the range of perspectives on the situation (Martino et al., 2015; Bion, 1994; Bruner, 1991). Hence, it is recognized as a cohesive resource individuals can continuously draw from to pursue their health objectives (Lemmo et al., 2022b).

Currently, few qualitative studies have been focusing on the link between the CS user and their public offer in a perspective based on narration and a socio-constructivist approach. Thus, this study aims to investigate the meanings that intervene in the relationship between the individual and their active participation in CSs within public healthcare through a qualitative-quantitative methodology. In this study, the employ of a qualitative-quantitative methodology, using T-Lab software, was rooted in three key reasons: (i) it appeared particularly suitable for handling the large volume of narrative data collected (Lancia, 2004, 2008); (ii) this methodology can, to a certain degree, improve the generalization of obtained results compared to other fully qualitative methodologies; and (iii) the performed technique supports the comparison between the meanings referred by users of different CSs. Thus, in line with our aim, T-Lab software can support ad hoc analyses adequate to capture in-depth the subjective nuances of the narrative meaning-making experience of the participant.

Moreover, it also has the goal of highlighting specificities and differences among the three considered CSs. Thus, it will shed light on how to construct better well-being promotion strategies and foster a subjective health demand accounting for the continuous experiences of those participating in CSs to encourage greater citizen engagement.

2 | METHODS

2.1 | Participants and procedures

The research was carried out as part of the MIRIADE Project. A total of 101 Italian adults ($M_{\text{age}} = 53.96$; $SD = 10.03$; 83.16% females) from the Campania region joined the research and agreed to be interviewed. As for the main inclusion criteria, all participants were recruited after they participated in a breast, cervical, or colorectal CS at local public health facilities and thus pertained to such target populations (breast: females 50–69 years; cervical: females 25–64 years; colorectal: females and males 50–74 years). In the final sample,

61.39% of participants were users of public breast CSs, 23.76% of public cervical CSs, and 14.85% of public colorectal CSs.

The interviews were conducted between January and July 2022 and took place at the facilities of the Local Health Centre that joined the MIRIADE project. These facilities provided the researchers with a private room for conducting the interviews, during which only the interviewer and the participants were present. Employing purposive sampling, participants were engaged in the study by asking them their willingness to join after briefly explaining the purpose of the study. As every CS user present during the days and times set aside for data collection was invited to join, researchers did not account for the number of people who refused to participate in the study. Qualified female psychologists experienced in qualitative research methodologies applied to psychoncology (Maria Luisa Martino, PhD, researcher in clinical psychology; Daniela Lemmo, PhD, postdoctoral research fellow; and Maria Florencia González Leone, PhD, postdoctoral research fellow) interviewed the participants after they had undergone the breast, cervical, or colorectal CS. Specifically, the interviews occurred after the examinations but before the participants received their results, considering the waiting period. Interviewers and participants had no prior relationships. Each interview was audio-recorded, transcribed verbatim, and lasted about 20–25 min. All interviews were conducted between January and August 2022. The sample size was determined using the principle of data saturation, whereby the authors concluded the collection of new interviews once no new insights or themes emerged from the data. Participants did not receive the transcripts nor provided feedback on the findings. Participation was voluntary, and every participant signed an informed consent form for their inclusion in the study, as well as a privacy protection document in accordance with GDPR EU 2016/679, D.L. 101/2018 regulations. The study adhered to the principles of the Declaration of Helsinki and was approved by the Ethics Committee for Psychological Research of the Department of Humanities of Federico II University Naples, IT (prot. no 16/2022).

An ad hoc semi-structured interview was developed to understand the meaning individuals attributed to engagement in preventive health practices. The interview grid was designed to explore various domains that, based on existing literature (González Leone et al., 2024; Lemmo et al., 2022b; Darbyshire et al., 2006; Wang et al., 2019), delve into the connection between the individual and the meaning associated with preventive health practices. The interviews dynamically tracked the evolution of individuals' experiences in a chronological and context-dependent manner, exploring the meaning of various phases within the screening process. The interview grid was employed with a flexible approach to closely align with the narrative progression of the interviewee and their own process of meaning-making. The interview was tested in a pilot study, before the administration to the population target, with a small sample of 10 voluntary participants.

The interview explored the following domains employing the reported conversational prompts (see Appendix A for the whole narrative interview grid):

- Representation of health and risk (*Could you tell me what health means to you? What are the main ways you take care of your health? When you think about the risk of disease, what comes to your mind?*)
- Previous history of access to the health service (*How did you find out about the prevention program? Was this your first contact with this service? What convinced you to participate?*)
- Experience of the screening examination, focusing on the physical sensations and emotions (*During the examination, what sensations did you feel? What emotions? How would you define the health relationship in this place?*)
- Aspects that foster engagement in the screening time and process (*What could help you to participate in this ongoing prevention? What could influence this decision?*)

2.2 | Data analysis

The analysis of the interviews was carried out using T-Lab (Lancia, 2004, 2008), which is a software designed for qualitative–quantitative text analysis. This software helps to identify dimensions of meaning and themes in the text by comparing lexical profiles (Bolasco, 1999). The interviews were collectively treated as a single body of text or corpus. To achieve our objectives, we employed elementary context units (ECUs), a cluster analysis, and a waterfall analysis to depict these data as active variables on a factorial map through multiple matching analysis.

2.2.1 | Rationale of analysis of ECUs with T-Lab software

The T-Lab software examines the texts as a unified dataset (Denzin & Lincoln, 1994), scrutinizing lexical choices, exploring co-occurrence, and conducting a comparative analysis. The ultimate outcome condenses common themes into a few substantial thematic clusters, forming a contextual field of shared meanings among participants (Reinert, 1995). This process enables the construction of a cohesive narrative thread within the discourse.

The lexical units incorporated into the analysis result from a meticulous selection process to generate a list of *keywords*. Each cluster comprises a collection of ECUs (sentences, paragraphs, or brief texts sharing similar keyword patterns) and is delineated by a set of keywords. These keywords are ranked based on the decreasing χ^2 values to signify their typicality within the cluster, providing insight into their semantic value (Lancia, 2004). This allows a reflexive process of interpreting the meaning of individual words by considering a range of ECUs and analyzing them within the context in which they are employed. The understanding of a word is discerned solely through its relationship with the context, specifically, its distribution within a portion of text (Greimas, 1983; Rastier et al., 2002). For each cluster, a label was assigned, and the most significant lemmas were recorded in descending order based on their χ^2 values.

TABLE 1 Preliminary organization of the text corpus.

Step	Transformations
Lemmatization	This process involves transforming verbs into their present infinitive forms, nouns, and adjectives into their singular masculine forms and articulated prepositions into their article-less forms.
Disambiguous	Consisting in resolving ambiguous semantic cases, particularly those involving homographs with identical graphic forms but different meanings.
Lexicalization	Converting a linguistic unit into a string of phrases composed of two or three words collectively conveying a unified meaning.
Cleaning the vocabulary	Removal of all words not providing any meaning in themselves, such as the abbreviations, proper names, articles, and conjunctions.

Subsequently, the clusters that emerged were projected on the factorial plan through a multiple correspondence analysis to further analyze them based on their position on the factorial axes in reason of V-test values (positive and negative levels of association of clusters and variables for each polarity). First, the textual material was organized following the steps reported in Table 1. The analyses were conducted by Maria Luisa Martino, Daniela Lemmo, and Marcella Bianchi. Then, the whole text corpus thus obtained was analyzed.

3 | RESULTS

3.1 | Quantitative results: Cluster analysis

The analysis of the text corpus was characterized by 97 506 occurrences, 7033 of which were distinct forms. Among those, 1556 ECUs and 4479 lemmas were identified. The active variable inserted by researchers was “screening” (breast, cervical, and colorectal).

From the cluster analysis, five significant clusters emerged. Clusters, indicated by interpretative labels, are detailed below in descending order based on the explained variance, with main lemmas presented according to χ^2 values (Table 2).

After completing the cluster analysis, a multiple correspondence analysis was performed by projecting the emerged clusters, and the screening variable according to the two factorial axes was executed. According to the two factorial dimensions obtained, positive and negative levels of association (V-test) of clusters and variables for each polarity will be presented (e.g., similarity and oppositions). Factor 1 was named *from the risk of disease diagnosis to preventive measures*, while factor 2 was named *from external healthcare settings to internal self-care settings*.

3.2 | Qualitative results: Cluster interpretation

Below we will present the interpretation of five clusters emerged from the analysis, for each cluster, we will report the ECU with high

TABLE 2 Cluster analysis results.

Cluster	Lemmas χ^2 values
1. Prevention as a sensory and emotional burden (395 ECUs, 26.56%)	Anxiety (84.47); hope (83.78); calm (59.44); body (53.36); positive (52.86); care (38.95); negative (38.40); result (38.26); truth (35.45); pain (34.60); worry (29.18); tension (28.67); take (25.64); result (25.45); right (22.74); prevention (22.74); and embarrassment (20.50).
2. Prevention as a strategy to manage the hereditary risk of death (375 ECUs, 25.22%)	Mother (191.01); children (141.05); child (96.81); dying (91.28); illness (58.24); cancer (55.79); problem (53.55); life (45.21); father (42.86); son (42.23); daughter (38.98); parent (38.18); family (37.68); bad (35.89); growing up (32.57); solving (21.60); and risk (18.24).
3. Individual's internal demand for health (267 ECUs, 17.96%)	Put (236.43); health (207.56); important (193.22); question (51.99); difficulty (44.47); feel (36.45); available (34.02); ease (33.08); well-being (31.75); overweight (28.39); for_me (26.68); address (23.69); body (21.44); physical (20.93); meaning (20.67); and need (20.26).
4. The times and places of prevention (248 ECUs, 16.68%)	Mammogram (268.03); Pap test (108.22); privately (90.04); years (86.43); time (72.12); call (60.52); year (59.94); Local Health Authority (56.91); the first time (51.07); public (47.27); ultrasound (46.35); breast (46.14); private (39.63); screening (39.09); test (36.62); and camper (32.89).
5. The concreteness of doing prevention (202 ECUs, 13.58%)	Booking (237.83); visit (82.44); hospital (76.31); pay (62.88); physician (48.47); aspirate (32.38); withdraw (31.32); health center (29.34); deliver (26.22); exemption (26.22); booked (26.22); first (26.22); clinical (25.90); ultrasound (25.59); and month (24.95).

scores that characterize and represent mainly the cluster. The ECUs belonging to each cluster are ordered according to the decreasing value of their score. That is, the relevance value (score) assigned to each ECU in the cluster.

Prevention as a sensory and emotional burden cluster embraces various facets of the emotional and somatosensory burden of undergoing CSs. The lemmas in this cluster refer to the subject's engagement in coping with negative emotions and bodily sensations related to the fear of the unknown and the risk of disease to which screening opens without, however, letting fear, worry, and tension interrupt the action (Wilson & Gilbert, 2005). In this sense, this cluster brings out an unavoidable—and sometimes ambivalent—connection between the screening experience and certain emotions and feelings that need to be embraced and subjectively managed to continue in the course of preventive action.

...No, I'm accustomed to it, so I know that there's always another person doing their work on the other side. Yes, there's always the fear, the anxiety. I feel it, and this anxiety then provokes me stress, and so I start sweating, or my hands become dry or even freeze... (score 73.33).

...The fear is always there, but I try to restrain it because this is a health issue (...) It is normal for it to be there. You know, there is this tension, unfortunately... we have to prepare ourselves mentally, anyway (...) So we prepare and hope, I even prayed this morning... hopefully, these are still dramatic things (score 73.33).

Prevention as a strategy to manage the hereditary risk of death cluster condenses all aspects of heredity and familiarity with cancer diseases that move access to screening (Martino et al., 2023). This horizon of meaning does not particularly emphasize the use of

screening as a device to monitor health maintenance, but rather its employ as a remedy for the risk of death and disease that one already feels destined for. Hence, this cluster also introduces a *family view* intended not only as intergenerational transmission of disease risk but also as a commitment to ensure the continuity of a healthy self *because of* the perceived responsibility toward significant others (i.e., the children).

...Then, I am afraid because of the genetic familiarity with the disease. As I said, after my mother, I also lost my brother. Well, I lost my father, then after less than a year my mother, and after that my brother died of stomach cancer. It was really invasive... He suffered so much, even more than my mother and my father, it appeared on his leg, and then in his face... It was growing all over (100.44).

It is essential. It should be an act of responsibility, especially toward the children, who still depend on us... So, we really should do it. My father, for instance, had a colonoscopy because he thought he had diverticula and instead he found a tumor that was just about to be born... (score 155.83).

The times and places of prevention cluster reflects all the meanings related to the times and places in which prevention and screening are administered and uptaken. This cluster represents a dimension of meanings linked and specific to CSs only addressed to females (breast and cervical), in which the contraposition between the public and private healthcare systems becomes more prominent (e.g., let's think to the presence of private gynecologist in women life) together with the accessibility of public screening facilities and their free offer. This cluster captures specific issues of female screenings contrary to the other clusters that capture mainly the transversal dimension of meanings. In

this cluster, in the case of these settings typically addressed to women, private healthcare seems to take over where the public CS services fail to personalize the path to access and the exam administration or when the woman needs more frequent follow-ups because of a higher risk or personal concerns. This cluster also highlights how continued participation in prevention is strictly linked to the temporal aspects of continuity in the relationship with the facility, logistics, and ease of access—all factors that play a paramount role in the choice.

...I have a predisposition for breast cancer, so I don't do the screenings just of my own free will. I do it one year within the public offer because it's free and the next year I do it privately (...) I did [the colorectal screening] once. I got the kit at home, and then sent it to the analysis lab through a pharmacy (score 306.35).

...Yes, I'm accustomed to always coming here because he was working here, so I felt safe enough to do the mammogram. I've always done it here since I was 40, because I already had a predisposition, so I started doing it. The place is very close for me (score 174.21).

Individual's internal demand for health cluster includes elements related to the responsibility of self-care and the importance of health for itself. This horizon of meaning highlights a demand for health that starts from the self and tends toward constructing well-being in all aspects of life experience. In such a cluster, the demand for health represents an active search that is not limited only to cancer prevention but extends to bodily wellness, nutrition, and the search for remedies for the overall protection of one's health.

As I said before to the practitioner, since every afternoon I watch 'Health and Wellbeing' on tv, for me, health equals wellbeing. In short, being healthy is important, so you're also happier and can give even more to others. Yes, I try to take care of myself, in the sense that for hair problems, I go and buy medicine; for nails, the same thing... I try to do something to age better. I try to be ok (score 115.00).

It should mean much but, in reality, it is something that I have neglected and given too little importance to because I have failed myself. I did not give myself that importance to guarantee the certainty of health for myself, even though I knew that I needed it anyway, just for myself, my health and my integrity (score 90.72).

The concreteness of doing prevention cluster holds together several aspects of the active positioning toward prevention. Doing prevention seems to represent, in this sense, not only a psychological engagement aimed at undergoing CSs but also a concrete and operational engagement in the actual performance of all related practices. So the

entire process of CS participation not only relies on undergoing the exam in itself but also encompasses the active assumption of some procedural and organizational aspects related to the phase *before* the screening exam (e.g., booking, the visit, paying, and the exemption) and *post*-screening (e.g., picking up the report and consulting).

...I gave a call to the centre the first time, I booked, and I came. Then, as time passed, after two, then three years... Well, when it's time to have the checkup, I go and do it. They called me because during the Covid all was temporarily suspended, so this week they called and I booked both the pap test and the mammogram for today (score 72.72).

I called because I knew everything was already booked, but they told me I could come because I was in the age range. They said I could book it, so I did and came. I have been in different facilities and did the screening exams in other places... If I remember correctly, the first time I did it, it was in the hospital, I was 40 (score 82.76).

3.3 | Factor interpretation

Projection into factorial space allowed the observation of the oppositions and proximities between the emerged dimensions of meaning (the clusters) and the three types of screening starting from the positive and negative levels of association (V-test) of clusters and variables for each polarity will be presented (Table 3; e.g., similarity and oppositions). Therefore, the labeled and interpreted factors should be regarded as a continuum through which the subjective meaning of experience unfolds, organizing and connecting the dynamics of the relationships between the different semiotic horizons (Figure 1).

Factor 1 (*from the risk of disease diagnosis to preventive measures*) opposes two different ways of interpreting the role of prevention in individuals' lives. At one pole, prevention is considered a remedy for the risk of death caused by genetic familiarity, which particularly characterizes breast CS. In this connotation, it prompts establishing a continuity of time and place, which could support its psychic containment. At the other pole, instead, the internal demand for health that extends to all the spheres of life (and which also imposes some negative affective costs) activates the more concrete elements related to taking charge of prevention and caring for personal health, and thus to prevention meant as protection and custodianship of individual well-being. This pole is, conversely, more relevant for cervical and colorectal CSs.

This factor highlights differences in meaning-making linked to the different screening types: screening for breast cancer is mainly linked to the woman's awareness of the presence of hereditary risk of the cancer in her family (we hypothesize that this may be related to high number of information campaigns on BC); cervical and colon-rectal CS is interpreted as prevention and care of one's health, not necessary

TABLE 3 Clusters and variables association (V-test) with positive and negative polarities of both factors.

Factor 1: From the risk of disease diagnosis to preventive measures (18.44%)			
Negative pole		Positive pole	
Cluster or variable	V-test	Cluster or variable	V-test
Breast cancer screening	−280 858	Cervical cancer screening	231 102
C3. The times and places of prevention	−183 431	C5. The concreteness of doing prevention	179 207
C1. Heredity as a cure for the risk of death	−143 347	Colorectal cancer screening	102 256
		C2. Individual's internal demand for health	87 359
		C4. The sensory and emotional cost of prevention	80 828
Factor 2: From healthcare settings to internal self-care settings (17.19%)			
Negative pole		Positive pole	
Cluster or variable	V-test	Cluster or variable	V-test
C5. The concreteness of doing prevention	−197 193	Colorectal cancer screening	25 863
Cervical cancer screening	−163 862	C1. Heredity as a cure for the risk of death	113 851
C3. The times and places of prevention	−152 171	C4. The sensory and emotional cost of prevention	112 919
		C2. Individual's internal demand for health	70 734

linked to the presence of hereditary risk in the family. We believe that the difference in this interpretation may also lie in the difference between the external and visible organ (breast) and the non-visible internal organs (uterus and colon).

Factor 2 (from external healthcare settings to internal self-care settings) counterpoints two separate ways of experiencing the screening. The first pole distinguishes a markedly concrete and operational level of prevention, mostly related to organizing the places and times of prevention, which mainly characterize cervical CS. Conversely, the other pole represents an exquisitely internal and emotional fact of the screening experience. Within this perspective, the screening emerges as a possible remedy for the risk of death generated by cancer familiarity, as a psychic turning-point posing high sensory and emotional costs, or even as an essential responsibility toward personal health. The issues of familiarity with cancer that would lead to identifying the screening as a possible remedy against the risk of death and, in addition, the emotional and ambivalent cost of the screening exam enter into dialogue with the responsible maintenance of self-care and

protection of personal health (*health demand*), particularly connoting the experience of colorectal screening.

This factor highlights differences in meaning-making compared to the three screening types: cervical screening is characterized by the specificity issue of the relationship between public and private contexts of care for women's health, let's think of the presence of the private gynecologist in women's life; colorectal screening (the only one both for female and male) is mainly characterized as screening that responds to an internal health demand by responding to the sense of primary prevention provided by the public health service.

3.4 | Discussion

Results of the present study highlight some interesting aspects of the meaning-making processes of citizens participating in public prevention initiatives, particularly in CS programs offered within public healthcare in the BLINDED.

In general terms, the construction of decision-making for involvement in preventive practices seems to be based on two macro-trajectories of signification. On the one hand, there is the individual's subjective way of interpreting and making meaning of preventive action. On the other hand, the importance of the subjective way of experiencing and living the relationship with the CS experience emerges.

Through the description of the emerged clusters, we observed how preventive practices are associated with meanings involving sensorial elements—namely, the sensory dimensions connected to the specific exam, involving sensitive organs and examinations that can procure pain or discomfort—as well as emotional aspects that find their expression in the body. The risk of death, linked to a family history of cancer, is emotionally shaped as an important driver for preventive action. This is in contrast to that part of the literature that points to fear and dread as an inhibitory factor to health preventive practices (Martino et al., 2024; Wilson & Gilbert, 2005).

Moreover, it seems relevant that prevention emerges in a connotation strictly linked to “doing.” Thus, prevention is, in fact, an *action* that recognizes both the active position and entitlement of the subject and an internal demand for self-care that collides with places, times, and health relationships that regulate access. This interpretation embraces a conception based on an active engagement of the subject in the relationship with public health services, a subject involved in self-care and choosing to adopt health behaviors such as CSs (Hoffman et al., 2010; Siu et al., 2016). In this sense, coherently with SDM (Kiviniemi et al., 2009), an engaged individual is potentially more able to be involved in a participatory process when it comes to making decisions about their health trajectories, but they are also more capable of activating the healthcare system by taking advantage of the opportunities offered (Graffigna & Barelo, 2017). Hence, engagement supports autonomy and self-determination, promotes trust in the doctor–patient relationship, improves knowledge, and reduces decision-making conflicts.

In conclusion, regarding the different types of CSs, we can suggest that maintaining the timing proposed by public healthcare seems challenging—mainly for breast but also cervical ones—since, in these

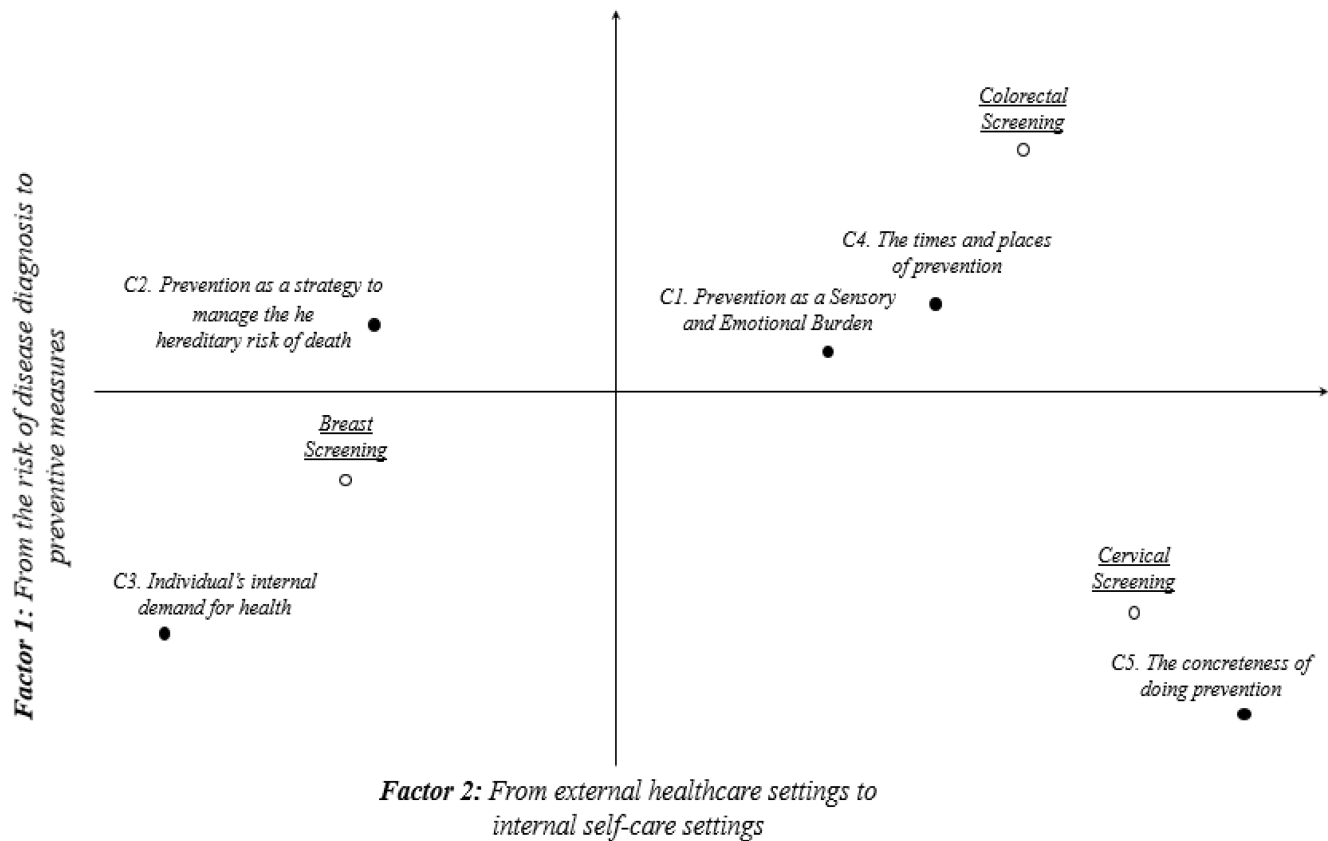


FIGURE 1 Factorial map of clusters and variables.

cases, prevention often takes the form of risk monitoring, resulting in a tendency to alternate between public and private venues (e.g., private gynecologist). Consequently, when screening takes on the specific meaning of preventing an oncological risk, individuals involved express the need to follow a different timing than that indicated by public programs, which appears insufficient. In contrast, whereas breast cancer prevention mainly polarizes meanings related to the cancer (which is more familiar and therefore can be imagined), in the case of cervical and colorectal cancer, prevention tends to polarize meanings that evoke representations of health and well-being.

3.5 | Limitations and future research

Net of the relevant contribution to the psychological literature about the processes underlying CS participation in public healthcare and its relevance for clinical practice, this study is not without those limitations that generally characterize the employed study design and methodology. Notably, the cross-sectional design only allows drawing conclusions concerning the precise moment during which data was collected, precluding analysis of how the expressed meanings may shift over time and experiences with repeat screenings, as well as casual inferences. Furthermore, the sampling procedure also poses limitations—for instance, as we

only collected data concerning those who decided to join the research and, we cannot address the selection bias, for instance, the number of people who declined participation was not recorded, which significantly limits the generalizability of the findings. Moreover, the study only collected basic participant characteristics, such as age and gender, overlooking other potentially influential sociodemographic factors. Also, due to the inclusion criteria and the specificity of the considered CSs target population, in our sample, women were particularly overrepresented compared to men, and we only included citizens of a specific Italian region, which still exhibits a robust cultural identity that could influence the transferability of these findings to other national and international contexts. In light of that, future studies should expand on the present findings, investigating these themes in different samples and cultural contexts, accounting for other demographic characteristics of participants, including perspectives from non-participants in CSs.

4 | CONCLUSION

The present study offered the opportunity to explore and understand the contexts of meaning that organize the relationship between citizens who actively decide to participate in public CSs and the services that deliver them.

While, on the one hand, citizens' construction of decision-making regarding such practices involves adapting the public CS services for the benefit of the population, this study reveals that the promotion of accessibility operated by the public service does not constitute the central aspect. On the contrary, it suggests that the meaning of participating in CSs actually lies in constructing a transitional space of thought in which the preventive practice starts as *external* and becomes *internal*, allowing the development of a subjective meaning for participation and engagement in cancer prevention. Hence, this passage entails a shift from considering it a remedy to a *risk* to a different consideration, less anchored to the idea of the disease and more focused on monitoring good *health*.

Moreover, this study illustrates that individuals participating in CSs can be regarded as *engaged* subjects reflecting on the meaning they personally attribute to well-being and health. Consequently, they are able to navigate the critical phases and concrete relational aspects of such experience—namely, the barriers and procedures—associated with participating in these medical exams. Thus, regarding such experience, our findings support the possible coexistence of several ways of meaning-making. This implies we do not intend to indicate *normative* approaches to access and engagement in cancer prevention. Rather, more modestly, we believe that our dive into the perspectives of those participating in screenings can help inform about the internal drivers from which the interviewed subjects build and maintain active engagement toward prevention. In particular, such observations should advise the future construction of campaigns for promoting good institutional communication and, in general, health promotion practice and interventions.

5 | RELEVANCE FOR CLINICAL PRACTICE

Based on our findings and consistent with the aforementioned conclusion, we can highlight two main trajectories for clinical practices linked to the construction and promotion of a health demand and motivation for engagement. Participation in CSs does not appear just to be an action to be performed but rather a process that brings into play aspects of the self, personal continuity, and family history—which is particularly salient for breast CS—and which imposes, every time, high emotional and sensorial burden due to the uncertainty entailed in the screening. Therefore, constructing an internal space of thinkability seems to allow to construct interior areas of awareness and responsibility toward themselves and others based on the value subjectively attributed to the action.

From a clinical practice point of view aimed at promoting health, our findings suggest the importance of building spaces suitable for supporting the construction of a coherent meaning for cancer prevention. This entails conducting training sessions within psychological and medical primary care settings for healthcare professionals—doctors, nurses, and health psychologists—to improve communication and relational skills aimed at supporting the *intrinsic motivation to change* of the citizen (Miller & Rollnick, 2006) to construct a collaborative and SDM. Thus,

opening up spaces of greater thinkability could be a way to address obstacles together with the user, creating a space for discovering how subjective perspective, within these processes, could be a way to construct engagement in oncological preventive practices. It appears particularly relevant for further research to enrich the literature about the meanings connected to the experience of those citizens who do not participate in CS programs in order to understand the personal perspective, in terms of cognitive and emotional meanings, that underlie and obstacle the engagement process.

AUTHOR CONTRIBUTIONS

Maria Luisa Martino: Conceptualization; formal analysis; investigation; data curation; writing – original draft; writing – review and editing. **Daniela Lemmo:** Methodology; formal analysis; investigation; data curation; writing – review and editing. **Marcella Bianchi:** Formal analysis. **Maria Florencia González Leone:** Investigation; data curation. **Anna Rosa Donizzetti:** Conceptualization; writing – review and editing; supervision. **Maria Francesca Freda:** Supervision; writing – review and editing. **Daniela Caso:** Conceptualization; supervision; project administration; funding acquisition.

ACKNOWLEDGMENTS

This study was funded by the Regional Prevention Plan (PRP Campania 2020–2025 Ministry of Health, Italy), project MIRIADE (DGRN 403, 9/12/2020).

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Maria Luisa Martino  <https://orcid.org/0000-0003-1906-9369>
 Daniela Lemmo  <https://orcid.org/0000-0001-6561-3404>
 Marcella Bianchi  <https://orcid.org/0000-0002-9417-7119>
 Maria Florencia González Leone  <https://orcid.org/0000-0002-1996-8439>
 Anna Rosa Donizzetti  <https://orcid.org/0000-0003-2605-8705>
 Maria Francesca Freda  <https://orcid.org/0000-0002-2529-2279>
 Daniela Caso  <https://orcid.org/0000-0002-6579-963X>

REFERENCES

- Andersen, J. G., Shrestha, A. D., Gyawali, B., Neupane, D., & Kallestrup, P. (2020). Barriers and facilitators to cervical cancer screening uptake among women in Nepal – A qualitative study. *Women & Health, 60*(9), 963–974. <https://doi.org/10.1080/03630242.2020.1781742>
- Bertaut, A., Coudert, J., Bengrine, L., Dancourt, V., Binquet, C., & Douvier, S. (2018). Does mammogram attendance influence participation in cervical and colorectal cancer screening? A prospective study among 1856 French women. *PLoS One, 6*(13), 1–15.
- Bion, W. R. (1994). *Learning from the experience*. Routledge.

- Bolasco, S. (1999). *Analisi multidimensionale dei dati. Metodi, strategie e criteri d'interpretazione [multidimensional analysis of data: Methods, strategies and criteria for interpretation]*. Amore.
- Bruner, J. (1991). The narrative construction of reality. *Critical Inquiry*, 18(1), 1–21. <https://doi.org/10.1086/448619>
- Brzoska, P., Aksakal, T., & Yilmaz-Aslan, Y. (2020). Utilization of cervical cancer screening among migrants and non-migrants in Germany: Results from a large-scale population survey. *BMC Public Health*, 20, 1–9.
- Darbyshire, P., Muir-Cochrane, E., Fereday, J., Jureidini, J., & Drummond, A. (2006). Engagement with health and social care services: Perceptions of homeless young people with mental health problems. *Health & Social Care in the Community*, 14(6), 553–562.
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (1994). *Handbook of qualitative research*. Sage.
- European Commission. (2017). *Cancer Screening in the European Union (2017) Report on the implementation of the Council Recommendation on cancer screening*. https://health.ec.europa.eu/system/files/2017/05/2017_cancerscreening_2ndreportimplementation_en_0.pdf
- Fivush, R., Habermas, T., Waters, T. E., & Zaman, W. (2011). The making of autobiographical memory: Intersections of culture, narratives and identity. *International Journal of Psychology*, 46(5), 321–345.
- González Leone, M. F., Donizzetti, A. R., Bianchi, M., Lemmo, D., Martino, M. L., Freda, M. F., & Caso, D. (2024). Users' experience of public cancer screening services: Qualitative research findings and implications for public health system. *Behavioral Science*, 14, 139. <https://doi.org/10.3390/bs14020139>
- Graffigna, G., & Barello, S. (2017). The value of measuring patient engagement in healthcare: New frontiers for healthcare quality. In *Healthcare ethics and training: Concepts, methodologies, tools, and applications* (pp. 1268–1290). IGI Global.
- Greimas, A. J. (1983). *Del Senso 2 [about the sense]*. Bompiani.
- Hoffman, K. E., Nguyen, P. L., Ng, A. K., & D'Amico, A. V. (2010). Prostate cancer screening in men 75 years old or older: An assessment of self-reported health status and life expectancy. *The Journal of Urology*, 183(5), 1798–1802.
- Irino, S., Ose, H., Takata, N., Kamoshida, S., & Ohsaki, H. (2023). Barriers to undergoing cervical cancer screening among health sciences university students in Japan: A cross-sectional study. *Nursing & Health Sciences*, 25(3), 466–473.
- Kiviniemi, M. T., Hay, J. L., James, A. S., Lipkus, I. M., Meissner, H. I., Stefanek, M., Studts, J. L., Bridges, J. F., Close, D. R., Erwin, D. O., Jones, R. M., & Wang, C. (2009). Decision making about cancer screening: An assessment of the state of the science and a suggested research agenda from the ASPO Behavioral Oncology and Cancer Communication Special Interest Group. *Cancer Epidemiology, Biomarkers & Prevention*, 18(11), 3133–3137.
- Lancia, F. (2004). *Strumenti per l'analisi dei testi [tools for text analysis]*. Franco Angeli.
- Lancia, F. (2008). Word co-occurrence and similarity in meaning. Some methodological issues. In S. Salvatore & J. Valsiner (Eds.), *Mind as infinite dimensionality* (pp. 1–39). Carlo Amore.
- Lemmo, D., Martino, M. L., & Freda, M. F. (2022a). Cancer prevention sense making and metaphors in young women's invented stories. *Healthcare*, 10, 2179. <https://doi.org/10.3390/healthcare10112179>
- Lemmo, D., Martino, M. L., Donizzetti, A. R., Freda, M. F., & Caso, D. (2022b). The relationship between healthcare providers and preventive practices: Narratives on access to cancer screening. *International Journal of Environmental Research and Public Health*, 19, 10942. <https://doi.org/10.3390/ijerph191710942>
- Lillie, S., Partin, M., M Rice, Fabbri, A., Greer, N., Patel, S., MacDonald R, Rutks I Wilt, T. (2014). *The effects of shared decision making on cancer screening – A systematic review*. Department of Veterans Affairs (US).
- Martino, M. L., Onorato, R., & Freda, M. L. (2015). Linguistic markers of processing trauma experience in women's written narratives during different breast cancer phases: Implications for clinical interventions. *Europe's Journal of Psychology*, 11(4), 651–663. <https://doi.org/10.5964/ejop.v11i4.991>
- Martino, M. L., Lemmo, D., Testoni, I., Iacona, E., Pizzolato, L., Freda, M. F., & Neimeyer, R. A. (2022). Anticipatory mourning and narrative meaning-making in the younger breast cancer experience: An application of the meaning of loss codebook. *Behavioral Science*, 12(4), 93. <https://doi.org/10.3390/bs12040093>
- Martino, M. L., Lemmo, D., Moylan, J., Stevenson, C., Bonalume, L., Freda, M. F., & Singer, J. A. (2023). The role and function of autobiographical memory narratives during the emotional processing of breast cancer treatment: An empirically-derived memory coding system. *International Journal of Environmental Research and Public Health*, 20, 1492. <https://doi.org/10.3390/ijerph20021492>
- Martino, M. L., Lemmo, D., Donizzetti, A. R., Bianchi, M., Freda, M. F., & Caso, D. (2024). Emotions and narrative reappraisal strategies of users of breast cancer screening: Reconstructing the past, passing through the present, and predicting emotions. *Qualitative Health Research*, 34(3), 263–276. <https://doi.org/10.1177/10497323231214120>
- Miller & Rollnick. (2006). *Motivational interviewing: Helping people change*. The Guilford Press.
- O'Donovan, B., Mooney, T., Rimmer, B., Fitzpatrick, P., Flannelly, G., Doherty, L., Martin, C., O'Leary, J., O'Connor, M., & Sharp, L. (2021). Advancing understanding of influences on cervical screening (non)-participation among younger and older women: A qualitative study using the theoretical domains framework and the COM-B model. *Health Expectations*, 24(6), 2023–2035.
- PASSI (2020). Progressi delle Aziende Sanitarie per la Salute in Italia: la sorveglianza Passi (Progress of Health Authorities for Health in Italy: Surveillance Steps). www.epicentro.iss.it/passi/
- Pennebaker, J. W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science*, 8(3), 162–166. <https://doi.org/10.1111/j.1467-9280.1997.tb00403.x>
- Rastier, F., Cavazza, M., & Abeillé, A. (2002). *Semantics for descriptions*. Chicago.
- Reinert, M. (1995). I mondi lessicali di un corpus di 304 racconti di incubi attraverso il metodo Alceste [the lexical worlds of a corpus of 304 narrations of nightmares through Alceste method]. In R. Cipriani & S. Bolasco (Eds.), *Ricerca qualitativa e computer [qualitative research and computer]* (pp. 203–223). Franco Angeli.
- Rimé, B. (2009). Emotion elicits the social sharing of emotion: Theory and empirical review. *Emotion Review*, 1(1), 60–85. <https://doi.org/10.1177/1754073908097189>
- Sheridan, S. L., Harris, R. P., Woolf, S. H., & Shared Decision Making Workgroup of the US Preventive Service Task force. (2004). Shared decision making about screening and chemoprevention: A suggested approach from the US preventive service task force. *American Journal of Preventive Medicine*, 26(1), 55–66.
- Singer, J. A., Blagov, P., Berry, M., & Oost, K. M. (2013). Self-defining memories, scripts, and the life story: Narrative identity in personality and psychotherapy. *Journal of Personality*, 81(6), 569–582.
- Siu, A. L., & US Preventive Services Task Force. (2016). Screening for breast cancer: US preventive services task force recommendation statement. *Annals of Internal Medicine*, 164(4), 279–296.
- Tur-Sinai, A., & Shahrabani, S. (2020). Determinants of women's decision to undergo early mammography: A survey study. *Nursing & Health Sciences*, 22(4), 1000–1009.
- Vallone, F., Lemmo, D., Martino, M. L., Donizzetti, A. R., Freda, M. F., Palumbo, F., Lorenzo, E., D'Argenzio, A., & Caso, D. (2022). Factors

promoting breast, cervical and colorectal cancer screenings participation: A systematic review. *Psycho-Oncology*, 31, 1435–1447. <https://doi.org/10.1002/pon.5997>

Wang, G. X., Baggett, T. P., Pandharipande, P. V., Park, E. R., Percac-Lima, S., Shepard, J. A. O., Fintelmann, F. J., & Flores, E. J. (2019). Barriers to lung cancer screening engagement from the patient and provider perspective. *Radiology*, 290(2), 278–287.

Wilson, T. D., & Gilbert, D. T. (2005). Affective forecasting: Knowing what to want. *Current Directions in Psychological Science*, 14(3), 131–134. <https://doi.org/10.1111/j.0963-7214.2005.00355.x>

World Health Organization (2022). *A short guide to cancer screening Increase effectiveness, maximize benefits and minimize harm*. Copenhagen. <https://creativecommons.org/licenses/by-nc-sa/3.0/igo/>

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Martino, M. L., Lemmo, D., Bianchi, M., González Leone, M. F., Donizzetti, A. R., Freda, M. F., & Caso, D. (2024). Public cancer screening services and participation: What meanings in users' narratives to promote engagement? *Nursing & Health Sciences*, 26(3), e13146. <https://doi.org/10.1111/nhs.13146>