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A qualitative study investigating cancer survivors' preferences for digital psycho- oncology interventions

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Abstract

Purpose

The increasing demand for accessible psycho-oncological care has highlighted the need for personalized approaches that facilitate effective patient–therapist matching. This study aimed to explore cancer patients' preferences regarding psycho-oncologists, identifying the most important clinical, psychological, and relational variables affecting patient–therapist relationships.

Methods

An exploratory qualitative study was conducted using five online focus groups involving 29 adult cancer patients (mean age = 53.65 years, SD = 8.55). Discussions explored participants' preferences regarding psycho-oncologists' characteristics, therapeutic approaches, care settings, and attitudes toward personalized matching systems. Audio-recorded sessions were transcribed verbatim and analyzed through inductive thematic analysis following Braun and Clarke's methodology.

Results

Empathy emerged as the most frequently reported desired characteristic of the psycho-oncologist (n = 13), followed by supportive-directive attitudes (n = 13), sweetness and reassurance (n = 8), professionalism and clinical experience (n = 5), and oncology-specific expertise (n = 5). Participants emphasized the importance of continuity of care (n = 6) and valued group therapy as a means of reducing loneliness and promoting mutual support (n = 5). Preferences regarding therapeutic orientation were heterogeneous: some participants favored practical and present-focused approaches such as cognitive-behavioral interventions (n = 7), whereas others preferred more exploratory or trauma-focused approaches (n = 7); supportive and solution-oriented interventions were the most frequently endorsed overall (n = 22). Demographic characteristics of the psycho-oncologist were generally considered less important than relational and professional qualities, with 19 participants reporting no specific age or gender preferences. Most participants (n = 27) expressed positive attitudes toward personalized patient–psycho-oncologist matching systems, although they emphasized the need to maintain human clinical judgment within the matching process. Overall, participants highlighted therapeutic fit, emotional safety, and individualized care pathways as central components of psycho-oncological support.

Conclusions

Cancer patients express multidimensional preferences regarding psycho-oncological care that extend beyond demographic characteristics and include relational, professional, and therapeutic factors. These

findings support the development of personalized matching frameworks integrating patient preferences to optimize therapeutic alliance and engagement.

Implications for Cancer Patients:

Designing AI algorithm for patient–therapist matching may facilitate access to psycho-oncologists whose characteristics align with patients' preferences, potentially improving therapeutic alliance, treatment engagement, satisfaction with care, and overall psychological well-being.

Introduction

The number of new cancer diagnoses and individuals surviving longer after cancer has substantially increased over recent decades [1]. In the United States alone, approximately 18.6 million people were living with a history of cancer in 2025, and this number is projected to exceed 22 million by 2035 [1]. As survival rates continue to improve, an increasing number of individuals require highly specialized interventions to address the psychological and social short- and long-term consequences of cancer and its treatment [2].

For these reasons, healthcare systems are increasingly encouraged to adopt integrated models of cancer care in which psychological support is considered a core component of oncology services rather than an optional adjunct [3]. Psycho-oncological care contributes to the management of cancer-related distress, facilitates adaptation to diagnosis and treatment, supports communication and decision-making processes, and promotes quality of life across the entire disease trajectory [4, 5, 6]. International guidelines recommend routine screening for psychosocial distress and timely referral to specialized psycho-oncology services as part of comprehensive cancer care [6]. However, despite these recommendations, access to psycho-oncological support remains limited in many healthcare settings. Major barriers include the insufficient availability of psychologists with specific training in oncology, variability in service provision across institutions, and the concentration of specialized psycho-oncology services within large urban hospitals and academic cancer centres. As a result, many patients experience unmet psychosocial needs despite the recognized importance of integrated supportive care. However, the provision of psychological support is not always feasible. The main barriers include the limited availability of psychologists specializing in an oncological setting and their unequal distribution between areas, with psychological services mainly concentrated in a few urban areas or within large hospital centres.

This uneven distribution forces many patients and caregivers to endure long journeys or to forego psychological support altogether, with significant consequences for both quality of life (QoL) and adherence to medical treatment [7]. To improve accessibility, alternative solutions, such as telemedicine, become crucial [8, 9].

In recent years, technology-based interventions have emerged as a promising strategy to complement traditional psycho-oncological services and address existing barriers to care [10, 11, 12]. By enabling remote delivery, digital tools may expand access to specialized psychological support beyond major cancer centres and reduce geographical and organizational barriers to care [13, 14]. In addition, web-based programs, mobile applications, telepsychology, and virtual reality interventions can support psychoeducation, symptom monitoring, psychological self-management, and continuity of care throughout the cancer trajectory [15, 16, 17]. Consistently, systematic reviews and meta-analyses suggest that digital psycho-oncological interventions may improve quality of life and reduce anxiety, depression, distress, and fatigue among cancer patients and patients [18, 19].

In this regard, the use of digital platforms (e.g., web-based cognitive behavioral therapy programs for reducing distress and anxiety), video consultations (.g., videoconference-delivered psycho-oncological counseling for managing emotional difficulties and fear of cancer recurrence), and dedicated applications has enabled support even for those who, for logistical or personal reasons, would have found it difficult to undertake an in-person pathway [20, 21, 22]. Technology can facilitate initial contact between patient and therapist, as it is designed to be intuitive and easy to use, even for those with little familiarity with digital tools. By reducing practical barriers to access and simplifying the process of seeking support, these platforms may facilitate engagement with psycho-oncological services. In addition, digital systems can incorporate matching algorithms that help connect patients with psycho-oncologists whose characteristics and expertise are more closely aligned with individual needs and preferences, potentially improving the accessibility and personalization of care [23].

The integration of technology and personalized interventions thus opens new scenarios in which innovation becomes a concrete resource for comprehensive, personalized care for cancer patients [24]. In this context, it becomes crucial to understand which factors lead patients to prefer a specific psycho-oncologist to develop increasingly accurate selection and matching criteria. Psychological characteristics and individual preferences may influence both therapeutic choices and the way patients interact with digital health technologies. Previous research has shown that factors such as coping style, illness perceptions, health beliefs, self-efficacy, and individual support needs can shape treatment preferences, engagement with healthcare services, and acceptance of digital interventions [25, 26]. Similarly, patient-related factors including communication preferences, perceived autonomy, and readiness to engage in psychological support have been associated with adherence to digital health interventions and sustained user engagement [27, 28]. Aligning patient characteristics, preferences, and therapeutic approaches may facilitate the development of a stronger therapeutic alliance and improve engagement with both psychological interventions and digital platforms [29, 30]. A meta-analysis by Swift et al. (2018) [31] demonstrated that respecting patient preferences, such as the psychotherapist's approach or treatment type, was associated with better outcomes and a lower risk of premature dropout. Furthermore, studies such as the one by Lipscomb et al. (2010) [32] show that people do not choose a therapist at random: they tend to prefer figures perceived as empathetic, welcoming, and non-judgmental. In many cases, great value is also placed on the professional's academic background, such as holding a PhD, because higher levels of education were often perceived as indicators of specialized

knowledge and preparedness to address the complex psychological challenges associated with cancer [32]. Beyond these aspects, more recent research suggests that the patient's personality traits also influence therapeutic preferences. Heinze et al. (2023) [33] observed that individuals with high openness to experience tend to choose therapists with less conventional approaches, while those with greater emotional stability appear more flexible and less influenced by variables such as the therapist's gender or age [33]. Similarly, patients' decision-making styles and locus of control can deeply influence the choice of a psycho-oncologist. A study by Dopelt et al. (2022) showed that those who perceive greater internal locus of control over their health tend to take a more active role in the therapeutic process: they ask questions, seek information, and participate in decisions [34]. Conversely, cancer patients with an external locus of control tend to delegate entirely to the physician or other professionals [34]. Furthermore, self-efficacy and patient's values can significantly impact treatment adherence [35].

The primary objective of the current qualitative focus group study was to investigate cancer patients' preferences regarding psycho-oncological care delivered through digital tools. Specifically, the study explored which characteristics of psycho-oncologists cancer patients consider relevant when selecting a therapist, including psychotherapeutic orientation (such as cognitive-behavioral therapy) and consultation type (such as individual versus group sessions). Furthermore, the secondary objective of the study sought to identify clinical, demographic, and psychosocial factors that may be associated with these preferences, with the broader aim of informing the development of an AI matching algorithm to optimize the fit between cancer patients and psycho-oncology professionals.

Methods

Study design

A qualitative focus group study was conducted to investigate clinical, psychological, and interpersonal factors potentially relevant to the development of a patient–psycho-oncologist matching framework algorithm. This study is part of a larger mixed-methods research project approved by the Ethics Committee of the University of Milan (Approval No. 82/85, July 8, 2025). Five focus groups were conducted between December 2025 and January 2026. The present paper focuses exclusively on the qualitative findings emerging from focus groups conducted with oncological patients.

Participant selection

Participants were recruited through social media channels, patient associations, and personal contacts using a convenience sampling strategy. *Inclusion criteria* were: (1) having received a current or previous cancer diagnosis; (2) being aged 18 years or older; (3) adequate understanding of spoken and written Italian; (4) possession of basic digital literacy skills; (5) absence of diagnosed psychiatric or neurological disorders; and (6) provision of informed consent through an online consent procedure. *Exclusion criteria*

included: (1) severe cognitive impairment; (2) inability to use technological devices even with assistance; and (3) refusal or failure to provide informed consent.

Sample size was guided by the principle of data saturation, defined as the point at which no substantially new themes or relevant information emerge from the data [36]. Existing qualitative literature suggests that thematic saturation in focus group research can often be achieved within relatively small samples, particularly when participant experiences are sufficiently focused and homogeneous [37, 38]. In line with these recommendations, approximately 25 participants were initially targeted and organized into small focus groups to facilitate active discussion and depth of exploration. Recruitment and data collection continued until thematic saturation was considered achieved.

Procedure

Focus groups were conducted in accordance with the methodological guidelines proposed by Krueger and Casey (2014) [39], while also considering recommendations for the management of online focus groups described by Abrahams (2017) [40]. The focus groups were moderated by three clinical psychologists and researchers (MS, MM, VS). A total of five online focus groups were conducted, each lasting approximately 60–90 minutes. Two focus groups included five participants each, two included six participants, and one included seven participants.

Data analysis

Descriptive statistics were calculated to summarize participants' sociodemographic and clinical characteristics. Audio-recorded focus groups were transcribed verbatim and analyzed using thematic analysis following the approach proposed by Virginia Braun and Victoria Clarke (2006)[41]. An inductive and data-driven approach was adopted to allow themes to emerge directly from participants' narratives without applying predefined coding frameworks. Three psychologists and researchers (MS, MM, and VS) independently familiarized themselves with the transcripts and conducted the initial coding process. Codes and preliminary themes were subsequently discussed and refined through iterative meetings among the research team to enhance thematic consistency and interpretative depth. The analytic process included repeated reading of the transcripts, generation of initial codes, identification of candidate themes, thematic revision, and final definition of overarching themes. Representative quotations were selected to illustrate the main themes identified throughout the analysis.

Results

Descriptive statistics

A total of 29 participants (mean age of 53.65, SD = 8.55) with an oncological diagnosis were included in the present study (Table 1). Regarding educational level, the majority of participants held at least a

postgraduate qualification (master's degree, specialization school, or PhD) (n = 20). 6 participants had completed upper secondary education, while 3 held a bachelor's degree.

With respect to disease phase, participants were asked to self-identify their current stage of illness among four predefined categories: acute phase (recent diagnosis and/or ongoing active treatment, including surgery, chemotherapy, radiotherapy, or immunotherapy), chronic phase (follow-up, clinical surveillance, or remission), advanced phase (recurrent or metastatic disease), or other. Most participants reported being in the chronic phase of illness (n = 19). 1 participant was in the acute phase, whereas 3 participants reported being in an advanced phase of disease. 6 participants selected the "other" category, describing conditions that did not fit the predefined classifications, including recently completed treatments, long-term patientship beyond five years, ongoing hormonal therapy, or completion of the most invasive treatments without reconstructive surgery.

Most participants were from Northern Italy (n = 24), while three were from Central Italy and two from Southern Italy or the Islands. In addition, 21 participants reported having had previous psychological support or psychotherapy experience, whereas 8 had never engaged in psychological treatment before participation in the study.

Thematic analysis

We conducted a qualitative thematic analysis of the data collected through the focus groups. The following themes and subthemes emerged from the analysis (Table 1).

Table 1

Theme	Patients' quotation
Desired characteristics of the psycho-oncologist	ID#6."The first thing, in my opinion, is empathy, because you cannot go to a psychologist who lacks empathy." ID#12. "Competence and professionalism in a psycho-oncologist are very important to me."
Preferences regarding therapeutic setting and intervention style	ID#9.. "I prefer someone who lets you speak but also guides you a little." ID#6. "Group therapy helped me feel less alone, less like I was the only sick person in the world."
Preferences regarding therapeutic orientation	ID#19. "I think it is better to have a therapy that can do something in the immediate present, rather than years and years of therapy." ID#10. "If we are in a psycho-oncology pathway and we cannot talk about the past but only focus on the illness, I want this to be clear between us from the start."
Demographic characteristics of the psycho-oncologist	ID#11. "Age and gender are not important to me." ID#10. "Having someone closer to my age sometimes makes it easier to relate."
Attitudes toward automatic patient–psycho-oncologist matching	ID#21. "I would like a way to know the right approach immediately, because once you emotionally invest in a therapist, changing becomes difficult." ID#27. "More than a questionnaire, I would prefer a screening interview with a real person."

Expected Characteristics of the Psycho-Oncologist

The *first theme* concerned the characteristics participants desired in their psycho-oncologist.

Specifically, five participants emphasized the importance of professionalism and clinical experience in their psycho-oncologist (n = 5). As one participant stated: *"Competence and professionalism in a psycho-oncologist are very important to me."* (ID#22) For thirteen participants, empathy represented the most important characteristic they wished to find in their psycho-oncologist (n = 13). Empathy emerged as the most frequently reported desired characteristic (n = 13). Participants described empathy as essential to feeling understood and emotionally supported during cancer care. As one participant explained: *"The first thing, in my opinion, is empathy, because you cannot go to a psychologist who lacks empathy."* (ID#1). Participants preferred an empathic but balanced approach capable of reassuring and supporting patients without minimizing or catastrophizing their experiences. Directive attitudes also emerged as positively valued by many participants (n = 13). Participants frequently described the need for a psycho-oncologist capable of accompanying and guiding them through the disease trajectory, particularly during moments of uncertainty and emotional distress. However, directive attitudes were appreciated when combined with emotional warmth, sensitivity, and attentiveness. One participant stated that they preferred a professional who *"lets you speak but also guides you a little"*(ID#4). Participants also highlighted the importance of sweetness, calmness, and reassurance (n = 8). These characteristics were perceived as particularly important within oncological settings, where patients often experience fear, uncertainty, and emotional fragility. Participants appreciated psycho-oncologists who adopted a gentle and reassuring communication style while remaining emotionally present and supportive: *"Sometimes I need just a little more kindness. I'm almost tempted to say tenderness or gentleness*". (ID#22)

Attention to non-verbal communication also emerged as a relevant aspect (n = 3). Participants emphasized the importance of facial expressions, tone of voice, emotional presence, and body language in shaping the therapeutic relationship. Coherently, some participants reported discomfort toward professionals whose non-verbal communication conveyed pity or excessive concern *"I'd like someone to pay attention to facial expressions; I often see pity in them".* (ID#17). Other participants also emphasized the value of specific specialization in oncology (n = 5), especially regarding understanding cancer-related treatments, side effects, and psychological consequences of illness.

Preferences Regarding Therapeutic Setting and Intervention Style

The second theme concerned participants' preferences regarding therapeutic setting, intervention style, and organization of psycho-oncological care.

A prominent theme concerned continuity and structuring of the therapeutic pathway (n = 6). Participants frequently expressed the desire to maintain continuity with the same psycho-oncologist throughout the illness trajectory and highlighted the importance of clear therapeutic organization from the beginning of

treatment. Participants emphasized the importance of having a stable “point of reference” during different phases of illness, including diagnosis, treatment, and possible recurrence.

Group therapy emerged as another relevant subtheme (n = 5). Participants described group settings as beneficial for reducing feelings of loneliness and promoting normalization through contact with other patients facing similar experiences. One participant stated: *“Group therapy helped me feel less alone, less like I was the only sick person in the world.”* (ID#6). Participants also emphasized the value of sharing fears, doubts, and emotions in a supportive environment characterized by mutual understanding.

Participants additionally highlighted the importance of multidisciplinary care and collaboration between psycho-oncologists and medical professionals. The possibility of integrating psychological support within the broader oncological care pathway was perceived as highly important, particularly to ensure continuity, communication, and comprehensive patient-centered care.

Preferences Regarding Therapeutic Orientation

Another theme explored during the focus groups concerned participants’ preferences regarding therapeutic orientation.

Several participants expressed a preference for practical and directive approaches focused on the “here and now” (n = 7), particularly cognitive-behavioral interventions aimed at providing concrete coping strategies and emotional support during the cancer journey. One participant stated: *“I think it is better to have a therapy that can do something in the immediate present, rather than years and years of therapy.”* (ID#19) Others appreciated therapeutic styles capable of offering guidance and practical suggestions, emphasizing the importance of an active and interactive therapist rather than a purely passive listener.

At the same time, participants reported heterogeneous preferences regarding therapeutic orientations and techniques. Some participants described positive experiences with approaches focused on trauma exploration or emotional processing (n = 7), while others preferred supportive and solution-oriented interventions (n = 22). Different approaches mentioned by participants included cognitive-behavioral therapy, EMDR, Gestalt therapy, Jungian approaches, meditation practices, yoga, and the Simonton method.

Participants also highlighted the importance of clarity and transparency regarding the therapeutic process, including the goals of therapy, expected duration, and focus of the intervention. One participant explained: *“If we are in a psycho-oncology pathway and we cannot talk about the past but only focus on the illness, I want this to be clear between us from the start.”* (ID#10)

Finally, participants emphasized the importance of integrated and continuous psycho-oncological care (n = 4). Several individuals highlighted the need for collaboration between psycho-oncologists and oncologists, continuity with the same professional throughout the illness trajectory, and greater accessibility of psycho-oncological services within healthcare settings (n = 6).

Demographic Characteristics of the Psycho-Oncologist

The third theme concerned participants' preferences regarding the demographic characteristics of the psycho-oncologist, including age, gender, and cultural similarities.

For the majority of participants (n = 19), demographic characteristics such as age and gender were considered relatively unimportant compared to professional competence and relational qualities. Several participants explicitly stated that age and gender were "indifferent" as long as the psycho-oncologist was empathic, competent, and supportive. However, these findings should be interpreted cautiously, as all participants were women and preferences may vary according to patients' demographic and clinical characteristics.

Some participants (n = 10) expressed specific preferences related to gender and age. In particular, several women preferred female psycho-oncologists when discussing topics related to sexuality, body image, breast cancer, or intimacy, perceiving greater emotional understanding and shared sensitivity in these contexts. Other participants preferred psycho-oncologists closer to their own age, describing younger professionals as more open-minded, curious, and emotionally available.

Affinity at the cultural and personal level also emerged as relevant for some participants (n = 3). Shared language, cultural background, values, or personal interests were perceived as facilitating therapeutic alliance and mutual understanding. One participant described shared interests such as yoga and meditation as a "super plus" within the therapeutic relationship.

Attitudes Toward Automatic Patient–Psycho-Oncologist Matching

The final theme concerned participants' attitudes toward the possibility of automatically matching patients with psycho-oncologists based on individual preferences and characteristics.

Overall, participants expressed generally positive attitudes toward personalized matching systems. The majority of participants (n = 27) appreciated the possibility of identifying the "right" psycho-oncologist early in the care pathway, particularly to avoid emotionally investing in a therapeutic relationship later perceived as unsuitable. One participant explained: *"I would like a way to know the right approach immediately, because once you emotionally invest in a therapist, changing becomes difficult."* (ID#21)

At the same time, two participants emphasized that automatic matching systems should not completely replace human interaction and clinical judgment. Some participants expressed preference for combining questionnaires with an initial screening interview conducted by a real professional. One participant stated: *"More than a questionnaire, I would prefer a screening interview with a real person."*(ID#27). Others highlighted the importance of maintaining the possibility of changing psycho-oncologists if the therapeutic relationship proved unsatisfactory despite the initial matching process.

Discussion

The findings of the present study provide insights about cancer patients preferences for psycho-oncologist and, more broadly, into the psychological and relational dimensions underlying engagement with psycho-oncological care. Overall, the results suggest that psycho-oncological care is perceived not only as a clinical intervention, but also as a highly relational and personalized experience requiring alignment between patients' emotional needs, coping styles, and therapeutic expectations. Among all the characteristics discussed during the focus groups, empathy emerged as the attribute most consistently valued by participants. However, participants did not describe empathy as simple kindness or emotional warmth. Rather, they appeared to value a form of empathy characterized by understanding, emotional availability, and psychological containment. Several participants explicitly rejected attitudes perceived as pitying or excessively dramatic, suggesting that within psycho-oncology patients may seek professionals capable of acknowledging suffering while simultaneously conveying reassurance and stability. The findings are consistent with previous literature on therapeutic alliance in psycho-oncology by suggesting that patients value professionals capable of maintaining emotional closeness while simultaneously conveying psychological containment, reassurance, and stability [42].

Similarly, participants frequently emphasized the importance of professional competence, clinical expertise, and specialization in oncology. Several participants described psycho-oncological support as more valuable when provided by professionals with specific knowledge of cancer and its implications. For example, one participant stated that "*having someone who already knows the disease and understands what you are going through makes a difference,*" (ID#8) while another emphasized the importance of being supported by a professional with "e*xperience in oncology*" (ID#15). These findings suggest that, for many participants, perceived competence was closely linked to the clinician's familiarity with the oncological context rather than solely to general psychological skills.

This result is consistent with previous literature highlighting the relevance of cancer-specific expertise in fostering patients' confidence and engagement in psycho-oncological care. The findings therefore support previous arguments emphasizing the importance of integrated and multidisciplinary psycho-oncological models [43, 44]. Another particularly relevant aspect concerns participants' appreciation for directive and structured therapeutic attitudes. Many participants described preference for psycho-oncologists capable of "guiding" them through the illness trajectory, particularly during periods of uncertainty and emotional vulnerability. This preference may partially reflect the loss of control frequently experienced during cancer treatment [45]. In such contexts, directive interventions may provide emotional containment, predictability, and practical orientation [46, 47]. Notably, however, participants did not appear to desire rigid or authoritarian professionals. Directive attitudes were appreciated only when combined with warmth, attentiveness, and emotional sensitivity. Participants' accounts suggest that oncological patients may prefer therapists capable of flexibly balancing support and guidance according to patients' emotional states and coping needs. From a clinical perspective, these findings may support adaptive or integrative therapeutic approaches rather than strictly nondirective models. The findings regarding non-verbal communication are also particularly noteworthy. Interestingly, participants often discussed non-verbal communication without being explicitly prompted to do so. Facial expressions, tone of voice, and emotional presence were described as highly influential

in shaping first impressions of the psycho-oncologist. Some participants even reported feeling uncomfortable when non-verbal cues conveyed pity. This suggests that seemingly subtle interpersonal signals may acquire particular importance in oncology settings, where patients are already coping with uncertainty, vulnerability, and concerns about their future [48].

Participants also emphasized the importance of continuity and stable therapeutic relationships across the cancer trajectory. The focus groups reflect the fragmented and rapidly changing nature of oncology care, in which patients are frequently exposed to multiple professionals, experience transitions between treatment phases, and face uncertainty regarding prognosis. In such contexts, continuity with the same psycho-oncologist may serve not only as an organizational preference but also as a psychological anchor that fosters trust, emotional safety, and relational stability [49]. The desire for a clear and structured therapeutic pathway further suggests that predictability and transparency may reduce emotional burden and facilitate engagement with psychological services.

The heterogeneity observed in participants' preferences regarding psychological approaches and supportive practices represents another important finding. While many participants appreciated practical and solution-oriented approaches such as cognitive-behavioral interventions, others described preferences for trauma-focused, experiential, or emotionally exploratory approaches, including EMDR, Gestalt therapy, Jungian approaches, meditation, yoga, and the Simonton method. These findings highlight that participants frequently emphasized the desire for interventions capable of producing immediate emotional benefits and concrete coping strategies. This may reflect the urgency and emotional burden associated with cancer diagnosis and treatment, where patients often prioritize symptom management and functional coping over long-term exploratory work [50].

The repeated references to group therapy are also clinically meaningful. Participants frequently described group settings as reducing loneliness, normalizing emotional experiences, and promoting mutual understanding among individuals facing similar conditions. These observations are consistent with previous literature suggesting that peer support and shared illness narratives may reduce isolation and facilitate emotional processing among cancer patients [51, 52]. Interestingly, participants appeared to value groups not only for emotional support, but also for the possibility of feeling "understood" by individuals who had directly experienced cancer. This suggests that experiential similarity may represent a relevant therapeutic factor in psycho-oncology, potentially complementing individual psychotherapy interventions.

Participants emphasized the importance of maintaining human clinical judgment and preserving flexibility within the matching process, including the possibility of changing psycho-oncologists when necessary. Rather than endorsing replacement-oriented models, participants appeared to favor hybrid systems in which digital tools support, but do not replace, human decision-making. The findings therefore align with emerging literature advocating for "human-in-the-loop" AI approaches in mental healthcare and psycho-oncology, where algorithmic personalization may assist clinicians while preserving relational and ethical dimensions of care [53, 54, 55].

Demographic variables such as age and gender appeared relatively secondary compared to relational and professional characteristics. Although some participants expressed preferences for gender similarity or age proximity in specific contexts, most emphasized that competence, empathy, and interpersonal style were substantially more important.

Limitations

Several limitations should be acknowledged. First, the sample consisted exclusively of women diagnosed with breast cancer. While this homogeneity facilitated an in-depth exploration of experiences within a specific clinical population, it limits the transferability of the findings to other oncological groups. Previous research has shown that psychological adjustment, supportive care needs, body image concerns, illness perceptions, and help-seeking behaviors may vary according to cancer type and disease location [56, 57, 58]. Consequently, preferences regarding psycho-oncologist characteristics and matching criteria identified in the present study may not reflect those of patients with other cancer diagnoses.

Second, participants were characterized by a relatively high educational level. Educational attainment has been associated with greater health literacy and digital health literacy, which can influence attitudes toward technology-based healthcare solutions and digital interventions [59, 60]. Therefore, participants may have been more receptive to the idea of technology-supported matching systems than populations with lower educational attainment, potentially limiting the applicability of the findings to more diverse patient groups.

Third, previous experience with psychological support may have influenced participants' ability to articulate preferences regarding psycho-oncological care. In the present sample (n = 21), participants reported previous psychological or psycho-oncological support. Prior psychotherapy experience has been shown to shape expectations, preferences, and perceptions of therapeutic relationships [31]. As a result, some preferences identified in this study may reflect previous experiences with psychological services and needs, rather than solely patients' needs in oncology settings [61].

Fourth, the study relied on voluntary participation in focus groups, introducing the possibility of self-selection bias. Individuals willing to participate in discussions about psycho-oncological support may be more interested in psychological care, more comfortable discussing emotional experiences, or more motivated to engage with healthcare services than non-participants. Consequently, the findings may overrepresent the perspectives of patients who are already relatively engaged in psychosocial aspects of cancer care.

Finally, as an exploratory qualitative study, the findings do not allow conclusions regarding whether the identified preferences would translate into improved therapeutic alliance, engagement, satisfaction, or clinical outcomes. Further quantitative and longitudinal research is needed to evaluate the predictive validity and clinical utility of patients–psycho-oncologist matching criteria.

Conclusions

The findings of this study have several implications for the development of future patients–psycho-oncologist matching frameworks. Participants consistently described preferences extending beyond demographic characteristics, emphasizing relational qualities such as empathy, emotional warmth, non-judgmental attitudes, and communication style, considering the crucial role played by emotions in the cancer'patients overall well-being [62].

Similarly, the professional characteristics, including oncology-specific expertise, therapeutic approach, and preferred levels of guidance within therapy, is relevant. These findings suggest that patient preferences regarding psycho-oncological support are multidimensional and may not be adequately captured by demographic matching alone.

From an algorithm development perspective, the present study provides an initial set of candidate variables that may inform future matching models. However, the qualitative nature of the findings does not allow conclusions regarding the relative importance of these variables or their actual impact on therapeutic processes and outcomes. Consequently, the preferences identified in this study should be considered preliminary and require further empirical validation.

Future quantitative research should examine whether these dimensions are associated with clinically meaningful outcomes, including therapeutic alliance, treatment engagement, psychological distress, and quality of life. Establishing the predictive value of specific matching variables will represent a crucial step toward the development of evidence-based and patient-centered matching frameworks in psycho-oncology. In this sense, the present study contributes to the identification of potentially relevant matching dimensions that can be systematically evaluated in subsequent quantitative and longitudinal investigations.

Declarations

Competing Interests

The authors have no relevant financial or non-financial interests to disclose.

Ethics Approval

This study was performed in accordance with the principles of the Declaration of Helsinki. Approval was granted by the Ethics Committee of the University of Milan (Approval No. 82/85, July 8, 2025).

Consent to Participate

Informed consent was obtained from all individual participants included in the study.

Consent for Publication

All participants provided informed consent for the anonymous publication of their data.

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Author Contribution

All authors contributed to the study conception and design. Material preparation, data collection, and analysis were performed by MS, MM, and VS. The first draft of the manuscript was written by MS, and all authors commented on previous versions of the manuscript.GP supervised the study. All authors read and approved the final manuscript.

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AI tools were used to standardize the manuscript, as English is not the author's first language.

Data Availability

The datasets generated and/or analysed during the current study are available from the corresponding author on reasonable request, subject to ethical and privacy restrictions.

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