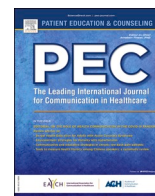




Contents lists available at ScienceDirect

Patient Education and Counseling

journal homepage: www.journals.elsevier.com/patient-education-and-counseling

A qualitative analysis of educational, professional and socio-cultural issues affecting interprofessional collaboration in oncology palliative care

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ABSTRACT

Objectives: Oncology palliative care (PC) services seek to improve quality of life in patients with cancer. PC providers face significant systemic obstacles, stemming from insufficient collaboration between healthcare providers. This study explores these obstacles and strategies to help facilitate successful collaboration amongst healthcare providers at a systemic level.

Methods: A multicenter qualitative study was conducted via interviews and focus groups. Fifty employees in Italian-speaking Switzerland were interviewed, along with ten relatives of oncology patients. Framework analysis was used to identify and categorize the most prominent themes.

Results: Three main themes were identified: knowledge of and connection to other healthcare approaches; beliefs, attitudes and behavior regarding collaboration; and values, attitudes and beliefs towards life, end-of-life and optimal care approaches for oncology patients.

Conclusions: Strategies that promote interprofessional collaboration and oncology PC services should foster a cultural shift towards perceiving these services as a medical specialty, thereby contributing to quality patient care.

Implications: An overview of potential limitations is provided, in addition to a timeline of interprofessional collaboration which would help to optimize oncology PC services.

1. Introduction

Palliative care (PC) services were developed to support cancer patients and their families, who often face complex physical and emotional challenges. These services improve quality of life in patients and their families, helping them meet their needs [1]. Despite their immense value, there are many barriers to the use of PC services [2]. Such barriers are apparent even in countries with high-quality healthcare systems [3]. Knowledge deficits and insufficient collaboration between healthcare providers are among these obstacles requiring further research [2]. While previous studies have examined interpersonal and organisational issues affecting collaboration [4,5], system-related issues have yet to be adequately explored.

San Martín-Rodríguez, Beaulieu, D'Amour and Ferrada-Videla [6]

have classified several factors influencing collaboration. These factors include socio-cultural, educational and professional aspects, such as beliefs, values, behaviors [6,7], or interpretations of events shared by a group [7]. We investigated how these aspects are transmitted via education, thereby influencing collaboration.

This study aims to explore the interprofessional collaboration experience between healthcare providers practicing in oncology, primary care and PC settings from socio-cultural, educational, and professional lenses. This study focused on identifying perceived systemic barriers and factors facilitating successful interprofessional collaboration within a given specialty, and between various specialties.

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<https://doi.org/10.1016/j.pec.2022.05.006>

Received 24 October 2021; Received in revised form 19 April 2022; Accepted 10 May 2022

Available online 20 May 2022

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2. Methods

2.1. Participants

We interviewed various professionals employed in primary care, oncology and PC, including healthcare professionals (HPs), allied healthcare professionals and non-medical volunteers (AHPs), all of whom work with adult cancer patients. We also interviewed the heads of healthcare units and organizations, as well as experts in oncology and PC [i.e., key informants (KIs)]. These participants were recruited from 14 institutions and seven care practices in Italian-speaking Switzerland, which has an approximate population of 381,000 [8,9]. We also interviewed relatives of deceased cancer patients. The interviews with HPs, AHPs and KIs were conducted from August 2018 to January 2019, and those with relatives from January to February 2020.

2.2. Procedure

2.2.1. Data collection methods

To recruit HPs, AHPs and KIs, we contacted professional associations, organizations, and hospital units. To recruit relatives, we prepared and distributed pamphlets at pharmacies, hospitals and PC/oncology organizations. Our sample population consisted of a wide range of interdisciplinary professionals to represent the experiences and perceptions of a variety of individuals [10,11]. We decided to include the relatives of deceased patients rather than patients themselves due to ethical concerns. Asking PC or end-of-life patients to reflect on their use of support services could have adverse effects on their psychological wellbeing (e.g., frustration) or influence their future healthcare choices [12,13].

Semi-structured interviews (see Appendix 1) were conducted individually in private locations within each hospital, clinic and organization, or via telephone when a face-to-face interview was not feasible ($n = 2$). Relatives of deceased cancer patients were interviewed either via semi-structured individual interviews or as part of a focus group discussion (see Appendix 2) [14]. The relatives were asked to evaluate their experience with healthcare services and describe their observations pertaining to collaboration within these services. For example, they were asked if they perceived conflict between healthcare services and how they perceived the HPs' and/or AHPs' roles, especially regarding their tasks and responsibilities during their relative's care. Researchers [MB, ND, SR, and Claudia Zanini (CZ)] with extensive experience in qualitative methodology conducted the interviews and facilitated the focus group discussion. MB has a background in clinical and health psychology, public health and health communication, and ND has a background in communication sciences and health communication. SR has a background in classics, philosophy and health communication, and CZ has a background in sociology and health communication.

2.2.2. Design

A multicenter qualitative study was conducted via interviews and focus groups. Framework analysis was used to identify and categorize the most prominent themes. For analytical purposes, we categorized all practitioners with a specialization in PC as PC providers. We also considered the other HPs and AHPs whose work was at least 80% focused on specialized PC services, as well as the leaders and experts in PC (KI), to be PC providers. All participants who did not belong to a specialized PC team [e.g., general practitioners (GPs) and oncology providers] were categorized as non-palliative care (NPC) providers. Chaplains, social workers and volunteers were categorized as support group professionals for anonymity purposes. We used the term 'healthcare providers' to refer to both HPs and AHPs. All but one interview, as well as the focus group, were conducted and analyzed in Italian. Thus, the applicable quotes were translated from Italian into English. Data were anonymized prior to analysis to ensure participant confidentiality. Digital audio recordings of the interviews and focus

group were saved to a secure server and the local audio files were deleted.

2.2.3. Ethical considerations

Approval was granted by the ethics committees of three Swiss regions in June and July 2018. Participants were provided with a study information sheet prior to the interview or focus group, and signed a consent form. Participants' names were anonymized and alphanumeric codes were used to ensure participant confidentiality.

2.2.4. Data analysis

Interviews and focus groups were audio-recorded by MB, ND and SR, and transcribed verbatim for framework analysis by MB [15,16]. This flexible method of data collection allowed for an opportunity to elicit open responses while ensuring relevant topics were covered [17,18]. Due to the abundance of data collected, we performed a framework analysis. This method is optimal when working with large volumes of text, as it offers a systematic structure to identify themes, as well as manage and analyze the data [19]. After becoming familiar with the transcripts, MB, ND and SR devised a thematic framework, which was refined based on the research question, notes taken during interviews, and implicit connections between ideas at subsequent stages [15]. MB, ND and SR met on a weekly basis throughout the study. They also met with co-authors CG, GS, PS and IC at the beginning of the study and bi-monthly thereafter. The analytical process followed a priori research inquiries, and previously identified a priori issues in collaboration dynamics were integrated into a unique model by creating a framework matrix [6,20,21]. The researchers were open to the possibility of additional issues emerging from the data [22]. MB, ND and SR reviewed the matrix, drawing connections within and between participants and categories to generate themes. We considered both the original research objectives and new concepts generated inductively from the data [15]. In the final stage of the analytical process, data mapping and interpretation were performed by MB, ND and SR, and subsequently reviewed by CG, GS, PS, IC for further opinion. Our framework was based on the categorization proposed by San Martín-Rodríguez et al. [6]. We considered barriers and facilitators at the *system level* in the analysis, which included all professional, socio-cultural and educational aspects that facilitate or impede interprofessional collaboration [6].

3. Results

The final sample consisted of 60 total participants. Amongst these participants were 26 HPs including GPs, specialized practitioners, and nurses, and 14 AHPs, including psychologists, social workers, chaplains and volunteers. All participants had experience with patients requiring oncological and/or PC. Ten KIs, including the heads of oncology and PC organizations (e.g., professional societies, non-profit organizations) and institutions (e.g., clinics) and other experts in these fields participated. Additionally, 10 relatives of deceased cancer patients participated. For more details on participants, please see Table 1.

Three themes emerge, describing systemic observed and perceived determinants of successful collaboration: knowledge of and connection to other healthcare approaches; beliefs, attitudes and behavior regarding collaboration; and values, attitudes and beliefs towards life, end-of-life and optimal care approaches (Fig. 1).

3.1. Theme 1: knowledge of and connection to other healthcare approaches

The first theme of this study involves both level and type of education. In this theme, the roles of different types of education, such as formal, informal, and non-formal education are highlighted. It is important to differentiate between informal and non-formal education. Informal education is non-intentional, incidental and generally unconscious, while non-formal education occurs outside the classroom and is

Table 1
Participants' characteristics.

| Characteristic | Total HPs, AHPs, KIs, Rs* | HPs, AHPs, KI* | | Medical Doctors | | Nurses | Psychologists | Social workers, chaplains, volunteers | Key informants | Relatives |
|---|---------------------------|----------------|------|-----------------|------|--------|---------------|---------------------------------------|----------------|-----------|
| | | PC* | NPC* | GP** | SP** | | | | | |
| | | | | | | | | | | |
| n | 60 | 15 | 35 | 6 | 10 | 10 | 6 | 8 | 10 | 10 |
| Gender n (HPs, AHPs, KIs, FMs) | (60) | | | | | | | | | |
| Female | 35 | 10 | 17 | 0 | 5 | 8 | 5 | 5 | 4 | 8 |
| Male | 25 | 5 | 18 | 6 | 5 | 2 | 1 | 3 | 6 | 2 |
| Age group (years) n (HPs, AHPs, KIs, FMs) | (60) | | | | | | | | | |
| 18–30 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 31–40 | 7 | 1 | 6 | 0 | 1 | 3 | 2 | 0 | 1 | 0 |
| 41–50 | 16 | 6 | 8 | 0 | 2 | 3 | 2 | 6 | 0 | 2 |
| 51–60 | 19 | 4 | 12 | 3 | 5 | 3 | 1 | 1 | 3 | 3 |
| 61 or more | 17 | 4 | 8 | 3 | 2 | 0 | 1 | 1 | 6 | 5 |
| Main education n (HPs/AHPs/KIs) | (50) | | | | | | | | | |
| Switzerland | 32 | 5 | 27 | 5 | 5 | 6 | 2 | 6 | 9 | |
| Abroad | 18 | 10 | 8 | 1 | 5 | 4 | 4 | 2 | 1 | |
| Career stage n (HPs/AHPs/KIs) | (50) | | | | | | | | | |
| Junior (1–10 years) | 9 | 2 | 7 | 0 | 1 | 4 | 1 | 2 | 1 | |
| Senior (11–more years) | 41 | 13 | 28 | 6 | 9 | 6 | 5 | 6 | 9 | |

* HPs: Healthcare professionals; AHPs: Allied Healthcare professionals; KI: Key informants; Rs: Deceased patients' relatives; PC: Palliative care providers; NPC: Non-palliative care providers (See Section 2.1).

** GP: General practitioners; SP: Specialized practitioners: 5 oncology and hemato-oncology specialists; 5 palliative care specialists.

complementary to formal education, considering its finality [23]. Illustrative quotes are presented in Table 2.

3.1.1. Awareness and understanding of other professional practices

The first subtheme involves an awareness and understanding of the roles of professionals from other disciplines. Many participants reported that an overall awareness of PC principles amongst NPC providers significantly contributes to improved collaboration, and even facilitates the use of PC. While these observations were noted by numerous participants, one nurse explained that it is important to learn about PC, including what it is, when to initiate it, and in which patient care areas the PC team can help (Q1).

Other participants noted that informal education on PC (e.g., information on its characteristics and benefits shared by word of mouth within the team) facilitates its use, and is as powerful as learning this information in a formal educational context. Overall, participants noted that this contributes to the development of 'PC culture' (Q2).

Relatives of deceased cancer patients also expressed their views on the importance of HP education. They noted that having a complete understanding of other professionals' practices (e.g., PC) is crucial for successful collaboration between healthcare providers (Q3, Q4).

In addition to learning about PC, participants remarked that healthcare providers should also be educated on aspects such as communication (Q5).

Another relevant factor regarding training programs for medical doctors involves a lack of formal specialization in PC, affecting attitudes and trust toward PC doctors (Q6).

Other HPs expressed similar views, explaining that top professional levels (e.g. national medical associations) acknowledging a specialty, such as PC, encourages trust in those providers' expertise (Q7).

It should be noted that while PC specialization for doctors now exists in Switzerland, it has only recently been established and some participants may not have been aware of the specialization.

3.1.2. Connection to a different healthcare approach

Connection to a different healthcare approach (e.g., being interested

in and having positive attitudes towards the approach) was reported by several participants, stemming from experience in healthcare via different types of education, including formal, informal, and non-formal. Nevertheless, some participants reported that there are NPC providers who, despite receiving education on PC, do not favor PC services. Participants, especially GPs, explained that not favoring PC is the result of some NPC providers' beliefs. In fact, some believe that PC providers' roles are redundant, as palliative medicine is within their scope (Q8).

Several participants explained that being connected to PC and having received non-formal education on the topic often coexist and may influence each other (Q9).

3.2. Theme 2: Beliefs, attitudes and behavior regarding collaboration

The second theme refers to the sociocultural aspects of this study's framework. Illustrative quotes are presented in Table 3.

3.2.1. One-on-one doctor–patient relationships, attitudes and beliefs

Participants explained that negative attitudes towards and incorrect beliefs about collaboration, especially regarding running two types of therapy simultaneously (e.g., active treatment and supportive therapy), represent a barrier to collaboration. They reported that recognizing the importance of additional support in patient care favors the incorporation of other services in a timely manner (Q1).

One participant, a PC KI, stated that a lack of collaboration in patient care is due to oncology providers' belief that oncologists must care for the patient until death. Other participants expanded upon this view, describing the "separatist" approach (Q2).

According to some NPC providers, this approach, coupled with the consequent difficulty in sharing responsibility for patient care, continues even after the patient is referred to a PC ward. However, some participants, including oncologists, expressed a positive attitude towards collaboration. One oncologist explained that a potential barrier to successful collaboration includes the belief that other HPs (e.g., oncologists) do not want to share responsibility for patient care, which is not necessarily true (Q3). Other interviewees confirmed that this belief is widespread (Q4).

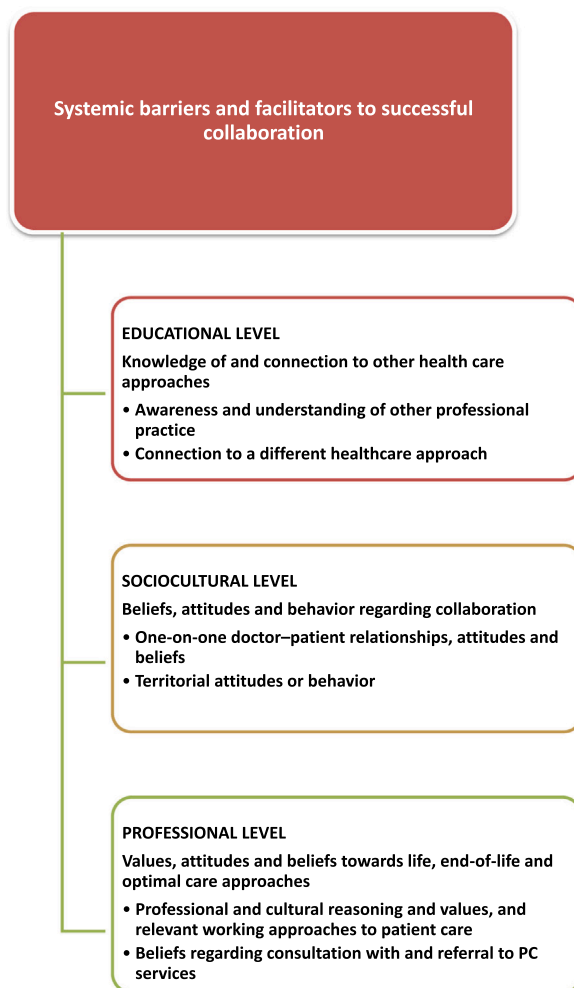


Fig. 1. Systemic barriers and facilitators to successful collaboration.

3.2.2. Territorial attitudes and behavior

In this theme, interviews revealed a desire to keep patients' care within a certain geographical area or network, which implicitly involves the concepts of power and dominance in a specific health sector [24]. Numerous participants discussed territorial attitudes towards their work, describing a geo-cultural divide (Q5).

Furthermore, NPC and PC providers reported that provincialism is very common in the geographical areas in which they work, and that the related mentality generates four distinct geographical areas. These defensive and territorial attitudes represent a socio-cultural aspect.

Interviews also revealed a clear division between organizations and networks. AHPs reported that when a patient is already being followed by an organization within a certain network outside of their own, they tend to avoid following the patient "to not invade the territory of others." In fact, several participants reported a perception that other services and/or health providers are invading their territory (Q6).

Participants, both from the PC and NPC fields, reported that there are multiple reasons behind the desire to maintain control over patient care and avoid involving other services, including defending personal economic interests (Q7). The perception that new specialists (such as PC specialists) can take over patient care was reported by several participants (Q8). However, in some cases, the principle of territoriality is lost, and PC services are contacted because of a utilitarian choice, rather than a belief that involving these services would benefit patient care. Participants referred to these situations when PC providers are involved in

patient care, especially when a patient is followed at home by their GP. There is a common belief that HPs want to "steal" responsibility for patient care. Participants reported that actions to change these beliefs represent a major strategy to promote successful collaboration (Q9).

3.3. Theme 3: Values, attitudes and beliefs towards life, end-of-life and best optimal care approaches

This main theme refers to the professional level of this study's framework. Illustrative quotes are presented in Table 4.

3.3.1. Professional and cultural reasoning and values, and relevant working approaches to patient care

In this subtheme, participants described the different views shared by professionals in various disciplines. They also discussed beliefs regarding the most appropriate approach to patient care in different disciplines. Many participants, both PC and NPC providers, reported that a major barrier to successful collaboration is the considerable differences between the two apparently incompatible care approaches. Participants explained that oncology providers tend to focus on life prolongation by addressing all medical complications, and therefore, typically extend active treatment as late as possible in the care path. On the contrary, PC providers tend to focus on quality of life and minimizing suffering, and tend to stop active treatment earlier than oncologists (Q1).

Table 2
Illustrative quotes.

| Theme 1: Knowledge of and connection to other healthcare approaches | |
|---|---|
| 1 | I think that training is necessary, not training on... how to provide PC, but learning what PC consists of, when you need to activate it, how they can help you. [...] where the services are located, how is the procedure to activate them, in which circumstances...most of my colleagues wouldn't know the correct answers [...] what is missing is knowledge of the services, how they are organized in their networks, how can I contact them and when I do, what exactly happens (NPC – Nurse, ID 32). |
| 2 | I think that considerable education and information is lacking at medical and nursing sciences levels [...]. The way [to optimize the utilization of PC] is training, training namely to create... it's not only about education but primarily to create culture [about PC] (NPC – Psychologist, ID 29). |
| 3 | Well, in order to improve the use of PC services, I would say that having a more precise image of palliative care is essential, not having an image related only to end-of-life, it's true the fact that these services often arrive, actually, at that stage... [...] this is related to the "stereotype" [of PC services, e.g., that they hasten death] which is perpetuated and the poor understanding of them [PC services] among patients and families and among some healthcare providers (Family member, ID 10). |
| 4 | My husband had psychological support from a psychologist, we chose among three names recommended both by Dr. X, who knew the professional and the service provided, and by a friend of ours, who had [...] cancer in the previous year, and also recommended him (Family member, ID 7). |
| 5 | The focal point (regarding education) to put the attention on... it's the interdisciplinary communication, more and more spread, in order for this communication to be appropriate, it is necessary that a continuous learning process, carried out by team members, occurs, in particular by PC or oncology care providers (PC – Support Group, ID 46). |
| 6 | The lack of formal education for medical doctors (in PC), in terms of a proper specialization, can lead other doctors to perceive PC specialists as less well-prepared than others (PC – Specialist Practitioner, ID 4). |
| 7 | A facilitator [for PC services optimization] would be that the [...] (local administrative government) would put in place a clear strategy in PC allowing clarity on "who does what." [...] What helped us a lot was the FMH (Swiss Medical Association) recognition of PC as a specialty for doctors, because [that recognition] has taken us away from this short of identification as "artists of medicine" (being perceived as such) and now we are perceived differently (PC – Key informant, ID 5). |
| 8 | Sometimes I get angry about palliative medicine, oh my God the specialist, the palliative physician, as it was necessary [to have] a specialist to die... [...] during a training on life and death issues, which I attended, all what was explained included "We need to intervene with palliative medicine..." but the truth is that palliative medicine is part of family medicine... for most purposes... (NPC – GP, ID 15). |
| 9 | The activation of specialized PC services can be done by the oncologists, but of course, also by us, nurses. Also, regarding this...there is awareness [of PC], especially among those who worked in PC wards, who worked with specialized PC teams, who are possibly more connected [with PC] (NPC – Nurse, ID 35). |

Similarly, a substantial number of participants explained that the more common, aggressive approach amongst oncologists might hinder successful collaboration with the PC team (Q2).

Similarly, a major barrier to collaboration is that the two approaches seem to have only a few points of contact, mainly because professionals from both approaches are very conservative (Q3).

In particular, being "conservative" (e.g., regarding opiate use), seems to be relatively common amongst GPs, and can hinder collaboration with PC providers (Q4).

The approach to care, illness, life and death seems to be highly linked to HPs' and AHPs' professional affiliation and their previous experiences (Q5).

A final barrier to collaboration involves participants' beliefs regarding the most appropriate number of healthcare providers to be involved in end-of-life care (Q6).

Several participants highlighted additional beliefs regarding patients' best interests and quality of care concerning rare cross-organizational collaborations between institutions belonging to different networks (Q7).

3.3.2. Beliefs regarding consultation with and referral to PC services

In addition to values and attitudes towards care approaches, many

Table 3
Illustrative quotes.

| Theme 2: Beliefs, attitudes and behavior regarding collaboration | |
|--|---|
| 1 | We need to recognize the right moment [to contact the PC team], according to the fact that we have to admit and better reflect that the patient, who we have in front of us, will shortly be "problematic," [problematic: more complex health condition] and then we do not have to wait until he becomes problematic, we need to anticipate these things, by making a first connection with the PC specialist [...]. We are noticing an evolution in this regard [...] from doctor "I do everything," to a doctor who expresses the need to receive help with patient care, but more than help for the patient, the help is [actually] for himself (NPC – Oncologist, ID 11). |
| 2 | Some of us [oncology providers] say "no, no, no," once it comes to delegating [aspects of patient care], then we say "no," because this is part of our tasks...I think that there is still some difficulty recognizing that it is not about "delegating" but about "collaborating" (NPC – Nurse, ID 32). |
| 3 | There is often the detachment from the GP [no further GP involvement], which is assumed, by the GP, as something that we do, but it's not like that, we would be very happy if they [GPs] did have more control [over patient care], actually. That would be a mutual exchange, an "unloading"... it is a burden to carry alone, and if you share it from the start, it is easier (NPC – Oncologist, ID 9). |
| 4 | [...] regarding the oncologist...it frequently occurs that he does not steal...but monopolizes patient care a bit... (NPC – GP, ID 16). |
| 5 | Intra-cantonal disputes, for instance between public and private sectors [in different regions of the canton] carry the risk that available resources are squandered because we need to give everyone enough to be happy, rather than collecting all resources and covering and meeting all needs [...]. It [the situation described above] is quite common I think. In some cantons which are [...] religious, where there is the party of the church and the liberal party and...this scission, which goes outside in the society, can be found in the collaboration... anyway this translates in the arena of health care, schools, economics... (PC – Key informant, ID 6). |
| 6 | [...] a private oncologist in the area X [of the canton] asked me what I thought regarding a specific ward with PC beds [there are public and private clinics with wards with PC beds located throughout the area], because he referred some of his patients there, but his impression was that after referring 'he was shut out of the door'. Then, he developed distrust and resistance to referring his patients there again, because he felt like he was a second-line [less important] doctor after referral to this ward (NPC – Psychologist, ID 27). |
| 7 | [...] that oncology providers keep maintaining certain therapeutic choices [to prolong active therapies until death] concerns professional consciousness, so to keep going with these can generate unnecessary suffering, [...] I could imagine that there is a matter of economic motives behind the choice of [...] not taking other routes... (PC – Key informant, ID 47). |
| 8 | [...] even a local university organizes trainings, a certificate in PC, it is ok that... but it is not enough [to improve collaboration] because they [PC providers] come out with the label of specialists, and there we need to be very careful, because specialists steal others' "land," and this is not ok (NPC – Key informant, ID 22). |
| 9 | I have a great memory regarding interdisciplinary collaboration; of course, to obtain it, it is necessary to reach the full availability and willingness [to work together] of HPs, and not to have the will to protect their own "vegepgardens," but, instead, to work only for the patient's own good (NPC – Support group, ID 43). |

participants described that oncologists and GPs believe they do not require additional help treating oncology patients, representing a barrier to collaboration with PC providers. This may stem from confidence in their expertise or a belief that their expertise fully meets patients' needs (Q8, Q9).

Participants also described a perceived difficulty of managing severe, resistant pain amongst NPC providers. In these cases, PC providers' support is requested, as it is "not avoidable" (Q10).

Furthermore, participants felt the need to collaborate with PC providers emerged when no other treatment options are available (e.g., chemotherapies) at end stages of disease (Q11). Several relatives shared these perceptions (Q12).

Several relatives also reported a lack of perceived need to collaborate with PC providers amongst NPC providers, resulting from an insufficient assessment of patients' needs. For example, a patient-centered approach was not taken as the patient was not properly asked whether they required additional support (Q13). Nurses commonly used a patient-centered approach as opposed to other HPs (Q14).

Table 4
Illustrative quotes.

| Theme 3: Values, attitudes and beliefs towards life, end-of-life and optimal care approaches | |
|--|---|
| 1 | We can say that collaboration between oncology and PC occurs less often than, probably, is appropriate, because fractures are often created between the PC specialist and the oncologist, even because of communication style and the ways they face specific themes which indeed...arise...where the theme of quality of life becomes predominant...where they talk about prolongation of patient survival, then it becomes difficult...but it occurs eh...that they are able to do that (to collaborate)... (NPC – Psychologist, ID 29). |
| 2 | I was also wondering... I see some people saying "it would be nice if they [oncologists] understood that 'no recovery' is not necessarily a defeat..." but meanwhile it is also true that if their main purpose is recovery...however, they should be able to make a switch and to say "Ok, I cannot help him heal... then let's see if we can help the person live better" (PC – Key informant, ID 40). |
| 3 | There are some disciplines, which have gone in an autonomous manner for many years, taking care of the person, but not necessarily all of the disciplines have been opened to a PC approach and therefore it takes time toward a change in this sense, and I can say that the healthcare professionals are very conservative in their disciplines, so encounters between these disciplines can be difficult (NPC – Key informant, ID 20). |
| 4 | As for me, I have never had any problems with opiates, but other practitioners probably have some; therefore, they first contact the oncologist (rather than the PC specialist who is associated with the use of these) (NPC – GP, ID 12). |
| 5 | Mmm...how could I say...I think that it is just personal, in a way that even the fact to start talking about end-of-life with the patients is slightly based on the personal experience of the oncologists... from what for him is a good death (PC – Nurse, ID 37). |
| 6 | [...] unfortunately, in some situations, the oncologist manages, gets to know, receives some letters, but this is not rare, because whether I take in charge the patient I try to be present, to mark territory, but no... for a reason that the patient is not taken in charge by three or four people and then you don't understand more who the leading figure is... , this is a bit the thing.... (NPC – GP, ID 15). |
| 7 | We tend [to avoid referring the patients to PC unit/ward of another network, e. g., from public to private services], mainly because the patient has already several problems...he is not emotionally fine, if we change all his care team, I think that this is an additional distress, this is an additional source of suffering. I saw a case, years ago, where the patient wanted to change, at a certain stage. He wanted to go to another service (part of another network) and he had severe pain, it was hard to manage the pain, we tried everything here (NPC – Psychologist, ID 25). |
| 8 | I think that the main reason [oncology providers do not contact the PC team] is excessive self-esteem, which makes some of us think that... "being able to treat the disease... imagine if we are not able to palliate the symptoms...!" [they'll think]... here it is... (NPC – Oncologist, ID 11). |
| 9 | [An oncologist often thinks] "I am a specialist and therefore I am here to take care of the patient until death, I will take care of him." Thus, that specialist will not ask for the intervention of the PC specialist because he believes he'll be able to face these situations anyway (PC – Key informant, ID 19). |
| 10 | [...] at the moment when the disease is extremely widespread and then at that stage in which the leukemia cells fill the whole skeleton, it is here...and they [cells] exit...and then at that point the pain is how can I say? The pain is very severe, a pain that they [patients] say is like they were getting stab wounds, they feel pushing, pulling, for example that pain is very difficult to palliate [...] therefore, you need their intervention [PC providers] (NPC – Hematologist, ID 7). |
| 11 | [PC services] taking charge of the patient, is sometimes, I do not want to say almost always..., but sometimes, a bit delayed for the PC; that is, we come in when the oncologists leave the patient. As long as they think it is necessary, they carry on [with active treatments], [...] with many lines of chemotherapies, sometimes even too many, and then finally there is the PC taking charge of the symptoms and not anymore the cure of the disease (PC – Support group, ID 21). |
| 12 | [family member talks about loved one] [...] they attempted to do another intervention, like a bypass, but at the end they saw that nothing could be done, therefore, they told us right away that... we would have to be moved to palliative care... yes... (Family member, ID 3). |
| 13 | [family member describes oncology care received by loved one] there was, anyway, attention to the person, there were even small suggestions related to eating. Therefore, this is not only about the medical treatment... but also about that what it is important. [...] I think it makes the difference, to explore if additional needs are there and other health providers need to be involved (Family member, ID 7). |
| 14 | [...] I think that this is more linked to the type of education received but also to the type of connection, but also to a sort of barrier which still exists a bit between the doctor and the patient and... the nurse has, in contrast, a more |

Table 4 (continued)

| Theme 3: Values, attitudes and beliefs towards life, end-of-life and optimal care approaches | |
|--|---|
| | direct contact with him, more deep, more spontaneous... the doctor, tends always anyway to search for something, to propose [treatments], rather than also to assess needs, before... (NPC – Nurse, ID 34). |

4. Discussion and conclusion

4.1. Discussion

Evidence from this study suggests that oncology and primary care services as well as PC providers and patients consider interprofessional collaboration to be influenced by a complex interplay of factors. These factors include knowledge and training, values, beliefs, attitudes and behaviors towards collaborating with other professionals, and the best approach to end-of-life care.

Our findings can be divided into three main categories. Firstly, education is one of the most influential factors for successful collaboration. A vital aspect involves formal education to increase awareness of PC and other providers' roles and improve communication and collaboration skills. Some of these observations resemble the results of a previous study exploring oncologists' perspectives [25], while many other observations are novel. Our study provided a deep and comprehensive view of the perspectives of six types of healthcare providers, besides oncologists, as well as deceased cancer patients' relatives. To our knowledge, our study reported a unique finding that the type of education provided affects collaboration and personal connection to other fields in cancer care.

We found that informal and non-formal education influence healthcare providers to reflect on their specialty and with whom they work, thereby developing a positive attitude towards other healthcare approaches. Previous evidence showed that hidden (e.g., learning the norms of a hospital's culture) and informal curricula implicitly teach students the culture and behavior of medicine. Our study confirms these results of Fins, Gentileco, Carver, Lister, Acres, Payne and Storey-Johnson [26], also in a European context. In addition, our study uniquely demonstrated the significance of non-formal education in collaboration. In addition to non-formal education as evidenced by our study, formal and informal education can positively or negatively affect healthcare providers' attitudes towards end-of-life care [26]. Attitudes are particularly relevant, given that most oncology care recommendations, including the decision to collaborate with other services, are not based solely on high-level evidence [27].

We also found that barriers to and facilitators of collaboration involve socio-cultural aspects. Healthcare providers' attitudes, beliefs and behavior were shown to influence collaboration. While this is not limited to the healthcare fields investigated [24], it appears to be particularly relevant in PC for malignant diseases, in part due to the complex relational dynamics involved (e.g., large number of professionals involved in patient care). Firstly, the "territorial boundaries" between primary care/oncology and PC are occasionally unclear or disputed. Previous evidence has shown that this can lead to conflicts between different professional groups [28]. This novel study clearly demonstrates that these factors are apparent in south-central European oncology PC. Secondly, specialized PC is a relatively new field that has yet to be fully and formally recognized as a professional medical discipline in Switzerland. Negative attitudes towards collaborating with other healthcare providers and territoriality can be explained by previous evidence demonstrating how professional groups (e.g., in health care) were historically viewed as pillars of society, primarily motivated by a concern for patient well-being; however, these groups are now often seen as interest groups motivated by material privilege and rewards

[29]. Since interorganizational collaboration may be perceived as a territorial threat, professional leaders promote and prioritize their own professional roles, competences and approaches rather than collaborating [28]. Evidence from previous studies suggests that establishing strong professional guidelines, and clarifying competencies, represents a strategy to promote new professions (e.g., those related to PC), as all professions strive for "jurisdiction" over their field [30]. This finding aligns with a previous study focusing on oncologists' opinions. The study demonstrated that working according to "self-defined" professional roles as opposed to "negotiated" roles represents a barrier to collaboration with other patient care services [25]. Thirdly, our study emphasized the existence of professional territories within organizations and organizational territories within administrative regions (e.g., districts) that share resources. The competition for resources may encourage a lack of collaboration and/or lead to professional and administrative territorial conflicts [31]. Finally, we found that, at the professional level, values and attitudes towards life, illness and death and a patient-centered approach to care were relevant factors influencing collaboration between healthcare providers. Our findings highlight that providers with contrasting approaches to patient care (life prolongation versus quality of life) are less willing to collaborate. These differing approaches may result from medical training, in which death is primarily defined as a physiological event. This framework is often reinforced by medical experience [32]. Oncology is rooted in mainstream medicine (e.g., internal medicine), and is primarily based on the acute care model [33]. In contrast, hospice and PC were established outside of mainstream medicine, made possible by financial support from charities. PC's original focus was end-of-life care provided by multidisciplinary teams [33]. Our findings confirm a recent Lancet Oncology Commission in a south-central European population: "Now, for the most part, oncological and PC cultures are still separate" [33]. Besides cultural differences, surgical oncology, medical oncology, radiation oncology and PC are often organized in silos with separate leaders in different departments [33]. To our knowledge, this is the first study that has explored territoriality in oncology and oncology PC in detail.

Our results indicate collaboration is vital in many situations. It is often necessary for NPC providers to consult PC providers, especially once the patient's health status cannot be improved or their pain is unbearable. This follows the defined roles of the PC team, including assessing physical, psychological, social and spiritual pain [34,35]. However, our findings indicate that NPC providers perceive a need for the PC team's contribution when patients experience physical pain, and this rarely occurs in a timely manner. This study also identified several unique factors that influence collaboration in oncology PC settings. These factors include connection to other healthcare approaches and a widespread willingness to maintain a one-on-one provider-patient approach. Additionally, when healthcare providers' professional reasoning and values oppose one another, interprofessional collaboration is often reduced. This study included input from various health professionals, providing a comprehensive view of the oncology and PC landscape in Italian-speaking Switzerland. Our participation invitation was extended to all healthcare providers registered at their respective main professional societies, or working in the main hospitals and home care organizations. We took care not to select a convenience sample. Despite our commitment to include all potential healthcare providers, many NPC provider participants likely had a prior interest in PC, a potential bias of this study. The results of this study apply to a specific linguistic area of Switzerland and are therefore not transferable to the other linguistic areas, due to cultural differences. However, this study aims to encourage research teams from other areas of Switzerland to further this research and debate the results obtained on overcoming barriers to effective interprofessional collaboration, optimizing the use of palliative care.

4.2. Conclusion

This study highlights the need to consider systemic factors facilitating collaboration between healthcare providers in cancer PC settings to achieve optimal use of specialized PC services.

4.3. Practice implications

Our findings suggest training should be used to improve interdisciplinary collaboration. This training should include formal education (e.g., technical and professional trainings), informal education (e.g., learning from peers/colleagues or mass media) and non-formal education (learning from environment or from experience), as these methods strongly influence not only skills, but also attitudes towards incorporating PC. Additional interventions should encourage a cultural shift towards favoring collaboration [e.g., by overcoming perceptual and organizational silos [36,37]] and may also involve improving negotiation skills [38]. It is best to implement these interventions starting in undergraduate health courses. For instance, the *escape room* activity [39, 40] is an innovative way to encourage communication and foster positive team dynamics amongst healthcare students. Workplace measures should also be consistently implemented to improve collaboration and communication. For example, the intervention by Weller, Boyd and Cumin [41] effectively demonstrates that external services, such as a seven step program can be implemented to improve communication and collaboration in teams.

Finally, providers should be encouraged to self-reflect on their own clinical practice and attitudes toward life, illness and death to improve interdisciplinary collaboration [42]. At the university level, arts-based activities such as the *inner-outer boxes* [43] should be offered. This is an arts-based learning experience that helps professionals reflect on their future approach to end-of-life care by exploring myths and beliefs embedded at a personal level. These beliefs can significantly influence their future work as healthcare professionals. Working with mandalas can also promote critical self-reflection, as demonstrated in the study by Mahar, Iwasiw and Evans [44]. Finally, implementing psychodrama as a required and systematic exercise for all healthcare professionals would significantly enhance self-reflection and insight regarding care of the dying [45]. Such educational interventions should be implemented across all categories of health care, both at the time of undergraduate education and throughout their professional careers. These methods help to achieve an optimal interprofessional collaboration to improve quality of care of cancer patients and their families.

CRediT authorship contribution statement

Marco Bennardi: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualization, Project administration. **Nicola Diviani:** Conceptualization, Methodology, Validation, Resources, Writing – review & editing, Visualization, Supervision, Project administration, Funding acquisition. **Piercarlo Saletti:** Conceptualization, Writing – review & editing, Funding acquisition. **Claudia Gamondi:** Conceptualization, Writing – review & editing, Funding acquisition. **Georg Stüssi:** Conceptualization, Writing – review & editing, Funding acquisition. **Ivan Cinesi:** Writing – review & editing. **Sara Rubinelli:** Conceptualization, Methodology, Resources, Writing – review & editing, Supervision, Project administration, Funding acquisition. All authors approved the final manuscript.

Declaration of Competing Interest

The authors declare that they have no known competing interests that could have appeared to influence the work reported in this paper.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.pec.2022.05.006](https://doi.org/10.1016/j.pec.2022.05.006).

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