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Experiences of interaction between people with cancer and their healthcare professionals: A systematic review and meta-synthesis of qualitative studies

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ABSTRACT

Purpose: This study investigates patients' experiences of interaction with their healthcare professionals (HCPs) during cancer treatment and identifies elements that HCPs can utilize to improve cancer care provision.
Methods: PubMed, CINAHL, PsycINFO, SCOPUS, and Embase were systematically searched for relevant studies published from January 2010 until February 2022. Qualitative studies investigating adult patients' perspectives on their interaction with HCPs during cancer treatment were included. Studies conducted during the diagnosis or end-of-life treatment phase were excluded. Duplicate removal, screening, and quality appraisal were independently performed by four reviewers using Covidence.org. We performed a thematic meta-synthesis of qualitative data extracted from studies meeting the quality criteria in three stages: excerpts coding, codes categorization, and theme identification by merging similar categories.
Results: Eighty-eight studies were included for quality appraisal, of which 50 papers met the quality inclusion criteria. Three themes were identified as essential to positively perceived patient-HCP interaction: "Support, respect and agency", "Quantity, timing, and clarity of information", and "Confidence, honesty, and expertise". Overall, patients experienced positive interaction with HCPs when the approach was person-centered and when HCPs possessed strong interpersonal skills. However, patients expressed negative experiences when their preferences regarding communication and the type of personal support needed were ignored.
Conclusions: This meta-synthesis emphasizes the importance for HCPs to recognize all patients' needs, including communication and personal support preferences, to provide high-quality care. Consequently, healthcare professionals should continuously train their verbal and non-verbal communication, empathy, active listening, and collaboration skills during their undergraduate and continuing education.

1. Introduction

Every stage in the cancer continuum is accompanied by symptoms such as pain, fatigue, weight loss, and psychological distress, and the importance of supportive care for patients diagnosed with cancer is increasingly being acknowledged (Berman et al., 2020; Hui et al., 2018; Jordan et al., 2018). *Supportive care* in cancer is defined as the prevention and management of the adverse effects of cancer and its treatment, from diagnosis through treatment to post-treatment care, in a person-centered manner (Jordan et al., 2018; MASCC). Supportive care includes basic care, i.e., information provision and symptom management, as well as more specialized interventions such as nutritional support, exercise therapy, music therapy, counseling, meditation, and comprehensive palliative care (Institute, 2022).

In general, different healthcare professionals, including physicians, nurses, dieticians, occupational therapists, physiotherapists,

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psychologists, spiritual caregivers and social workers, play a role in delivering supportive care (Holmes et al., 2021; Selby et al., 2019). These professionals usually collaborate as part of a multidisciplinary team to provide timely and effective treatment of physical and psychological impairments resulting from the disease or its treatment, thus optimizing patients' quality of life (Hui et al., 2018; Silver et al., 2013, 2015).

Delivering supportive care for patients who have cancer requires enhanced skills and knowledge of the healthcare professionals involved, including interpersonal and communication aptitudes, to create adequate patient-professional interaction – as laid down in professional competency profiles and frameworks by several international professional bodies (Fitch, 1994, Fitch, 2008; 1994; Society, 2018; Support, 2017).

In the literature, communication and interaction are often used interchangeably or synonymously (Fleischer et al., 2009). Interaction, however, encompasses more than only effective communication. Casu et al. associates interaction with person-centeredness and, therefore, with aspects such as informational and support needs, respect, the interest of the professional in the patient, and the ability to actively listen to and involve the patient in the care choices (Casu et al., 2019). Such aspects have also been noted as essential to delivering high-quality cancer care (Institute of Medicine Committee on Quality of Health Care in, 2001), and person-centered interaction has been shown to positively influence patient satisfaction (Baker et al., 2013; Lee et al., 2020; Moore et al., 2012; Moreno et al., 2019), potentially leading to better health outcomes (Forbes et al., 2020; Hoffman et al., 2003; Umihara et al., 2016; Wright, 1998). While the benefits of effective patient-professional interaction in cancer care are known, patients' expectations and preferences regarding their healthcare professionals should be clarified.

In the last decade, an abundance of qualitative studies investigating patients' needs and experiences related to interaction with healthcare professionals during their cancer treatment has been published. Conducting a systematic overview and qualitative meta-synthesis of these publications may provide insights into the existing body of evidence and establish the level of saturation on these topics (Goodman, 2008; Howitt, 2019).

Therefore, this study aimed to identify and appraise the current body of evidence investigating patients' experiences of interaction with healthcare professionals while receiving cancer treatment, provide an overarching thematic synthesis of high-quality study results, and provide recommendations for crucial interpersonal and communication skills expected from healthcare professionals working with patients with cancer.

2. Methods

The systematic review of the literature took place between July 2019 and April 2022. The review protocol was prospectively submitted for registration in the International Prospective Register of Systematic Reviews under the identification number: CRD42019139427.

2.1. Data sources and searches

Qualitative studies, using either semi-structured interviews or focus groups as data collection methods, were eligible for review. Multiple electronic searches in PubMed.gov, Embase, SCOPUS, CINAHL, and PsycInfo databases, respectively, were conducted between August 2019 and February 2022. Additionally, reference lists of included papers were hand searched for potentially eligible papers.

The search strategy used several combinations of four groups of index terms and respective keywords: Neoplasm (cancer, tumor, malignancy, etc.); Patient satisfaction (patient's perspective, patient's view, patient's desire, etc.); Qualitative research (focus groups, interviews, needs assessment, etc.); Professional-patient (Physician-patient relations, Nurse-patient relations, therapeutic alliance, etc.). The search strings were executed in the corresponding databases by an experienced medical information specialist (exact search strings: see supplementary material).

2.2. Study selection

Qualitative studies investigating adult patients' experiences with interaction with all healthcare professionals (i.e., physicians, nursing professionals, allied health professionals) during cancer treatment were included. Studies were eligible for appraisal if they: 1) applied well-described qualitative data collection methods such as focus groups or semi-structured interviews, 2) included patient populations, and 3) were published after 2010. Studies investigating the interaction experience from the healthcare professionals' perspective were excluded, as were studies on patients in the diagnosis or end-of-life stage of cancer care. Retrieved records were imported and organized in Covidence.org. After duplicate removal title and abstract of remaining records were screened for eligibility by one reviewer (RC, MM, ME, RM). Consensus meetings were held to resolve disagreements between reviewers.

2.3. Quality assessment and data extraction

Three researchers conducted the critical appraisal (RC, MM, and RM), and each article was independently assessed by at least two reviewers, using the Critical Appraisal Skills Programme checklist for qualitative research (CASP). The Critical Appraisal Skills Programme checklist consists of 10 items assessing qualitative studies' methodological rigor and validity and has been widely used in qualitative meta-syntheses (Butler et al., 2016). The Critical Appraisal Skills Programme checklist qualitative checklist is divided into three sections. Section A (6 questions) evaluates the internal validity or methodological rigor of the study, section B (3 questions) evaluates the results of the study, and section C (1 question) evaluates the external validity and implications of the study results (CASP). Each question contains several hints to assist in scoring and is marked either "yes", "no", or "can't tell". Scoring guidelines (yes: 1 point, can't tell: 0.5 points and no: 0 points) as proposed by Butler et al. (2016) were applied by two reviewers, and the final appraisal score (maximum 10 points) was determined through a consensus meeting.

As Butler et al. (2016) suggest, articles were excluded for further review when receiving a score of <1 on item 7: "Have ethical issues been taken into consideration?" on the Critical Appraisal Skills Programme checklist. Additionally, we chose to exclude articles from the meta-synthesis when items 5: "Was the data collected in a way that addressed the research issue?", or 8, "Was the data analysis sufficiently rigorous?" received a score of 0, since low scores on these items pose a serious threat to the methodological rigor (Charmaz, 2006; Howitt, 2019; Mays and Pope, 2000).

Articles with a total score >5.5 were included for the meta-synthesis. Papers were categorized into high-quality papers (score 9.0–10), moderate-quality (score 7.5–9.0), and low-quality (score 5.5–7.5). (Table 1).

The following data were extracted from the studies meeting the quality criteria: the country where the study was conducted, population data (demographics, type of cancer, treatment received), methods (data collection methods, topics investigated), and the results (first-order constructs, i.e., participant's quotes and second-order constructs, i.e., interpretations).

2.4. Data synthesis and analysis

We used thematic synthesis to analyze the data (Thomas and Harden, 2008). This systematic method consists of coding data excerpts from the included studies to yield descriptive and analytical themes (Nicholson et al., 2016). A new dataset was formed from the extracted individual

Table 1
Quality appraisal.

First author	Year	Critical Appraisal Skills Programme items										Total	Category	Reason(s) for exclusion
		1	2	3	4	5	6	7	8	9	10			
Aagaard	2018	1	1	1	0	0.5	0.5	1	0.5	0.5	1	7	Low-quality paper	
Abt Sacks	2016	1	1	1	1	1	1	1	1	1	1	10	High-quality paper	
Albrecht	2019	1	1	0	0.5	0.5	0	1	1	0.5	1	6.5	Low-quality paper	
Alpert	2018	1	1	0	1	1	0	1	1	0.5	1	7.5	Moderate-quality paper	
Anderson	2020	1	1	0	0.5	0.5	0	1	1	1	1	7	Low-quality paper	
Appleton	2018	1	1	0.5	0.5	0.5	1	1	1	1	1	8.5	Moderate-quality paper	
Asiedu	2018	0.5	1	0.5	0.5	0.5	0	1	0	1	1	6	Exclude	Data analysis
Back	2014	0.5	1	0.5	1	0.5	0.5	1	0.5	0.5	0	6	Low-quality paper	
Bergin	2017	1	1	0.5	1	0.5	0.5	1	0	1	1	7.5	Exclude	Data analysis
Best	2014	1	1	1	1	1	0	1	0.5	1	1	8.5	Moderate-quality paper	
Bittencourt Romeiro	2016	1	1	0.5	0	0	0	1	0	0.5	0.5	4.5	Exclude	<6 score, data analysis and collection
Blakely	2017	1	1	0.5	1	1	0.5	1	0.5	0	0.5	7	Low-quality paper	
Boons	2018	1	1	1	0.5	0.5	0	1	0	0.5	0	5.5	Exclude	<6 score, data analysis
Brincat	2021	1	1	1	0.5	1	0.5	1	0.5	1	1	8.5	Moderate-quality paper	
Brom	2017	1	1	1	1	0	0.5	1	0	1	1	7.5	Exclude	Data collection, data analysis
Burrows Walters	2017	1	1	1	1	0.5	0	1	0	0.5	1	7	Exclude	Data analysis
Candela	2020	1	1	0.5	0.5	1	1	1	0.5	1	1	8.5	Moderate-quality paper	
Chen	2019	1	1	0	1	0.5	0	1	0.5	0	0.5	5.5	Exclude	<6 score
Couchman	2019	0	1	0	1	1	1	1	0.5	1	1	7.5	Moderate-quality paper	
Daem	2019	1	1	1	0.5	0.5	0.5	1	1	1	0.5	8	Moderate-quality paper	
Dance	2021	1	1	0	0	1	0	1	0	0.5	0.5	5	Exclude	<6 score, data analysis
Den Herder-van der Eerden	2017	1	1	1	1	1	0	1	1	1	1	9	High-quality paper	
Dencker	2018	1	1	0	0	1	0	1	0	0.5	1	5.5	Exclude	<6 score, data analysis
Devitt	2020	1	1	1	0.5	0.5	0	1	0.5	1	1	7.5	Moderate-quality paper	
Donachie	2020	1	1	0	0.5	1	0	1	0.5	1	1	7	Low-quality paper	
Evans	2012	0.5	1	0.5	1	0.5	0	0.5	0	0.5	0.5	5	Exclude	<6 score, data analysis
Farias	2017	1	1	0	0.5	1	0	1	0.5	0.5	1	6.5	Low-quality paper	
Furber	2015	1	1	1	0	0.5	0	1	0	0	0.5	5	Exclude	<6 score, data analysis
Furber	2013	1	1	0.5	1	0.5	0.5	1	0	1	1	7.5	Exclude	Data analysis
Gruss	2019	1	1	1	1	0.5	0	1	0	0.5	1	7	Exclude	Data analysis
Halkett	2010	1	1	0.5	1	1	0	1	0	0.5	0.5	6.5	Exclude	Data analysis
Herrmann	2021	1	1	0.5	1	0.5	0.5	1	0.5	1	0.5	7.5	Moderate-quality paper	
Hess	2021	1	1	0	1	1	0	1	1	1	1	8	Moderate-quality paper	
Hillen	2012	1	1	0.5	1	1	0.5	1	1	0.5	1	8.5	Moderate-quality paper	
Hogberg	2013	1	1	1	0.5	0.5	0	1	0	0.5	1	6.5	Exclude	Data analysis
Hopmans	2015	1	1	0.5	0.5	0.5	0	1	0.5	0.5	0.5	6	Low-quality paper	
Hull	2020	0.5	1	0.5	0.5	0.5	0.5	1	0	1	1	6.5	Exclude	Data analysis
Jacobsen	2015	1	1	1	1	1	0	1	1	1	1	9	High-quality paper	
Janssens	2021	1	1	0	0.5	1	0	1	0	1	0.5	6	Exclude	Data analysis
Jones	2013	1	1	1	0.5	0.5	0	1	0.5	0	0	5.5	Exclude	<6 score
Jordan	2022	1	1	0	1	1	1	1	1	1	1	9	High-quality paper	
Kamradt	2015	1	1	0	0.5	0.5	0.5	1	0	0.5	0.5	5.5	Exclude	<6 score, data analysis
Kobleder	2017	1	1	0	1	0	0	1	1	1	1	7	Exclude	Data collection
Kumar	2020	1	1	1	0.5	0.5	0	0.5	1	1	0.5	7	Low quality paper	
Kvale	2010	1	1	1	1	0.5	0	1	0.5	0.5	0.5	7	Low-quality paper	
Lawhon	2020	1	1	1	1	1	0	1	0.5	1	1	8.5	Moderate-quality paper	
Lelorain	2019	1	1	0	0.5	1	1	1	1	1	0.5	8	Moderate-quality paper	
Lowe	2021	1	1	1	0	0.5	0	1	0.5	1	0.5	6.5	Low-quality paper	
Martinsson	2016	1	1	0	1	0.5	0	1	0.5	0.5	0.5	6	Low-quality paper	
Masel	2016	1	1	1	1	1	1	1	1	1	1	10	High-quality paper	
Mazor	2013	1	1	0	0.5	0.5	0	1	0.5	0.5	0.5	5.5	Exclude	<6 score
McCarthy	2014	1	1	1	1	0.5	0	1	0	0.5	0.5	6.5	Exclude	Data analysis
McKenzie	2015	1	1	0.5	0.5	0.5	0	1	0	0.5	1	6	Exclude	Data analysis
McNair	2016	1	1	0	0.5	0.5	0	1	1	0.5	1	6.5	Low-quality paper	
Melhem	2017	1	1	0	0.5	0.5	0	1	0	0	1	5	Exclude	<6 score, data analysis
Myers	2021	1	0.5	0	0.5	0	0	1	0.5	1	0.5	5	Exclude	<6 score, data collection
Myren	2021	1	1	0	0.5	1	0.5	1	1	1	1	8	Moderate-quality paper	

(*continued on next page*)

Table 1 (*continued*)

First author	Year	Critical Appraisal Skills Programme items										Total	Category	Reason(s) for exclusion
		1	2	3	4	5	6	7	8	9	10			
Nababan	2020	0.5	1	0.5	0	0.5	0.5	1	0.5	1	0.5	6	Low-quality paper	
Niranjan	2020	1	1	0.5	0	0.5	0	1	0.5	1	0.5	6	Low-quality paper	
Noteboom	2021	1	1	1	1	1	0.5	1	1	1	1	9.5	High-quality paper	
Pedersen	2013	1	1	0.5	0.5	0.5	0	1	0.5	0.5	1	6.5	Low-quality paper	
Prip	2022	1	1	0.5	1	1	0	1	1	1	1	8.5	Moderate-quality paper	
Retrouvey	2019	1	1	1	1	1	0.5	1	1	1	1	9.5	High-quality paper	
Rocque	2019	1	1	0.5	1	1	0.5	1	0.5	0.5	1	8	Moderate-quality paper	
Salmon	2011	1	1	0	1	0.5	0.5	1	1	0.5	1	7.5	Moderate-quality paper	
Sattar	2018	1	1	0	1	1	1	1	0.5	1	1	8.5	Moderate-quality paper	
Schildmann	2013	1	1	0	0.5	0.5	0	1	0.5	0.5	1	6	Low-quality paper	
Sheppard	2011	0.5	1	0	0	0.5	0	1	0	0.5	0.5	4	Exclude	<6 score, data analysis
Slavova-Azmanova	2018	1	1	1	0.5	0.5	0.5	1	0	0.5	0.5	6.5	Exclude	Data analysis
Smith	2017	1	1	1	0.5	1	0	1	0	0.5	1	7	Exclude	Data analysis
Step	2011	1	1	0	1	1	0	1	0.5	0.5	1	7	Low-quality paper	
Tamirisa	2017	0.5	1	0.5	0	0.5	0	1	0	0.5	0.5	4.5	Exclude	<6 score, data analysis
Tanay	2014	0.5	1	1	0	0.5	0	1	0.5	0.5	1	6	Low-quality paper	
Thorne	2013	1	1	0	0	0	0	1	0	0.5	0.5	4	Exclude	<6 score, data collection, data analysis
Tomlinson	2012	1	1	0	0.5	0.5	1	1	0	0.5	1	6.5	Exclude	Data analysis
Twibell	2020	1	1	0	1	1	1	1	1	1	1	9	High-quality paper	
Van Bruinessen	2013	1	1	0.5	1	0.5	0	1	1	0.5	0.5	7	Low-quality paper	
Van Egmond	2019	1	1	0	1	1	0	1	0.5	0.5	1	7	Low-quality paper	
Vaughan	2021	0.5	1	0	0	0.5	0.5	1	0.5	1	1	6	Low-quality paper	
Villalobos	2018	0.5	1	0.5	0	0.5	0	1	0	0.5	1	5	Exclude	<6 score, data analysis
Waelli	2021	1	1	0	0.5	0.5	0	1	0.5	0.5	0.5	5.5	Exclude	<6 score
Wagland	2019	1	1	0.5	0.5	0.5	0	1	0.5	1	0.5	6.5	Low-quality paper	
Wong	2011	1	1	0	1	1	0	1	0.5	0.5	1	7	Low-quality paper	
Wood	2013	1	1	0.5	1	0.5	1	1	0	1	1	8	Exclude	Data analysis
Ziebland	2015	1	1	0.5	0	0.5	0	1	0	0.5	1	5.5	Exclude	<6 score, data analysis
Legend														
		Included studies					Hard exclusion criteria (data collection/data analysis/ethical considerations)							

study results. Analysis was conducted as follows: First, all text fragments relevant to this study's purpose were coded (RC). Text blocks were considered pertinent to our study if they depicted interaction with healthcare professionals from the patient's viewpoint. Next, a code list was generated, after which codes were re-read and grouped into meaningful categories. These results were discussed in reflexivity meetings, after which - as the last analysis step - themes were generated from the categories (Charmaz, 2006; Thomas and Harden, 2008). Analysis was conducted in MAXQDA 2022 (VERBI Software, 2021). Throughout the different stages of analysis, several reflexivity meetings with the research team were held to reduce researcher bias and increase the richness of the findings (Creswell and Creswell, 2017). Lastly, a sensitivity analysis was conducted through which the identified themes were verified against individual study results, population characteristics, and study settings (Fig. 2).

3. Results

After duplicate removal title and abstract of remaining records (n = 10332) were screened for eligibility, leaving 406 studies meeting the inclusion criteria (Fig. 1: PRISMA flowchart). Eighty-eight articles were appraised, after which 37 studies were excluded due to threats to methodological rigor. One additional study was excluded after quality appraisal as the focus of that study was retrospectively found irrelevant to this study's aim (Rohde et al., 2019). A total of 50 articles are included in this meta-synthesis (Table 2). All these studies were conducted to either investigate patients' interaction preferences with healthcare professionals or evaluate interventions adjacent to innovative care projects aimed at improving patient-professional interaction.

3.1. *Population characteristics*

A total of 1245 patients under active cancer treatment were included across the 50 studies, of whom 45% (n = 558) was female, 36% (n = 444) was male, and 19% (n = 243) was unspecified. Across all study samples, age ranged from 18 to 92 years. Patients were diagnosed with 21 different types of cancer, the majority being gastrointestinal (34 studies), breast (25 studies), genitourinary (20 studies) and lung cancer (16 studies). Cancer treatments received at time of study were chemotherapy, radiotherapy, surgery, hormone therapy, endocrine therapy, and disease surveillance (Table 2).

3.2. *Quality appraisal results*

Eight studies (references 2, 14, 22, 23, 30, 35, 38, 45 in Table 2) were considered of high-quality (score 9.0–10), 18 studies (references 4, 6, 8, 10–13, 15, 18–20, 26, 27, 32, 37, 39–41 in Table 2) of moderate quality (score 7.5–9.0) and 24 studies (references 1, 3, 5, 7, 9, 16, 17, 21, 24, 25, 28, 29, 31, 33, 34, 36, 42–44, 46–50 in Table 2) of low-quality (score 5.5–7.5). Generally, the low-quality papers lacked in reporting of methodological rigor with regards to specification of the analysis approach (i.e., phenomenological, grounded theory, content analysis), data collection methods (i.e., no interview guide presented) and/or researcher reflexivity. Also, information on the relationship between researcher and participants and methods applied for triangulation and validation of data were often unavailable in studies of lower quality, while these items are deemed essential in qualitative study reporting (Creswell and Creswell, 2017; Mays and Pope, 2000). (Table 1).

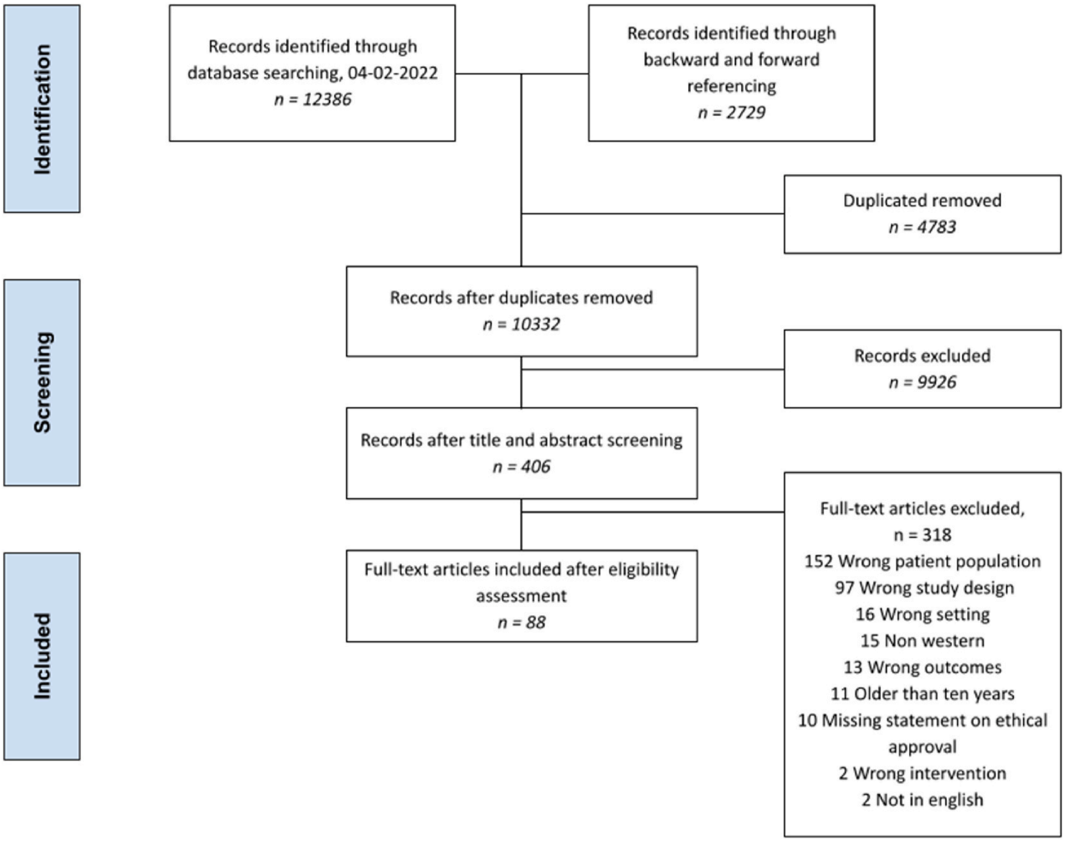

Fig. 1. PRISMA Flowchart: selection process for qualitative meta-synthesis.

3.3. *Data synthesis*

The main concept describing positively perceived interaction, emerging from data analysis, was "person-centered care", incorporating the following themes: "Support, respect, and agency", "Quantity, timing and clarity of information", "Confidence, honesty and expertise".

3.3.1. *Theme 1: support, respect and agency*

A total of 45 studies (8 high, 17 moderate and 20 low-quality papers) (Table 3) reported that the experience of support, respect, and personalized care enhanced a positive perceived patient-professional relationship. The following four subcategories were identified:

3.3.1.1. Experiencing emotional, spiritual, and social support. Patients' experiences of support received from healthcare professionals were positive in most studies. It was highly appreciated when healthcare professionals had a caring attitude and showed personal interest in patients extending beyond health issues (references 2, 9, 12, 14, 17, 21, 22, 24, 30, 36, 39, 40, 42, 45, 47 in Table 2). Moreover, if healthcare professionals were perceived as *available*, by allocating enough time during consultations, this comforted patients in the idea that they were met with genuine concern (references 2, 5, 7, 9, 10, 12, 18–22, 30, 32, 33, 35–37, 39, 40 in Table 2). Patients reported positive experiences when healthcare professionals showed empathy, were understanding or provided emotional support (references 1, 5, 7–9, 12, 13, 16, 18, 19, 21, 23, 25, 32–35, 37, 41, 45, 48, 50 in Table 2). Receiving social support towards home and financial situations was appreciated, and providing access to spiritual support or allowing patients to talk about spiritual beliefs openly was perceived positively (references 5, 8 in Table 2). When facing financial and familial challenges being able to count on healthcare professionals to deal with these issues was positively perceived (references 2, 9, 14, 30, 50 in Table 2).

3.3.1.2. Feeling respected and treated as a person. Feeling respected during interaction with healthcare professionals was perceived as essential by patients in many studies (references 2, 12, 17, 19, 21, 30 in Table 2). Being given consideration when expressing preferences and opinions improved patient-professional relationships (reference 21 in Table 2). A personalized approach made patients feel like "normal human-beings" and valued (references 2, 6–8, 13, 14, 17, 18, 20, 22, 26, 36, 38, 45, 50 in Table 2).

3.3.1.3. Feeling safe in a welcoming and familiar environment. Studies identified a patient-perceived reduced burden of disease when experiencing a friendly and positive social and physical environment in which they received their treatments (references 2, 6, 18, 22, 30, 36, 37 in Table 2). In addition, *relational continuity*, defined as being able to count on the same healthcare professionals throughout the entire care process, was positively perceived and increased feelings of safety in the healthcare institution (references 1, 2, 12, 14, 22–24, 27, 36, 46, 47 in Table 2).

3.3.1.4. Having agency. Several studies identified patients being appreciative of being involved in decision-making regarding their treatment plan, as this was perceived as being given control and being part of the team striving towards the best possible outcome (references 2, 8, 14, 15, 21, 22, 25, 26, 28, 30, 35, 38, 39, 41, 46, 47, 49 in Table 2). In this context, patients perceived it as essential that healthcare professionals provide advice regarding treatment decision-making (references 7, 17, 23, 35, 38, 41, 49 in Table 2). In contrast, several other studies described patients' negative experiences regarding shared decision-making, experiencing this as a burden. Instead, patients in these studies expressed that healthcare professionals should use their expertise to recommend treatment options (references 2, 28, 41, 47, 49 in Table 2). (See Table 3 for example quotes).

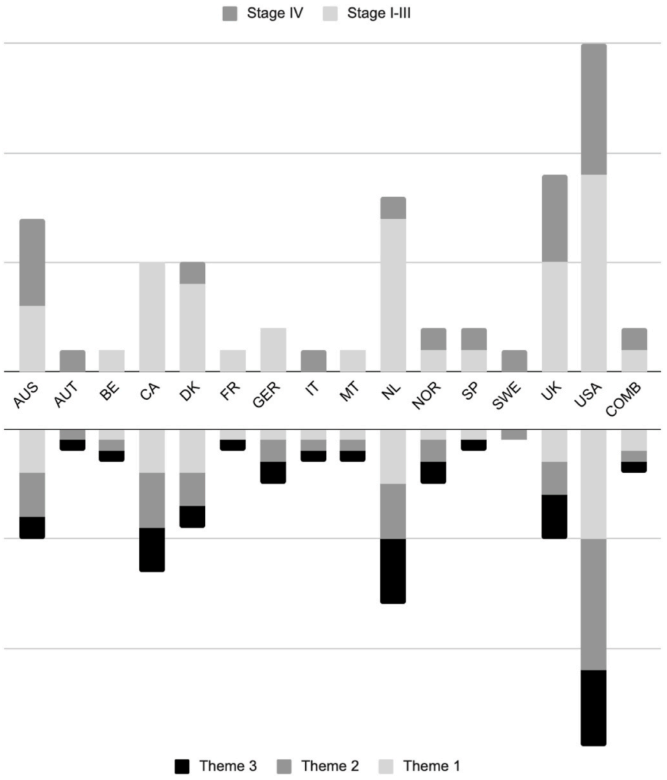

Fig. 2. Sensitivity analysis. Shown are the number of studies per country including Stage I-III and Stage IV patients (top) and finding each of the respective themes (bottom), AUS: Australia, AUT: Austria, BE: Belgium, CA: Canada, DK: Denmark, FR: France, GER: Germany, IT: Italy, MT: Malta, NL: Netherlands, NOR: Norway, SP: Spain, SWE: Sweden, UK: United Kingdom, USA: United States of America, COMB: Combined.

3.3.2. Theme 2: quantity, timing and clarity of information

Themes related to quantity, timing, and clarity of received information were identified in 45 studies (8 high, 15 medium, and 23 low-quality studies) (Table 3) as important aspects to a positively perceived interaction between patients and healthcare professionals. However, preferences varied across study populations. Some studies reported patients' preferences for receiving detailed disease information, treatment options and consequences, whereas other studies reported on patients preferring less detail. Several studies identified patients perceiving the quantity of information as being overwhelming and therefore difficult to grasp. The following subcategories illustrate experiences of quantity, timing, and clarity of information provided and verbal and non-verbal communication aspects in patient-professional interaction.

3.3.2.1. Timing and quantity of information provided. Patients' experiences with the quantity of information varied across studies. Nine studies identified information needs being dependent on individual patient preferences (references 2, 9 10, 25, 28, 33, 36, 43, 50 in Table 2). Some study respondents appreciated when efforts were made to provide extensive information, as this confirmed to them that healthcare professionals are experts on the topic and it facilitated decision-making (references 1, 2, 4–10, 16–19, 21–26, 28, 31–33, 36–38, 49, 50 in Table 2). In contrast, a high quantity of information can be overwhelming or even unwanted, as patients deemed technical details unnecessary (references 2, 7, 18, 36, 42, 46 in Table 2). Therefore, being provided with (treatment) information gradually, on-demand and by choice was positively perceived by patients (references 2, 7, 22, 47 in Table 2).

3.3.2.2. Being provided with clear information. Clarity of information seemed to revolve around the negative experience of the information being inadequate or incomplete (references 2, 20, 23, 25, 29, 30, 33, 41, 47, 50 in Table 2). Information provision was perceived as adequate when it was understandable and when time was taken to answer questions and check how the information was received (references 2, 6, 9, 21–23, 30, 31, 33, 36, 47, 49, 50 in Table 2). Studies identified being shown *what* to do and *where* to go, receiving graphics including visual aids, and receiving structured and succinct information as positive experiences (references 6, 7, 9, 36, 50 in Table 2).

3.3.2.3. Communication skills. Patients positively perceived healthcare professionals' use of reflective and sensitive ways of communication. Personal preferences were leading in how direct, or more indirect forms of communication were applied (references 19, 22, 23, 41, 44 in Table 2). Patients appreciated active listening skills, demonstrating concern and understanding (references 7–9, 19, 33, 48 in Table 2). In contrast, in 9 studies, patients experienced the use of metaphors, complicated language, or being cryptic in communication as confusing (references 2, 5, 10, 18, 23, 29, 41, 43, 46 in Table 2). Five studies reported on patients' positive experiences with healthcare professionals applying humor during their consultations, although individual preferences make it necessary to check when the use of humor is appropriate (references 1, 2, 6, 22, 44 in Table 2). Several studies identified the importance of non-verbal communication in patient-professional interaction and a friendly and positive attitude (references 1, 2, 4, 7, 9, 13, 17, 21, 22, 30, 36, 37 in Table 2).

3.3.3. Theme 3: confidence, honesty, and expertise

A show of confidence, honesty, and expertise by healthcare providers was perceived positively by patient populations in 41 studies (7 high, 15 medium, and 19 low-quality papers) (Table 3), and these aspects were identified as key elements in developing a trusting relationship between patients, relatives, and healthcare professionals. The following subcategory illustrates patient experiences further:

3.3.3.1. Being in the hands of confident and honest professionals. In most studies where "trust" was identified as a theme, patients experienced this as a given because of the professional's qualifications. Trust increased when dealing with known experts in the field, as this increased feelings of safety (references 1, 2, 5–7, 9–14, 17, 18, 20, 22–24, 26, 28, 30, 32–35, 38–42, 47 in Table 2). In addition, greater trust in healthcare professionals was experienced when patients were met with self-confident professionals showing to be in control and projecting honesty and integrity (references 1, 2, 5–9, 13, 17, 20, 22–32, 40, 41 in Table 2). Nevertheless, professionals being able to recognize the limit to their own expertise and who do not hesitate to consult or refer to a colleague or scientific literature were highly appreciated by patients (references 2, 14, 24 in Table 2).

3.4. Sensitivity analysis

All studies were conducted in western countries with various healthcare models. The larger part of the studies (78%) included patient populations in disease stages I-III. The three transcending themes identified in this meta-synthesis were equally distributed across the 50 studies. See Fig. 2 for an overview of the themes, cross-checked against the individual study results, settings, and populations.

4. Discussion

The objective of this systematic qualitative meta-synthesis was to gather, appraise, and provide an overarching thematic synthesis of results from the current body of qualitative research on positive and negative experiences of patients receiving cancer treatment regarding

Table 2
Study characteristics.

First author	Reference number	Year	Country	Type of cancer	N	Gender M/F	Mean age [range]	Treatment(s) received	Professionals mentioned by patients	Topics investigated
Aagaard	1	2018	Denmark	Breast, GI	13	6/7	Breast: 63.75 [N/A] GI: 70.7 [N/A]	Surgery	NP	Patients experience of being prepared for general anesthesia and their interaction with RNAs
Abt Sacks	2	2016	Spain	Breast	41	1/40	N/A [32–69]	Chemotherapy, radiotherapy, hormone therapy or combinations	Physicians, NP, mammography operators	Perception of information and assessed oncologic care received
Albrecht	3	2019	USA	Leukemia	7	4/3	32 [25–36]	Induction chemotherapy	Physicians, NP	Experiences of treatment, support, information, and communication
Alpert	4	2018	USA	Breast, hematologic, GI, GU, lung, sarcoma, skin, gynecologic	35	14/21	54 [N/A]	N/A	Physicians	Perception of portal communication, risk information communication via a portal, patient-oncologist relationship changes through portal use
Anderson	5	2021	USA	Breast	28	0/28	64 [N/A]	Adjuvant endocrine therapy	Physicians, NP, unspecified healthcare providers	Patient perceptions of and possible race-based differences in patient-provider communication
Appleton	6	2018	UK	Lung, GI, head/neck	30	18/12	N/A [52–88]	Radiotherapy, chemotherapy or combination	Physicians, NP, unspecified medical staff	Identify components of care important to patients and meeting their needs. To explore how cancer services promote and support patient's wellbeing throughout cancer treatment
Back	7	2014	USA	GI	37	15/22	58 [31–84]	Surgery, chemotherapy, radiotherapy	Physicians	To identify communication practices that clinicians could use as entry points into conversations about goals of care.
Best	8	2014	Australia	GI, lung, GU, breast, gynecologic, adenocarcinoma	15	5/10	70 [41–87]	Palliative, not further specified	Physicians, spiritual advisors	Spiritual support of patients with advanced cancer and preferences regarding the role of doctors in helping them cope with a terminal illness
Blakely	9	2017	Canada	GI	20	N/A	N/A	Surgery, disease surveillance	Physicians	Communication experiences of patients treated surgically for pancreatic cancer, identify perceived enablers and barriers to effective communication
Brincat	10	2021	Malta	GI	12	2/10	62 [38–78]	Antineoplastic medicines, not further specified	Physicians, NP, unspecified HCP	Experiences on initiation of treatment with antineoplastic medicines for colorectal cancer.
Candela	11	2020	Italy	N/A	32	17/15	N/A [41–80]	N/A	NP	Experiences with dependence on care of patients with advanced cancer
Couchman	12	2019	UK	GU, GI, breast, gynecologic, lung, atrial sarcoma	15	6/8	74 [N/A]	N/A	Physicians	Experiences of family physician's role in providing palliative care and facilitators and barriers to the family physician's ability to fulfil this perceived role.
Daem	13	2019	Belgium	Breast, Hematologic, Lung, GI	13	N/A	N/A	N/A	NP, psychologists, physicians, social workers	When patients with cancer experience quality psychosocial care

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Table 2 (*continued*)

First author	Reference number	Year	Country	Type of cancer	N	Gender M/F	Mean age [range]	Treatment(s) received	Professionals mentioned by patients	Topics investigated
den Herder-van der Eerden	14	2017	Belgium, Germany, Hungary, Netherlands, UK	N/A	96	N/A	68 [N/A]	Palliative (Not further specified)	Physicians, NP, physiotherapists, hospice professionals	Experience of relational, informational and management continuity of care in patients with advanced cancer, COPD or CHF
Devitt	15	2020	Australia	Breast, GI, hematologic, GU, lung	9	4/5	N/A [36–74]	N/A	Physicians and health professionals, not further specified	Attitudes of patients toward multidisciplinary cancer meetings
Donachie	16	2020	The Netherlands	GU	17	17/0	67 [54–76]	Active surveillance	Physicians, NP	Psychosocial support needs of prostate cancer patients during active surveillance
Farias	17	2017	USA	Breast	22	0/22	N/A	Adjuvant endocrine therapy	Physicians	Physicians' communication about all aspects of AET treatment from patients' perspective
Herrmann	18	2021	Germany, Australia	Leukemia, lymphoma, multiple myeloma, myelofibrosis	20	7/13	56 [N/A]	N/A	Physicians	Preferences for receiving one longer consultation or two shorter consultations when being informed about allogeneic hematopoietic stem cell transplantation
Hess	19	2021	Germany	Breast, GU, GI	29	N/A	58.4 [N/A]	N/A	Physicians, psychologists, unspecified medical staff	Psychosocial needs in cancer patients at the beginning of inpatient rehabilitation
Hillen	20	2012	Netherlands	GI, Breast, GU, Gynecologic, Muscle, Bone, Brain	29	13/16	N/A	Curative treatment, palliative treatment, not further specified	Physicians	To elucidate cancer patients' trust in their oncologist
Hopmans	21	2015	Netherlands	Lung	11	5/6	N/A	Surgery, stereotactic ablative radiotherapy	Physicians	Patients experience of treatment decision-making process
Jacobsen	22	2015	Canada	Lymphoma, Leukemia, sarcoma, breast, GI, multiple myeloma, GU	13	7/6	N/A [18–39]	N/A	NP, unspecified healthcare providers	To explore how young adults with cancer experience being known by their healthcare team
Jordan	23	2022	USA	GU	7	7/0	75 [N/A]	N/A	Physicians	Preferences of older patients with advanced bladder cancer related to their communication with providers and navigation of care planning.
Kvale	24	2010	Norway	N/A	20	10/10	N/A	Curative treatment, not further specified	NP	To gain insight into the patients' perceptions of the importance of nurses' knowledge about cancer and its treatment for quality nursing care.
Kumar	25	2020	USA	GI, Lung	32	15/17	66 [45–80]	N/A	Physicians, NP, physician assistants	Patients' perceptions of a serious illness conversation with an outpatient oncology clinician
Lawhon	26	2020	USA	Breast	33	N/A	N/A	Radiation	Physicians	Shared decision-making and patient preferences
Lelorain	27	2019	France	N/A	21	N/A	N/A	N/A	Physicians, NP	Relational, organizational, and informational issues
Lowe	28	2021	Denmark	GU	13	13/0	N/A [60–89]	Androgen deprivation, chemotherapy	Physicians, NP	Attitude of patients to involvement in treatment decisions and how physicians' and nurses' approaches to patient involvement were expressed through attitude and action.
Martinsson	29	2016	Sweden	GI, breast	15	6/9	N/A [41–71]	Palliative chemotherapy	Physicians, NP	Perspectives on the information received from physicians during

(*continued on next page*)

Table 2 (*continued*)

First author	Reference number	Year	Country	Type of cancer	N	Gender M/F	Mean age [range]	Treatment(s) received	Professionals mentioned by patients	Topics investigated
										palliative chemotherapy regarding cancer diagnosis, treatments, prognosis and future planning
Masel	30	2016	Austria	Breast, lung, brain, GI, sarcoma, GU, skin	20	7/13	N/A [42–85]	Palliative care, not further specified	Physicians, psychologists, dietitians, voluntary workers	Understanding of patients about their upcoming palliative care, expectations and needs when being admitted for palliative care, what is a good palliative care physician
McNair	31	2016	UK	Esophageal	31	24/7	67 [55–79]	Chemotherapy, pre-surgery	Physicians	Explore verbal information provision by surgeons during preoperative consultations, and patients' preferences about esophageal cancer surgery
Myren	32	2021	The Netherlands	Gynecological	8	0/8	N/A [44–80]	Surgery	Physicians, NP, case managers	Practical constraints and experiences from the perspective of patients with regard to morbidity and mortality meetings.
Nababan	33	2020	Australia	Lung	47	24/23	N/A	Surgery, chemotherapy, radiation therapy, palliative care	Physicians	Patients' experience of GP involvement following lung cancer diagnosis, and patients' view on communication between hospital cancer specialists and GPs.
Niranjan	34	2020	USA	Breast	20	0/20	53 [N/A]	N/A	Physicians	Supportive care needs of Western Australian women experiencing gynecological cancer
Noteboom	35	2021	The Netherlands	Skin, breast, GI, GU, lung, gynecological	20	6/14	69 [54–81]	N/A	Physicians	Treatment decision-making process and added value of GP involvement
Pedersen	36	2013	Denmark	GI, breast, GU, head/neck, lung, gynecological	9	4/5	55 [38–74]	Chemotherapy, radiation therapy or a combination	NP, unspecified medical staff	Explore experiences of how side effects from chemo and radiotherapy impact everyday life as well as information needs in coping with these side effects
Prip	37	2022	Denmark	Gynecological, skin, GU	18	9/9	N/A [30–80]	Chemotherapy, immunotherapy	Physicians, NP, unspecified HCP	Patients' experiences of communication with HCP during their course of treatment in an oncology outpatient clinic to elucidate how their needs for support are met
Retrouvey	38	2019	Canada	Breast	28	0/28	49 [N/A]	Surgery, chemotherapy, radiation therapy	Physicians	Breast cancer patients' acceptability of breast reconstruction
Rocque	39	2019	USA	Breast	20	0/20	N/A	Chemotherapy, radiotherapy, surgery or a combination	Physicians	Identify factors influencing decision making in treatment selection for patients with metastatic breast cancer and oncologists treating MBC
Salmon	40	2011	UK	Breast	20	0/20	N/A [39–86]	Surgery	Physicians, NP	How to define authentic, caring, clinical relationships? how do patients and surgeons perceive their relationships
Sattar	41	2018	Canada	Breast, GU, GI, lung	20	12/8	[66–78]	Chemotherapy and/or radiation therapy	Physicians	To explore cancer treatment decision making in older adults

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Table 2 (*continued*)

First author	Reference number	Year	Country	Type of cancer	N	Gender M/F	Mean age [range]	Treatment(s) received	Professionals mentioned by patients	Topics investigated
Schildmann	42	2013	Germany	GI	12	6/6	64.6 [40–76]	Chemotherapy, radiation, surgery	Physicians	Perceptions and preferences on information and treatment decision-making
Step	43	2011	USA	Breast, head/neck, lung, GI gynecologic	30	0/30	63 [42–84]	N/A	Physicians	Perceptions and experiences related to the discussion of prognosis with oncologists when initially diagnosed and when cancer recurred
Tanay	44	2014	UK	N/A	12	8/4	55.6 [36–70]	Chemotherapy, palliative care, surgery, radiotherapy or combinations	NP, unspecified health professionals	Use of humor during patient-nursing interactions in an adult cancer ward
Twibell	45	2020	USA	Breast, leukemia, GI, lung, GU, lymphoma, metastatic/multiple sites, Oral/larynx, skin, adrenal, bone, thyroid	30	N/A	65.4 [26–92]	N/A	NP, physicians	Perspectives of hospitalized adults with cancer regarding engagement in fall prevention plans
Van Bruinessen	46	2013	Netherlands	Lymphoma	28	12/16	59 [39–81]	N/A	Physicians	To identify communication barriers and facilitators at all stages after diagnosis
Van Egmond	47	2019	Netherlands	Skin	42	25/17	N/A [60–77]	N/A	Physicians	Care needs and preferences of patients with basal cell carcinoma and squamous cell carcinoma
Vaughan	48	2021	Australia	Mesothelioma, myeloid leukemia, nasal, breast, lung, GU, GI, peritoneal carcinoma	12	6/6	N/A [56–86]	N/A	Physicians, physiotherapist, dietitians, and NP	Evaluation of a Multidisciplinary Cachexia and Nutrition Support Service
Wagland	49	2019	UK	GU	97	97/0	65.5 [48–87]	Radiotherapy, surgery, androgen deprivation therapy, or combination	Physicians	Experiences of treatment decision making
Wong	50	2011	Canada	Breast	16	0/16	N/A [70–84]	Radiation	Physicians	Information needs of older women with early-stage breast cancer in relation to adjuvant treatment post lumpectomy

Legend, AET: Adjuvant endocrine therapy, COPD: Chronic obstructive pulmonary disease, CHF: Chronic heart failure, GI: Gastro-intestinal, GP: General practitioner, GU: Genitourinary, MBC: Metastatic breast cancer, N/A: Non-available, NP: Nursing professionals.

their interaction with healthcare professionals, and to identify elements that professionals can use to optimize the interaction with their patients. This study identified three themes: “Support, respect, and agency”, “Amount, timing and clarity of information provided”, and “Confidence, honesty, and expertise”, within one overarching concept connected with positive experiences of patient-professional interaction: “Person-centered care”.

Person-centered care is a concept that actively involves patients as partners of healthcare professionals, ensuring that patients’ preferences, needs, and values guide clinical decisions. In the past decades, person-centered care has been shown to improve health outcomes and increase patient satisfaction, making it a key component of high-quality care (Loonen et al., 2018; McMillan et al., 2013).

Across all included studies, positive experiences related to fundamental principles of person-centered care, as defined by Geirtes et al. (Gerteis et al., 1993) and the National Academy of Medicine (Institute of Medicine Committee on Quality of Health Care in, 2001): “respect for patients’ values, preferences, and expressed needs”, “information, communication, and education”, “physical comfort”, and “emotional support - relieving fear and anxiety”. In contrast, as shown in this qualitative meta-synthesis, the provision of care which lacked person-centeredness, especially when adopting a paternalistic approach and ignoring patients’ preferences regarding information provision and support needs, repeatedly resulted in negative experiences. Since even the most recent studies report negative patient experiences, our results seem to indicate that the application of the person-centered concept is not yet optimal.

The first theme – Support*, respect, and agency* – reflects that each person with cancer has personal needs and expectations and wants to be seen and treated accordingly. It also reflects that individuals with cancer value being supported in their autonomy. However, although supporting patients’ autonomy by providing them with information, giving them the possibility to make their own decisions, and empowering them towards healthier behaviors is an important goal for healthcare professionals (Chen et al., 2016; Velikova et al., 2018), recent literature shows that this goal is often unmet. For example, in a recently published overview of systematic reviews, Chaboyer et al. identify self-management, autonomy, education of patients and families, and emotional and psychological care, including spiritual support, as missed nursing care, i.e., nursing care that is often lacking, which is consistent with our findings (Chaboyer et al., 2021).

The results of this meta-synthesis also highlight interpersonal differences in the amount and kind of (emotional, social and/or spiritual) support needed and the extent to which each individual wants to have agency. Previous studies found that discrepancies between information needed to be able to take part in decision making and the information available and provided, as well as an authoritarian attitude of the healthcare professional, were potential reasons for patients preferring to leave the decisions up to healthcare professionals (Frosch et al., 2012; Rutten et al., 2005). On the contrary, in a survey study of cancer survivors, Chawla and Arora reported that patients who preferred not taking part in decision making had greater trust in their physicians (Chawla and Arora, 2013). These findings imply that healthcare professionals should be aware of the need to create a safe and welcoming environment and individualize their approach to facilitate shared decision making.

In cancer care, providing individualized support is essential to improve health outcomes (Berman et al., 2020). Several studies found that the support provided by healthcare professionals plays an important role in improving the quality of life of patients with cancer. This support is not merely instrumental (i.e., making sure treatment is adequately followed or providing effective symptom remediation) but also strongly related to feelings of being seen, heard, encouraged, and coached in an individualized manner (Cochrane et al., 2022; Faller et al., 2019; Sweegers et al., 2019). In contrast, poorly executed fundamental care threatens patients' feelings of safety, quality of life, empowerment, functioning, and satisfaction (Feo and Kitson, 2016; Jackson and Kozlowska, 2018).

Together, these findings imply that healthcare professionals should be consciously aware of their supportive role in treating patients during cancer care. While individualized support is invaluable, care should be taken to avoid patients' dependency on healthcare professionals. Such reliance is not desirable from a healthcare cost containment perspective but also conflicts with the objective to improve adaptation and self-management in patients (Huber et al., 2011).

The second theme – *Quantity, timing, and clarity of information* – shows the need for tailoring the information provision to patients. Too much information can be overwhelming or confusing, but too little information may cause anxiety. Previous systematic reviews found that communication and information needs of patients with cancer evolve throughout the continuum of care and are often unmet. During the treatment phase, information needs revolve around the stage of the disease, treatment options, and side effects. In the post-treatment phase, patients need more information on rehabilitation, self-management, follow-up, and long-term side effects (Chaboyer et al., 2021; Rutten et al., 2005; Wang et al., 2018).

Furthermore, many patients are anxious or show signs of depression, which influences their needs concerning information communication and their ability to process such information (Goerling et al., 2020; Nguyen et al., 2019). Kessels (2003) reported patients' recall of medical information to be poor, as 40–80% of the information provided by healthcare professionals was immediately forgotten. This was explained by the use of complex medical terminology or patient educational level, as well as the mode in which information was presented. As our meta-synthesis shows, timely and effective provision of personalized information to patients with cancer is challenging for many healthcare professionals. Indeed, the results of this meta-synthesis show negative patient experiences when receiving an overwhelming or unclear amount of information. This was due to healthcare professionals' use of technical terminologies or ignored patients' preferences to receive less information or at another moment. Since patients' preferences regarding disease information, treatment options, and consequences differ substantially from one individual to another, healthcare professionals should continually assess what information is needed and when, and if it is correctly received.

All in all, patients should be involved in deciding the timing, quantity and mode of information provided, and healthcare professionals should include this as an explicit point of discussion in their consultations.

The last theme of this review – *Confidence, honesty, and expertise* – reveals that people with cancer prefer interacting with honest professionals who are experts in their field and show confidence. The findings of this theme are consistent with the results of a literature review looking into the strength, correlates, and consequences of patients' trust in their physician which identified honesty and communication of expertise as elements enhancing patients' trust (Hillen et al., 2011). In addition, a recent study investigated the preferences of patients with metastasized breast cancer regarding supervised exercise programs also identified lack of expertise of healthcare professionals as a barrier for patients to adhere to their physiotherapy treatment (Ten Tusscher et al., 2019). Therefore, patients need to know that their healthcare providers are qualified to provide cancer care. At the same time, as shown in several studies on the learning needs of healthcare professionals for the treatment of patients with cancer, professionals of several disciplines, including physicians, nurses, and allied health professionals, indicate a lack of expertise in several aspects of cancer care such as knowledge of medical treatment or psychosocial and practical education on managing emotional and late effects of cancer treatment (Bradford et al., 2018; Klemp et al., 2011; Puts et al., 2021; Ten Tusscher et al., 2020). The findings of these studies, along with the results of this meta-synthesis, suggest that providing high-quality cancer care requires ongoing education and training opportunities specific to oncology healthcare professionals.

4.1. *Strengths and limitations*

This qualitative meta-synthesis included an extensive systematic search, selection, and appraisal method and followed the guidelines of several scientific publications regarding the synthesis of data from the included studies. Although we did not search in grey literature or unpublished work, a vast number of articles was identified, and we found indications for data saturation. Therefore, we do not think that any missed paper would have had major consequences for our findings and conclusions. We provide a comprehensive overview of themes related to patient-professional interaction, as found in qualitative cancer care studies published in the last decade, that can inform clinical practice. However, several limitations to our study can be identified.

Firstly, since few guidelines exist for conducting qualitative meta-syntheses, our methodological approach leaned heavily on the review protocol proposed by Butler et al. (2016). We applied a strict cut-off score on our quality appraisal (<7.5/10 is considered low quality). Therefore, studies contributing to our topic were possibly excluded from this review due to this strict appraisal method. However, our search yielded an extensive and varied amount of high-quality studies representative of the study domain. Within this body of literature, consistency and saturation of findings seem to be present, and we doubt that studies of lower quality would change the current insights.

Secondly, data synthesis was conducted based on the published reports of qualitative studies as we did not have access to the raw data. Although we followed strict guidelines for data analysis, we recognize that this approach might impact the richness of the data.

Thirdly, most papers included focus on patients' interaction with physicians and nurses and not with other essential (allied health) professionals. Nevertheless, we believe that the lessons learned from the patients' experiences described in the studies we included apply to all healthcare professionals who provide supportive care to patients with cancer. In relation to this, as the sensitivity analysis shows, this study's results were equally distributed across the included studies within various healthcare systems and patient populations. However, results cannot be extrapolated to contexts markedly different from the healthcare settings and systems in which the included studies were conducted.

4.2. *Implications*

Healthcare professionals are trained to assess patients' (dis)ability

Table 3
Example quotes.

Theme 1: Support, respect, and agency 45 studies (Aagaard et al., 2018; Abt Sacks et al., 2016; Albrecht et al., 2019; Anderson et al., 2021; Appleton et al., 2018; Back et al., 2014; Best et al., 2014; Blakely et al., 2017; Brincat et al., 2021; Candela et al., 2020; Couchman et al., 2019; Daem et al., 2019; den Herder-van der Eerden et al., 2017; Devitt et al., 2020; Donachie et al., 2020; Farias et al., 2017; Herrmann et al., 2021; Hess et al., 2021; Hillen et al., 2012; Hopmans et al., 2015; Jacobsen et al., 2015; Jordan et al., 2022; Kumar et al., 2020; Kvale and Bondevik, 2010; Lawhon et al., 2021; Lelorain et al., 2019; Lowe et al., 2021; Masel et al., 2016; Myren et al., 2021; Nababan et al., 2020; Niranjan et al., 2020; Noteboom et al., 2021; Pedersen et al., 2013; Prip et al., 2022; Retrouvey et al., 2019; Rocque et al., 2019; Salmon et al., 2011; Sattar et al., 2018; Schildmann et al., 2013; Twibell et al., 2020; van Bruinessen et al., 2013; van Egmond et al., 2019; Vaughan et al., 2021; Wagland et al., 2019; Wong et al., 2011)	
Sub-category	Example quotes (quality according to Critical Appraisal Skills Programme score)
Experiencing emotional, spiritual, and social support	“It makes you feel like she’s not just giving you a treatment. She’s [the physician] here and she cares about you.”(Jacobsen et al., 2015) (high-quality paper) “When one says, ‘I want to talk to a doctor,’ then there’s someone available the whole week who explains everything to you. (…) Simply time. They take time and explain everything carefully” (P05b, female, aged 42 years, suffering from cancer of the small intestine).(Masel et al., 2016) (high-quality paper)
Feeling respected and treated as a person	“When a clinician is very kind, that is 20% of your recovery. Only being nice. And when he is disrespectful, you decline with 20%”. F, 66y.(Hopmans et al., 2015) (low-quality paper) “He [oncologist] knew me by my name, my face. When I came in, it was like they treated you like you were a person and not just cattle coming through. He used to call me his most delicate patient.”(Farias et al., 2017) (low-quality paper)
Feeling safe, in a welcoming and familiar environment	“Well, they get to know you by your first name and it is a very friendly atmosphere, even though it’s quite a serious time in your life, they try and make you at ease, which was good” P27.(Appleton et al., 2018) (moderate-quality paper) “So maybe not directly in the consultation room but you sit down in a room where the atmosphere is a bit more “comfortable”. There you can have a water and a coffee for example. You just loosen it up a bit.” (Patient, female, 29 y, acute lymphoblastic leukemia) (Herrmann et al., 2021) (moderate-quality paper)
Having agency	“I think it’s really good giving lots of information but then leaving some of the decision up to the patient, that feels like you’re being, I suppose, more in control.”(Best et al., 2014) (moderate-quality paper) “The problem is I’ve asked them [clinicians] about treatments and the best treatment and they haven’t been able to give me an answer […] They say it’s up to me to decide which treatment I want. Unfortunately, because I’m not qualified in that area I can’t give an opinion on that, so I’m a bit in limbo [about] which is the best treatment […] I’m very, very depressed about it.” (67 years, stage I, AS: TDM2; DRS 30) (Wagland et al., 2019) (low-quality paper)
Theme 2: Quantity, clarity, and timing of communicated information 45 studies (Aagaard et al., 2018; Abt Sacks et al., 2016; Alpert et al., 2019; Anderson et al., 2021; Appleton et al., 2018; Back et al., 2014; Best et al., 2014; Blakely et al., 2017; Brincat et al., 2021; Candela et al., 2020; Couchman et al., 2019; Daem et al., 2019; Devitt et al., 2020; Donachie et al., 2020; Farias et al., 2017; Herrmann et al., 2021; Hess et al., 2021; Hillen et al., 2012; Hopmans et al., 2015; Jacobsen et al., 2015; Jordan et al., 2022; Kumar et al., 2020; Kvale and Bondevik, 2010; Lawhon et al., 2021; Lowe et al., 2021; Martinsson et al., 2016; Masel et al., 2016; McNair et al., 2016; Myren et al., 2021; Nababan et al., 2020; Niranjan et al., 2020; Noteboom et al., 2021; Pedersen et al., 2013; Prip et al., 2022; Retrouvey et al., 2019; Sattar et al., 2018; Schildmann et al., 2013; Step and Ray, 2011; Tanay et al., 2014; Twibell et al., 2020; van Bruinessen et al., 2013; van Egmond et al., 2019; Vaughan et al., 2021; Wagland et al., 2019; Wong et al., 2011)	
Timing and quantity of information provided	“I like that the doctor was very expansive in what they were saying. And giving a lot of information, without the patient having to ask a lot of questions or think up what the next question is they should be asking.’’(Back et al., 2014) (low-quality paper) “I don’t think I was as interested in that sort of detail. I know that there are risks, I don’t want to dwell on it. It’s always near the front of your mind at this particular time- and you’re trying to get away from that as much as possible (IS017)(McNair et al., 2016) (low-quality paper) “Often when you have asked a question, you get an answer and you have to think it over. And then the consultation is finished before you have thought about it. Then you start to think, oh what are they sending me home with this time”.(van Bruinessen et al., 2013) (low-quality paper)
Being provided with clear information	“Yes, he said that to me in a clear, calm manner … he provided me such shocking information in a way that made me feel reassured, protected. I told myself ‘all right, nothing is going to happen’. I give full marks to the surgeon […] He perfectly explained what was going on and we were going to start (patient diagnosed in 2009).”(Abt Sacks et al., 2016) (high-quality paper) “[Clinician] made me understand a lot of things … making it clear what could happen.” (PID 20) (Kumar et al., 2020) (low-quality paper)
Communication skills	“[the information] was put so bluntly. And I thought it could have been more gentle. And the doctor admitted she doesn’t take that approach. But when you’re talking to someone older who already has other medical challenges perhaps it could have been done with a little more gentleness … rather than I don’t believe in buttering things up, I’m gonna tell you straight as it is. We like that approach but in this particular case I think it could have been a little more gentle.” (Male, prostate cancer)(Sattar et al., 2018) (moderate-quality paper) “[About humor] It creates a bond …”(Tanay et al., 2014) (low-quality paper) “I asked “[…] What are the chance that I live or not live? What are the odds 50/50 or 60/40?” He replied that we are not in the business of odds and removed the eye contact. And his body language showed either he was not confident, or it was bad news for me … so it gave me a bad feeling.” [P016]. (Brincat et al., 2021) (moderate-quality paper)
Theme 3: Confidence, honesty, and expertise 41 studies (Aagaard et al., 2018; Abt Sacks et al., 2016; Anderson et al., 2021; Appleton et al., 2018; Back et al., 2014; Best et al., 2014; Blakely et al., 2017; Brincat et al., 2021; Candela et al., 2020; Couchman et al., 2019; Daem et al., 2019; den Herder-van der Eerden et al., 2017; Devitt et al., 2020; Donachie et al., 2020; Farias et al., 2017; Herrmann et al., 2021; Hess et al., 2021; Hillen et al., 2012; Hopmans et al., 2015; Jacobsen et al., 2015; Jordan et al., 2022; Kumar et al., 2020; Kvale and Bondevik, 2010; Lawhon et al., 2021; Lowe et al., 2021; Martinsson et al., 2016; Masel et al., 2016; McNair et al., 2016; Myren et al., 2021; Nababan et al., 2020; Niranjan et al., 2020; Noteboom et al., 2021; Pedersen et al., 2013; Retrouvey et al., 2019; Rocque et al., 2019; Salmon et al., 2011; Sattar et al., 2018; Schildmann et al., 2013; van Bruinessen et al., 2013; van Egmond et al., 2019; Wagland et al., 2019)	
Being in the hands of confident and honest professionals	“I trust their judgement more than mine” (patient 6) (Rocque et al., 2019) (moderate-quality paper) “I don’t want you to, like, half-lie to me. That [qualitative statement], to me, is half lying, you know, it’s saying, ‘Oh,’ you know, ‘it often returns,’ whereas this one tells me, ‘Hey, it does return most of the time. It’s up to you to help it not return.’” Patient 8. (Blakely et al., 2017) (low-quality paper) “One discovers very quickly if the nurses have knowledge about the disease. They know what they are talking about. That makes me feel secure. I do not have confidence in all the nurses. I ask the ones I trust.” (Kvale and Bondevik, 2010) (low-quality paper)

and needs before or during treatment. We believe this needs assessment should include preferences regarding communication and the type of personal support needed. In addition, our analysis shows that people with cancer have particular interaction needs and healthcare professionals working in cancer care need to recognize what these needs are to provide high-quality care. All in all, the results of this review highlight that even though enhanced interpersonal aptitudes of healthcare professionals are already recognized as indispensable when providing supportive cancer care, the negative experiences voiced by patients in many of the included studies show that better and constant attention should be given to these skills. Therefore, theoretical and practical training aiming to improve verbal and non-verbal communication, empathy, active listening, and collaboration skills should be emphasized in the undergraduate education of healthcare professionals and through continuing education related to oncology specializations. Besides, future research should focus on developing educational programs providing healthcare professionals with the knowledge and abilities to improve patient-professional interaction, thus delivering optimal person-centered care. Furthermore, healthcare professionals' perspective of patient interaction is underexposed in this meta-synthesis, as this was beyond the scope of our study. Future studies investigating this critical aspect could further enhance the insights provided in our review.

5. Conclusions

This systematic review underscores that patients with cancer highly value healthcare professionals with strong interpersonal skills who are able to provide care in a person-centered manner. It is currently acknowledged that skills, such as verbal and non-verbal communication, empathy, active listening, and collaboration are essential for healthcare professionals providing supportive care to patients with cancer and should continuously be emphasized in the education of oncology healthcare professionals. Our results clarify the meaning of these skills by breaking them down into two categories. Firstly, into an interpersonal aspect depicting the importance of inspiring trust and showing personal interest in the patient. Secondly, into a technical aspect including the ability of healthcare professionals to know when, how and what type of information to communicate to actively involve the patient in the treatment process to stimulate self-management and shared decision making.

Declaration of competing interest

None declared.

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Appendix A. Supplementary data

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