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Preference for palliative care among low-income advanced cancer patients in Mainland China: a qualitative study

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Abstract

Background Previous studies have highlighted the significant impact of income on access to palliative care. However, few studies have explored the treatment preferences of low-income patients with advanced cancer. These individuals require additional support in terms of palliative care, including financial psychological, spiritual, and social assistance. Therefore, it is essential to conduct more qualitative research with a particular emphasis on the preferences of this population.

Aim To explore the preference and influencing factors of palliative care among low-income advanced cancer patients in mainland China.

Design A qualitative study design with a hermeneutic phenomenological approach was used.

Methods Semi-structured interviews were conducted with a purposive sample of 23 low-income advanced cancer patients in mainland China. The collected data was analyzed thematically using Giorgi's methodology. The COREQ checklist was used.

Results Four themes emerged from the analysis: (1) Economic status is crucial for palliative preference selection, which affects the patient's choice of treatment, drugs and whether to continue with palliative care; (2) Family members and medical personnels' support strengthens determination to receive palliative treatment; (3) The Chinese traditional culture of returning to one's roots influences the choice of place of death, surgery and intubation; (4) Patients with advanced cancer tend to prefer the comfort care, refuse to be awakened and agree to sedation to reduce consciousness and thus relieve suffering.

Conclusions The preferences of low-income patients with advanced cancer were influenced by economic status, social support, cultural beliefs, and the desire to alleviate suffering. Therefore, medical professionals should be patient with patients, respect them, and provide psychological support. And strengthen patients' economic support by improving medical insurance policies and providing social assistance. At the same time, medical policymakers and clinical staff should respect patients' cultural values and treatment preferences when developing treatment plans.

Keywords Palliative care, Advanced cancer, Low income, Phenomenology, Qualitative research, Preference

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Background

According to the latest data released by the National Cancer Center, in 2020, the number of new cancer cases (4.56 million) and death cases (3 million) in China ranked first in the world [1]. Cancer is a disease that affects all areas of the world, and yet 70% of deaths from cancer occur in low-to-middle-income countries (LMICs). This is primarily due to late diagnosis, where curative treatment is not an option, and hence, palliative care is desperately needed.

Palliative care is an approach to patient-/family-/caregiver-centered health care that focuses on optimal management of distressing symptoms, while incorporating psychosocial-spiritual care according to patient/family/caregiver needs, values, beliefs, and cultures [2]. In 1973, Balfour Mont further explored the needs of dying patients and formally applied the term "palliative care" to highlight the notion of cloaking or protecting those living with terminal illness, with attention to quality of life up until the moment of death in an acute care academic hospital in Montreal [3]. Along with the development of palliative care, more and more patients benefit from it, and it is more suitable for older people and new cancers. The American Society of Clinical Oncology's Global Palliative Care Resource Stratification Guidelines makes it clear that all patients with terminal cancer benefit from palliative care [4].

While palliative care services exist in over half of the world's countries, these programs are primarily in developed countries. They are lacking in areas where patients may be in most need [5]. Socioeconomically disadvantaged cancer patients are diagnosed later in their disease trajectory [6], have worse health outcomes [7], and have lower cancer survival rates than patients in similar disease circumstances that are in socioeconomically better positions [8]. The disparity in diagnostic delay results in disproportionately more patients being diagnosed with cancer in advanced stages with no possibility of curative treatment [5].

In China, there needs to be better understanding of the role of palliative care. Many people have a misconception that once they are offered palliative care, it means that the healthcare providers are giving up on them and that they are just waiting for death [9]. They do not want to be regarded as dying persons. As a result, many terminally ill patients refuse the service. Further, in most instances, it is the family members, rather than the patients, who usually make treatment decisions, and often, the patients are not included in discussions related to their care. Another phenomenon is patients' lack of knowledge and misconceptions about palliative care, which are familiar worldwide [10].

According to a 2020 meta-analysis, most researchers have not explored in depth the impact of income on access to palliative care [11]. However, a qualitative study by Santos-Salas noted that future research should focus on patient preferences for palliative care interventions, especially in socially diverse groups [12]. Some studies have shown that low-income cancer patients have lower rates of participation in palliative care [13], which may be related to a number of factors such as their cognitive level, educational resources, and socioeconomic status.

China's palliative care system is still in its infancy, with only 0.7% of hospitals providing specialist palliative care services [14]. More research evidence is needed for the low-income population in mainland China, where targeted palliative care interventions are not available for this population. Therefore, the aim of this study was to explore the palliative care preferences and influencing factors of low-income patients with advanced cancer in mainland China in order to improve the quality of palliative care in this population.

Methods

Design

To gain a deeper understanding of the preference for palliative care among low-income advanced cancer patients, a qualitative design with Giorgi's [15] phenomenological approach was selected. The phenomenological approach is practical when the essence of the lived experience of a phenomenon is under study. Individually described experiences of the phenomenon provide richness and a variety of meanings. It emphasizes the importance of cultivating a phenomenological attitude, which implies being open to the participants' preferences. The interview outline for this study was developed based on a literature review and consultation with three experts in the field of palliative care. The study was conducted with a caring perspective when asking for the patient's treatment experiences throughout the trajectory of their illness to understand what their preferences and factors influence palliative care decisions for low-income advanced cancer patients.

Participants and setting

This study was conducted among inpatients at a professional oncology treatment center in Hefei, Anhui Province, China. The center treats approximately 800 oncology patients per year and provides radiation therapy, chemotherapy, immunotherapy, targeted therapy, and palliative care for oncology. The center is mainly attended by residents in Anhui province, most of whom are from rural areas and have access to the most basic medical insurance in rural areas. We used purposive sampling to identify study participants, and all patients met the following criteria: (a) they were advanced cancer patients with distant metastases; (b) their average monthly income was less than 1.5 times of the local low income standard; and (c) they were in good spirits at the time of the interviews and were able to understand the questions. Three patients were unable to get out of bed for physical reasons, and we arranged for them to be interviewed in a single room. The remaining patients were free to move around and we conducted the interviews in the ward interview room. Participants were selected to seek the most diversity of the sample, including gender, tumor type, disease duration, treatment options, and patients' socioeconomic conditions and education.

Data collection

Data were collected between January 2023 to November 2023 by the principal investigator(XWJ), who received skills training in qualitative data collection and analysis. The interviewer has a dual degree in nursing and educational psychology and is a clinical nurse. The rapport relationship between researcher and informants was established before the data collection, and the research purpose, process were fully explained to the informants. The interviews were conducted face to face in ward interview rooms or wards. A semi-structured guide (supplementary file 1) was developed for conducting the interviews with each patient. Formal interviews ranged from 40 to 100 min, and interviews were conducted until no new information was forthcoming. A digital audio recorder was used with the permission of informants. Notes were made immediately following each interview concerning the researcher's felt sense of interviewees, affective shifts, and other non-verbal cues observed during interviews. Interviews were then transcribed and explicated.

Data analysis

Giorgi's descriptive phenomenological psychological approach served as the model for data processing [15]. All of the data were gathered, and the first author handled the majority of the data collection and analysis. The documentation was compiled and transcribed word for word in Microsoft Word within 24 h following the interviews by authors. Recorded interviews were transcribed verbatim in Mandarin, the interview transcription form was used to record non-verbal behaviors, resulting in a final transcribed document. Data saturation was achieved with no new codes or themes were identified [16]. In order to have a general understanding of the full corpus of material and to keep an open mind regarding what was being read and heard, the analysis started by going through all of the transcriptions multiple times while listening to the recordings. Once the researchers had an overall understanding of all the data, the text from each interview was segmented into meaningful units. These units were then analyzed and transformed into second-order descriptions before being merged into "themes". Closely link and describe the themes in detail with the research phenomenon. Side notes and group discussions among the research team were utilized to support and refine the data analysis process from start to finish.

Trustworthiness

The strategies of trustworthiness explained by Lincoln and Guba [17] were used in this study. Credibility was achieved through a reflexive journal throughout the study. Member checking was conducted through three participants in this study. Transferability was established by providing a thick description of data about the background and participants. Dependability and confirmability were demonstrated through an audit trail.

Results

Twenty-three semi-structured interviews were conducted in this study. Demographic characteristics of participants are shown in Table 1. The mean age of participants was 58.7 years (ranging from 37 to 78). Through the interviews, four main themes emerged around palliative care preferences for low-income patients with advanced cancer in Table 2.

Theme 1: economic status is crucial for palliative preference selection

The family's economic status, especially the medical insurance coverage, directly affects the patient's choice of treatment, medication, and whether to receive continuous treatment. They prefer less costly drugs and palliative radiotherapy that is partially covered by basic health insurance, and some may even choose to discontinue treatment due to financial difficulties.

Sub-theme 1: economic status affects the choice of treatment methods

With low income, most patients only have primary medical insurance, so they will prefer palliative radiotherapy, which is covered by basic health insurance, to self-financed medical treatment.

> *"The doctor said that the effect will be better after radiotherapy, and primary health insurance covers 70% of the cost of radiation therapy. It is better than expected, so I am willing to get radiation." (C1).*
> *"The doctor offered to change the chemotherapy drug to see if the treatment would improve and assured me that the drug would be covered for a significant portion. I am only willing to try it because it is reimbursable." (C8).*

Sub-theme 2: economic conditions affect the choice of drugs

Most interviewees were from rural areas in China, and their medical insurance belongs to the most basic type

Table 1 Demographic characteristics of participating patients (*n* = 23)

Parameters	***n* (%) or mean (SD)**
Age in years (mean, SD)	58.7(11.3)
Gender	
Men	12(52%)
Women	11(48%)
Education	
Illiterate	2(9%)
Elementary school	8(35%)
Secondary school	8(35%)
High school or Technical secondary school	3(13%)
Undergraduate/Postgraduate	2(9%)
Medical insurance type	
Provincial medical insurance	1(4%)
Municipal medical insurance	9(39%)
Medical insurance for alien residents	11(48%)
Medical insurance for alien employees	1(4%)
Municipal medical insurance + commercial insurance	1(4%)
Civil status	
Married and childbearing	22(96%)
Single	1(4%)
Diagnosis	
Head and neck tumors	6(26%)
Chest and abdomen tumors	16(70%)
Other tumors	1(4%)
Length of illness(months)	
≤ 3	3(13%)
3–6	3(13%)
6–12	9(39%)
12–24	5(22%)
≥ 24	3(13%)
Hospitalization frequency(times) (mean = 5.21; range 1 to 14)	
First	9(39%)
2–5	4(17%)
6–10	7(30%)
10–15	3(13%)
Length of hospital stay(weeks)	
≤ 1	13(57%)
1–4	3(13%)
≥ 4	7(30%)
Treatment options	
Radiotherapy	11(48%)
Radiotherapy + Chemotherapy	3(13%)
Chemotherapy	4(17%)
Immunotherapy + Chemotherapy	5(22%)

of medical care. For some drugs that are not reimbursed by medical insurance, they need to pay for them at their own expense, which puts a tremendous financial burden on them. They therefore prefer medicines that are reimbursed by health insurance to those that they pay for out-of-pocket.

> *"The doctor suggested genetic testing, but I did not do it at my own expense, as it was costly." (C1).*
> *"Once I was faced with a choice of medication, both imported and domestic options were available. My wife preferred using imported medication, but I opted for the domestic alternative. The imported medication was too expensive and not reimbursable." (C2).*
> *"Before chemotherapy led to leukopenia, the doctor suggested a white shot, which costs 1000 yuan per dose, and it cannot be reimbursed. I can't afford." (C9).*

Sub-theme 3: economic status affects whether to continue to receive palliative care

As palliative care often needs to be carried out continuously in stages, some patients said that their current economic status can only be maintained for some time, and it is challenging to maintain follow-up treatment.

> *"Radiation is not cheap, and it only increases the burden on the family. My family does not have any money. If I relapse later, I will not continue treatment. I will let nature take its course." (C9).*
> *"I have been in treatment for three years now. I have spent too much money, I am afraid, my illness treatment drags the children at home. The financial burden on the family is too great." (C20).*

Theme 2: social support strengthen determination to receive palliative treatment

The social support system for cancer patients comprises assistance from their family members and medical professionals. Financial and emotional support from family members significantly affects cancer patients' willingness and confidence to receive palliative care, while doctor-patient trust and the patience, health promotion, psychological support and respect of healthcare professionals are key social support factors that enhance patients' adherence to treatment and courage to cope with the disease.

Sub-theme 1: support from family members

Most interviewees reported that family members' financial support could significantly strengthen their determination to receive the treatment.

> *"I am hesitant to pursue further treatment and instead wish to return home, but my family strongly urges me not to give up. They have even offered to sell our home to finance my treatment if necessary. My daughter has assured me that the cost of treatment is not a concern and that they will find a solution. I have decided to follow their advice." (C9).*

Table 2 Themes emerged from palliative care preference among low-income advanced cancer patients in mainland china

Themes	Sub-themes
1. Economic status is crucial for palliative preference selection	1.1 Economic status affects the choice of treatment methods 1.2 Economic conditions affect the choice of drugs 1.3 Economic status affects whether to continue to receive palliative care
2. Social support strengthen determination to receive palliative treatment	2.1 Support from family members 2.2 Support from medical personnel
3. The culture of returning to one's roots	3.1 Chinese traditional home burial culture influences the choice of place of death 3.2 The traditional notion of "filial piety" affects the choice of surgery and intubation
4. Alleviating suffering	4.1 Preference for comfort care rather than excessive medical intervention 4.2 Rejection of means of resuscitation and avoidance of post-resuscitation medical interventions 4.3 Accept sedation to relieve distress

> *"My son promised me therapy unconditionally, and despite selling his house to raise funds, he remained determined to provide me with the treatment. This instilled a great deal of confidence in therapy for me." (C15).*

In addition, the emotional support from the family members encourages the patients to be more confident to accept the treatment.

> *"But my daughter said for me to have to get treatment because she said she could not live without her mummy, oh my heart really goes out to my daughter's feelings.… It was only then that I listened to her and went into treatment." (C1).*
> *"I did not give the treatment much thought. I gave it all to my son. I was greatly relieved to hand it over to them. They assured me not to worry, they will take care of everything." (C11).*

Sub-theme 2: support from medical personnel

The participants reported that their trust in medical practitioners plays a vital role in making decisions regarding treatment. When medical staff explain things patiently and treat patients with respect, and when patients are confident in the professionalism of their doctors, they are more likely to engage with treatment plans and follow their recommendations actively.

> *"I trust the expertise of doctors, especially when I have a serious illness such as a tumor. I am an ordinary person with no medical knowledge… The doctors explained the treatment plan in an easy-to-understand way, further strengthening my trust in them." (C7).*
> *"Basically, we follow the doctor's advice, and we trust the doctor a lot." (C6).*
> *"There are times when you do not know what to do when faced with an illness and treatment, but when the doctor explains it to you in words you can understand, and you can calm down, not panic, and think it is good I met you." (C5).*

Theme 3: the culture of returning to one's roots

Chinese traditional home burial culture and the concept of "filial piety" significantly influence end-of-life care choices, with many preferring to die at home due to cultural significance and reluctance to undergo surgeries or intubation due to the belief that it harms the body and is an unfilial act. Therefore, even if they are treated in hospitals, many patients still wish to go home for hospice care in order to follow the cultural concept of 'returning to one's roots', which reflects the filial culture of respecting parental kindness and preserving physical integrity.

Sub-theme 1: Chinese traditional home burial culture influences the choice of place of death

According to this study, most informants expressed a desire to return home for their end-of-life care even if they were receiving treatment in a hospital. In mainland China, dying at home rather than in a hospital carries significant cultural significance for patients and their families due to the belief that 'fallen leaves return to the roots' or return to one's origin, which is deeply rooted in traditional Chinese culture.

> *"Let us go home. fallen leaves return to the roots, I am more traditional." (C6).*
> *"I still want to go home because in the countryside they say that you should die at home." (C15).*

Sub-theme 2: The traditional notion of "filial piety" affects the choice of surgery and intubation

"The body hair and skin, received by parents, do not dare to destroy injury, the beginning of filial piety." This is the culture of filial piety that many Chinese follow. Influenced by the traditional Chinese concept of "filial piety," some patients, especially the elderly, believe that surgery and tracheal intubation are a form of "harm" to their bodies and thus refuse to undergo these medical procedures. Moreover, they believe that undergoing these procedures is an unfilial act towards their parents. As a result, they prefer 'no harm' to their bodies rather than surgery and intubation.

> *"I do not accept tracheal intubation at the end of my life. I do not own my body alone; my parents gave it to me, and I feel that it would be a disservice to them and ungrateful for them to see me intubated." (C21).*
> *"I believe that my body's hair and skin were given to me by my parents. That is why I try not to have surgery if I can; surgery destroys the body's vital energy. My doctor did suggest surgery before, but I refused." (C22).*
> *"I definitely do not want to be intubated; my parents are still alive; what would they think if they saw me like this? They gave me a complete body, but I am spoiling it like this; I think it is the biggest ungratefulness ever!" (C23).*

Theme 4: alleviating suffering

In this study, the majority of advanced cancer patients preferred symptomatic treatment to excessive medical intervention, refusing resuscitation and agreeing to sedation to reduce consciousness and relieve distress. They are more interested in a more comfortable treatment than in the pursuit of prolonging life. These reflect the importance they place on avoiding unnecessary pain and comfortable treatment.

Sub-theme 1: preference for comfort care rather than excessive medical intervention

When selecting a treatment, most participants desired to alleviate their immediate pain and enhance their quality of life. They were not inclined towards excessive medical intervention to prolong their lives, as they have experienced multiple side effects due to such interventions during treatment.

> *"Vomiting can cause significant discomfort throughout the body, similar to the symptoms of typhoid fever. This can heavily affect mood. I have communicated to the doctor that I no longer wish to continue with chemotherapy." (C3).*
> *"Vomiting is very bad, uncomfortable to die, I do not want treatment, I do not do chemotherapy behind, I do not look, I went home, who said it was useless." (C16).*

Sub-theme 2: rejection of means of resuscitation and avoidance of post-resuscitation medical interventions

Most informants said that they are unwilling to engage in intensive rescuing when arriving at the terminally ill stage since they do not want to endure unnecessary suffering.

> *"I do not wish to be resuscitated. I have had the experience and found it to be painful, full of tubes, and uncomfortable. I hope to pass on gracefully." (C2).*
> *"I disagree, as my family members cannot understand my pain. I also experienced the pain and discomfort but was unable to communicate it at the time." I was in the intensive care ward and experienced excruciating pain, causing me to feel a strong urge to cough, but I was unable to do so. This sensation was extremely unpleasant." (C14).*

Sub-theme 3: Accept sedation to relieve distress

In the final phase of life, patients diagnosed with advanced cancer frequently suffer from various refractory symptoms that cannot be relieved by conventional analgesic treatment. The majority of those interviewed in this study expressed their willingness to receive palliative sedation to reduce consciousness and relieve distress. However, their preference was for mild sedation.

> *"I desire to be administered some sedative to ease my agony, but I do not want to be comatose and oblivious to my surroundings. I prefer to remain conscious and interact with my family members." (C6).*
> *"I want to use sedatives, which can reduce my discomfort. But I hope to use mild sedation instead of deep sedation because it allows me to chat with my family" (C11).*

Discussion

Palliative care is increasingly recognized worldwide [18]. Nevertheless, service provision and delivery of resources are often unequally distributed among different populations. Low-income patients with advanced cancer, in particular, receive limited palliative care support, even where resources do exist [19]. This study investigated the influences that affect low-income patients with advanced cancer when deciding on palliative care. The preference was influenced by patients' financial status, social support status, traditional Chinese culture, and the need to alleviate suffering.

The results indicate that financial status is a significant factor in patients' decisions to opt for palliative care, which aligns with research [20]. In resource-limited settings, patients with advanced cancer frequently postpone or decline treatment due to the high cost of therapy and medications [21]. This finding resonates with the results of previous studies, indicating that financial pressure is a common issue affecting cancer patients' treatment decisions. Family financial circumstances and health insurance type are two crucial factors that influence treatment preferences. For example, studies have shown that cancer patients may opt for palliative radiotherapy instead of more aggressive treatments due to financial constraints [22]. Unlike previous studies, however, this study shows that palliative care options for low-income patients remain significantly limited even when financial assistance is available. Therefore, measures are required to tackle this issue. This includes adjusting health insurance policies, providing social support, and improving patient education. These measures will help low-income patients with advanced cancer cope with the financial burden of treatment costs, improve their quality of life, and reduce treatment interruptions due to financial difficulties.

Providing social support to patients during palliative care interventions encompasses emotional and financial support from family members and medical support from healthcare providers. Financial support from family members significantly impacts a patient's willingness to receive palliative care, while emotional support increases patients' confidence to participate in care [23]. This aligns with the findings of previous studies, which suggested that a lack of social support may lead to patients refusing or reducing treatment [24]. Healthcare professionals must be mindful of patients who feel unsupported by their relatives. Regular communication with patients and their families about their needs and concerns is crucial, and it is important to inform families of their significant role in the palliative care process [25]. Additionally, community resources can be contacted, and the palliative care team can collaborate with local community organizations to provide further resources for patients and families [26]. The palliative care department can foster a sense of community among inpatients by arranging frequent social events, support groups, and other activities. This can help patients and their families feel included and supported.

Medical support, particularly doctor-patient trust, is a crucial aspect of social support. Trust is widely regarded as the foundation of the doctor-patient relationship in the medical community, and it affects a patient's choice of doctor and adherence to recommended treatment [27]. Low-income patients with advanced cancer often have lower cognitive levels, limited medical knowledge, and rely heavily on their doctors' advice [28–29]. Unlike previous studies of the same kind, this study found that the patience, respect and caring of healthcare professionals could enhance patients' confidence in coping with their illnesses, making them more willing to actively participate in the treatment and follow doctors' advice. In addition to trust, medical support was also reflected in other aspects [30–31]. Respondents reported that healthcare professionals were more patient, health-promoting, psychologically supportive, and respectful, which made them feel better. These support aspects can increase patients' confidence and courage to cope with their illness. Therefore, multifaceted interventions are essential to improve doctor-patient trust and treatment adherence. Healthcare professionals should provide medical expertise to meet patients' psychological and emotional needs, listen patiently to their concerns, and treat them with respect and care especially in low-income patient groups.

Terminally ill patients in China place significant cultural value on dying at home. This study found that most patients prefer to die at home, which is consistent with the findings of previous surveys [32]. According to a study, almost all patients believe that dying at home is a more favorable death, as it allows the soul of the deceased to be reunited with their ancestors, making it a significant transition. In essence, dying at home is equivalent to returning to one's roots, an essential Chinese custom [33]. Healthcare professionals must respect the patient's wishes regarding their place of death and ensure that their needs are met. Additionally, culturally appropriate care should be provided to dying Chinese patients and their families to enhance their sense of control over the dying process [34]. This echoes the recommendations put forth by previous studies that healthcare managers and policymakers should support patients' end-of-life preferences and achieve this goal through measures such as home care. In Traditional Chinese thought, it is believed that 'the body's hair and skin are derived from one's parents, and not harming one's body is considered a form of filial piety. This concept is deeply rooted in Chinese culture. Although the younger generation may be moving away from this traditional concept, some older patients still hold onto it and prefer conservative treatments. Specific invasive procedures, such as cancer surgery and tracheal intubation, are viewed as harmful and against filial piety [35]. Therefore, Physicians must thoroughly assess the patient's condition and prioritize their treatment preferences, particularly when the condition lacks a therapeutic rationale [37]. Encouraging shared decision-making between doctors and patients is an effective way to ensure that treatment options are scientifically sound and consistent with the patient's cultural beliefs [36]. This can be achieved through joint consultation and discussion. Simultaneously, education and awareness should promote the concept of filial piety to ensure that the younger generation understands and respects their parents' wishes.

This study examines the treatment choices of low-income advanced cancer patients in the final stages of life. The findings indicate that most patients prefer symptomatic treatment over excessive medical interventions, with their primary goal being pain relief and improved quality of life. This choice is not arbitrary but based on careful consideration of the expected effects of different interventions in terms of pain relief. The patients knew that excessive medical intervention could result in physical discomfort, increased pain, and reduced quality of life. This is in line with the findings of previous studies [29].

Some patients are hesitant to undergo resuscitation due to fear of pain and prefer mild sedation to alleviate pain, even if it does not significantly prolong their lives. This reflects the importance placed on quality of life and the desire to provide comfort and dignity in the final stages of life [37]. This indicates that when designing palliative care programs for low-income patients with advanced cancer, it is necessary to improve patient's quality of life and alleviate their suffering rather than solely prolonging their lives. It includes improving pain management, providing psychological support, and enhancing home care, which enable patients to live out the final stage of their lives in comfort and dignity [38]. This study highlights the fact that this choice reflects the importance patients place on quality of life and the desire to provide comfort and dignity at the end of life, which has been mentioned in previous studies [39],but this study provides more detailed empirical evidence.

Our study has several strengths. Firstly, few reports exist on the palliative care preferences of low-income advanced cancer patients in mainland China, and this study will enhance understanding of the palliative care preferences of this population. By conducting an in-depth investigation of this group, we have not only enhanced our understanding of their palliative care preferences but also provided valuable reference data for future medical services. Secondly, considering the uniqueness and complexity of China's mainland in terms of cultural background, healthcare system, and concepts and practices of palliative and end-of-life care, the conduct of this study is particularly important.

It is vital to recognize the limitations of this study. We did not evaluate the treatment preferences of this cohort of cancer patients at various stages in their lives due to prior research indicating that end-of-life care preferences for those with advanced cancer may diverge from their initial preferences and change with the progression of their illness. Furthermore, specific options presented theoretical situations, such as end-of-life resuscitation, which may not accurately mirror the scenarios that terminally ill patients will face in the future. Further research is necessary to explore the opinions and inclinations of low-income cancer patients across various stages of life.

Conclusions

The study's results indicate that patients' decision-making preferences are influenced by their financial and social support status, cultural values, and desire to alleviate suffering. Therefore, healthcare policymakers and clinical healthcare professionals should consider these factors when developing clinical care nursing service programs for low-income advanced cancer patients. Healthcare professionals should consider patients' economic and social support status and provide appropriate assistance, such as financial aid, links to social resources, and psychological support. It is important to respect patients' cultural values and treatment preferences when developing care and treatment plans that meet their needs. Furthermore, future research is recommended to delve deeper into the factors that influence patients' treatment decisions and the underlying mechanisms. This will establish a more comprehensive theoretical basis and practical guidance for clinical practice, enabling healthcare professionals to better cater to patients' needs and ultimately enhance treatment outcomes.

Supplementary Information

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Supplementary Material 1

Author contributions

XWJ, HH: Study design.XWJ: Data collection.XWJ, LN, HH: Data analysis.WHL, CH: Study supervision.XWJ: Manuscript writing.DFL: Critical revisions for important intellectual content.All authors reviewed the manuscript.

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Data availability

The data generated and analyzed during the current study are available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate

The Medical Research Ethics Research Committee of the First Hospital Affiliated to the University of Science and Technology of China approved the study (no 2023-ky292). Informed consent for human research, as addressed in the Declaration of Helsinki, was provided to prospective research participants one week before the interview, Participants were allowed to ask questions about the research procedures and to consider their willingness to participate. On the interview day, the researcher reminded participants they could with draw consent, stop participating in the study, and destroy their data. Prior to every interview, all interviewees signed an "Informed Consent Form for Participants". Patient data were coded to preserve confidentiality. At the end of the interviews, participants were asked if they had any further questions about this study.

Consent for publication

Non applicable.

Competing interests

The authors declare no competing interests.

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