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Palliative care needs and quality of life among adults with advanced chronic illnesses in low-income communities of Bangladesh

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Abstract

Objectives Palliative care (PC) is an interdisciplinary approach aimed at improving the physical, psychological, and spiritual well-being of patients and families affected by life-threatening diseases. This study aimed to investigate the need for PC among critically ill patients and their quality of life (QOL) in low-income groups in Bangladesh.

Methods This cross-sectional study was conducted at four healthcare facilities from March to April 2023, involving 553 registered patients with advanced chronic conditions. After applying inclusion and exclusion criteria, 183 patients in the advanced stage of illness were included. We collected data on sociodemographic, comorbidities, disabilities, and the 10-item African Palliative Outcome Scale (APOS). The Supportive and Palliative Care Indicators Tool (SPICT) was used to identify individuals requiring PC. The study investigated patients with an Eastern Cooperative Oncology Group (ECOG) performance status of 3–4, indicating significant functional impairment, and explored QOL across four domains: physical health, psychological health, social relationships, and environmental factors.

Results The mean age of the 183 patients was 53.8 (± 14.53) years, with 69.5% being female. We found that 10.3% of patients with chronic illness required PC, particularly cancer patients (87%) and those with chronic kidney disease (CKD) (53.3%). The APOS scores indicated that family anxiety (48.6%) was the most burdensome issue, followed by severe pain (15.5%), severe worry about illness (22.4%), and feelings of life being unworthy (9.4%). Patients with severe functional limitations (ECOG 3–4) were significantly more likely to need PC (58%) compared to those with moderate or no limitations (ECOG 0–2) (24%). Among those requiring PC, 70.1% rated their QOL as poor or very-poor, while only 23.8% of patients not needing PC reported similar ratings. Female patients had poorer QOL than males across all domains, and those facing financial hardships also experienced significantly lower QOL.

Conclusion In Bangladesh's low-income communities, a significant proportion of patients with chronic illnesses require palliative care (PC) due to advanced conditions. The findings emphasize the importance of integrating PC early in the treatment process for cancer and CKD patients, as it can greatly improve their QOL and provide essential support for both patients and families. The results advocate for a holistic approach to PC that addresses physical, psychological, social, and environmental factors affecting patients' QOL.

Keywords Palliative care, Palliative care needs, Quality of life, Functional status, Slums, Bangladesh

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Introduction

Palliative care (PC) is a specialized treatment approach for patients with severe illnesses, concentrating on relieving their symptoms and improving the quality of life both for the patient (adults and children) and their families [1]. A team of specially-trained physicians, nurses, and other professionals provide the care while collaborating with a patient's other doctors to ensure additional assistance. It can be administered alongside curative treatment, based on the patient's needs, not the prognosis. This approach is suitable for patients of any age and at any stage of chronic diseases.

Most adults, who are suffering from chronic diseases like cardiovascular disease (CVD), cancer, congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), chronic kidney disease (CKD), chronic neurological disease, diabetes mellitus (DM), rheumatoid arthritis, urinary tract infections (UTI), drug-resistant tuberculosis, multiple sclerosis, Alzheimer's, Parkinson's, dementia, and others life-threatening diseases, require palliative care. It minimizes and alleviates symptoms such as pain, depression, shortness of breath, fatigue, constipation, nausea, lack of appetite, sleep disturbances, and anxiety through early detection and accurate assessment [1, 2]. The physical, intellectual, and spiritual dimensions of patient care are incorporated into this treatment approach. This strategy assists people in living as actively as possible until death. Likewise, it supports the family in coping with the patient's illness and death [1, 3].

The human right to health and the Universal Health Coverage (UHC) goals officially acknowledge palliative care [4]. It is essential to all healthcare systems, from primary care to specialized care. It should be delivered in all economic settings worldwide through person-centered and integrated health services that consider individuals' needs and choices. However, it is still neglected in most regions of the world. Approximately 58% of countries offer PC services globally, and the ratios are as low as one service per 90 million people. Though, most of these countries are from high-income settings. According to the 2nd edition of the World Health Organization's (WHO) Global Atlas of Palliative Care, the need for PC increases daily due to the aging of the world's population [5]. Every year around 40 million people require palliative care. Nearly 78% of people belong to low- and middle-income countries (LMICs) [6]. While the burden of severe illness is enormous in LMICs, it is still not accessible to most people in need.

According to previous research, the burden of life-threatening diseases was higher in LMICs, demanding the severity of palliative care needs [7, 8]. Nevertheless, it is still not accessible to most people in need. Like other LMICs, the field of palliative care is pretty much entirely underdeveloped in Bangladesh. Approximately 0.6 million patients in Bangladesh require palliative care, yet less than 4,000 could access it so far [9]. A prior study revealed that a significant portion of the adult population in Bangladesh required palliative care [10]. A similar finding was documented among adult cancer patients in Bangladesh [11]. Palliative care has been thoroughly studied among Bangladeshi children and other LMICs [12, 13].

The healthcare system in Bangladesh faces significant resource constraints, limiting the provision and quality of palliative care [14]. Currently, there are only six comprehensive palliative care programs, all located in Dhaka [14]. Additionally, a small proportion of physicians have received palliative care training, and misconceptions about available treatment options are widespread [15]. This infrastructure is insufficient to address the needs of a population where approximately 60% of annual deaths require palliative care [15]. Chronic diseases contribute to around 61% of the overall disease burden and 54% of annual deaths in Bangladesh [16]. The most prevalent chronic conditions in Bangladesh include hypertension (27%), diabetes (12.5%), cardiovascular diseases (5%), chronic respiratory diseases (12.5%), cancer (0.2%), and stroke (1.14%) [17–22].

Urban slums in Bangladesh face significant socioeconomic and health challenges, with poor living conditions, limited services, and poverty worsening chronic illness burdens. Inadequate healthcare infrastructure leaves older adults and those with chronic conditions unsupported. Research is crucial to identifying palliative care needs, developing community-based models, and improving quality of life. Despite high demand, palliative care is absent from national health policies, underscoring the need for evidence-based advocacy to integrate it into healthcare for marginalized populations. Thus, the study aimed to evaluate the need for palliative care among severely ill patients in low-income settings in Bangladesh. We also assessed the quality of life in these communities to identify key areas requiring intervention and to support initiatives aimed at improving overall well-being.

Methods and materials

Design and setting

This multicenter cross-sectional study was conducted on adult individuals with advanced chronic diseases. It took place at four health centers run by the Health Management Bangladesh Foundation (HMBD Foundation), which serves mother and child health as well as chronic illness patients in Bangladesh's Tongi and Mirpur slums. Although the HMBD foundation's health facilities do not provide patients admission, patients are frequently referred to hospital if they need it.

Enrollment of participants

From the HMBD Foundation's register book-2022, a list of 553 chronic illness patients aged 18 years and above was extracted. The HMBD Foundation is a local NGO that provides free healthcare services in the slums of Tongi and Mirpur regions of Dhaka city. The organization does not provide hospitalization but refers patients to government hospitals if they require immediate care. The flowchart of patient selection from the HMBD facilitates is given in Fig. 1. Following an inclusion and exclusion criteria, a trained nurse chose 275 patients with severe chronic illnesses and offered them to participate in the study in February and March 2023. A trained nurse used the following criteria to define a patient with a severe chronic illness:

Inclusion criteria

1. Patients registered with the HMBD Foundation's health centers in Tongi and Mirpur slums and they received outpatient care from the HMBD Foundation.
2. The patient with any of the following diseases was included for the study: i) Diabetes mellitus (DM) with organ failure or long time (at least 10 years) suffering of DM, ii) Neurological disease or Stroke or heart failure, iii) COPD or lung diseases, iv) chronic UTI, v) Cancer, vi) Liver disease, vii) long time suffering of hypertension (at least 10 years) and vii) Multimorbid patients.
3. The disabled patient with any disease was included.

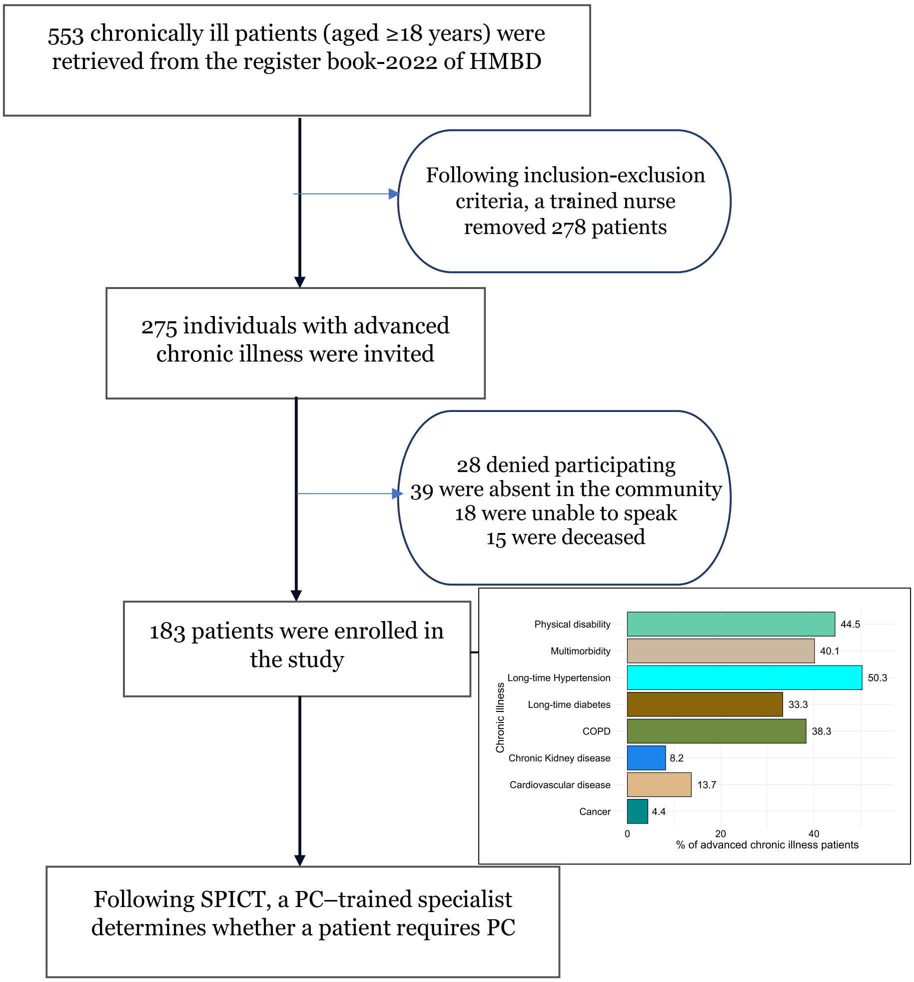

Fig. 1 Selection process of participants for the study analysis

Exclusion criteria

1. Dementia patients were excluded because the condition impairs memory, understanding, and decision-making, making it difficult for them to comprehend survey questions or provide accurate responses.
2. Patients requiring hospitalization at the time of the study or referred to hospitals for immediate care.
3. Patients younger than 18 years were excluded from the survey primarily due to ethical and legal considerations.

Data collection

The participants were interviewed using a semi-structured questionnaire. The questionnaire included the socio-demographic information, reported comorbidities, ECOG status, Washington group disability scale, WHO quality of life scale and the African Palliative Outcome Scale (APOS) questionnaire.

Statistical analysis

The statistical software R (version 4.3.1) was used to analyze the data. To summarize numerical data, the mean and standard deviation were estimated. Data were collected directly through patient interviews, resulting in no missing data for the outcomes. However, age information was missing for 11 out of the 183 patients interviewed. For the univariate analysis involving age, these missing entries were excluded from the analysis. The chi-square test was conducted to examine the bivariate association of PC needs by age, gender, disability and ECOG performance. After controlling for confounding variables, logistic regression models were fitted to determine the components connected with outcomes. A p-value < 0.05 was regarded as statistically significant.

African Palliative Outcome Scale (African POS)

The APCA African POS was created in 1999 for use with patients with advanced disease and to improve outcome measurement in PC by examining a variety of crucial and relevant outcomes [23–26]. The scale was developed by a multi-disciplinary team of palliative care professionals from Kenya, South Africa, Malawi, Tanzania, Uganda, Zambia, and Zimbabwe, with assistance from King's College London and the National Hospice and Palliative Care Organization in the United States [23]. The questionnaires contain ten items that address the components of palliative care as defined by the WHO (i.e., physical, psychological, social, and spiritual concerns), as well as the patient's and family's needs. The African POS's focus on cultural appropriateness, comprehensive assessment, ease of use, impact on care quality, and role in advocacy make it a valuable tool compared to other scales in the context of palliative care.

The tool is divided into two sections, with the first seven questions directed at the patient and the final three directed at a family member. All responses are graded on a Likert scale of 0 to 5, with numerical and descriptive labels available if necessary. The numbers 0 and 5 represent opposites on such a scale, with numbers in between (for example, when measuring pain, 0 represents 'no pain' and 5 represents the 'worst possible pain you can imagine'). When the patient does not have an informal caregiver, there is also a 'not applicable' option to use in the questions addressed at the family. To avoid response bias, people provide the same answer without thinking about individual questions, the responses use a combination of high score = best status and low score = best status as a mechanism. The summary score will be calculated by adding the total scores from each question and rating them against a possible range of 0–35 for patients and 0–15 for family members/carers. Importantly, to ensure that all scores are correctly directed (i.e., the lower the score, the better the outcome against an item; the higher the score, the more severe the outcome), we will reverse the scores for questions 4–9 (i.e., if the patient gives them a score of 5, we will reverse it to a score of 0) to ensure consistency across the research instruments (e.g., all high scores indicate a positive outcome, low scores negative etc.) [27].

The SPICT (Supportive and Palliative Care Indicators Tool)

The SPICT (Supportive and Palliative Care Indicators Tool) is a clinical tool used by healthcare professionals to identify people with deteriorating health conditions who may benefit from palliative care. It was developed in 2010 by a research team at the University of Edinburgh [28]. The tool investigates symptoms, prognosis, impact on function and well-being, communication and treatment goals. The SPICT tool is not a diagnostic tool, but rather a screening tool to help identify people who may need a more comprehensive assessment for palliative care. The SPICT helps clinicians identify patients with deteriorating health conditions who may benefit from palliative care, even if they do not have an immediate terminal diagnosis. This early identification allows for timely interventions that can improve quality of life and align care with patients' values and preferences.

ECOG Scale of Performance Status

The Eastern Cooperative Oncology Group (ECOG) Scale of Performance Status assesses how a condition affects a patient's ability to perform daily tasks [29]. It represents a patient's level of functioning in terms of self-care, daily activity, and physical capabilities (walking, working, etc.). It's also a means for doctors to keep track of how a patient's level of functioning changes as a result of treatment during the study. The scale, which is in the public domain, is used to classify patients based on their functional impairment, compare the efficacy of medicines, and assess a patient's prognosis [30]. The scale is straightforward, with scores ranging from 0 (fully active) to 5 (deceased), making it easy for healthcare professionals to remember and apply. Its simplicity reduces variability in assessments among different healthcare providers, ensuring more consistent evaluations. The ECOG Scale of Performance Status is a critical tool due to its simplicity, reliability, and ability to inform both clinical practice and research in assessing patients' functional abilities.

World Health Organization Quality of Life-BREF (WHOQOL-BREF)

The WHOQOL-BREF measures four key domains of quality of life: physical health, psychological health, social relationships, and environment [31]. This broad scope captures various factors influencing an individual's quality of life, enabling meaningful comparisons across diverse populations while accounting for cultural differences. The tool is a concise, 26-item self-report questionnaire, designed for simplicity and ease of administration, making it ideal for both clinical and research applications without overburdening respondents or administrators. It has been extensively validated for reliability and accuracy across different populations and settings, providing valuable data to guide clinical interventions and health policy decisions [32, 33]. With its comprehensive, culturally sensitive design and practicality, the WHOQOL-BREF stands out as a vital instrument for assessing quality of life worldwide.

Results

Palliative care needs

Among 553 chronic illness patients, a trained nurse identified 275 patients with advanced chronic illness. Subsequently, a palliative care-trained physician used the SPICT tool to determine that 57 patients (10.3% of the chronic disease cohort) required palliative care. Of the 183 patients with advanced-stage diseases, 57 (31.1%) were found to need palliative care. The need for palliative care varied based on disease status, as illustrated in Fig. 2, which shows the palliative care needs among patients with advanced chronic illnesses. Among cancer patients, 87.5% were identified as needing palliative care, while 53.3% of patients with chronic kidney disease (CKD) required it. Additionally, approximately 26% of patients with diabetes for over 10 years needed palliative care, and about 21% of patients with hypertension for more than 10 years also required it. The study suggests that the need for palliative care may be influenced by both the type and duration of the chronic condition.

Palliative outcome scale scores

The APCA African Palliative Outcome Scale (APOS) is a multidimensional outcome measure that assesses physical, psychological, emotional, social, and spiritual aspects of palliative care. The APOS scores show that among ten items, emotional and social factors were most prevalent, and the scores are presented in Table 1. Close to

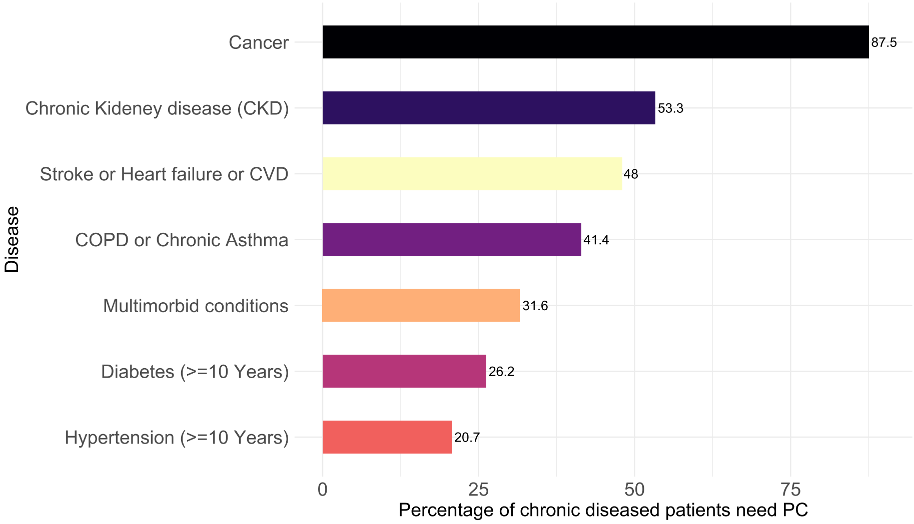

Fig. 2 Palliative care needs among advanced chronic illness patients by a disease status

Table 1 APOS scores of participants ($n = 174$)

APOS items	0	1	2	3	4	5	≥4*
1. Pain	10 (5.7%)	31 (17.8%)	65 (37.4%)	41 (23.6%)	21 (12.1%)	6 (3.4%)	27 (15.5%)
2. Had acute symptoms like vomiting, sneezing or constipation	54 (31%)	50 (28.7%)	33 (19%)	29 (16.7%)	6 (3.4%)	2 (1.2%)	8 (4.6%)
3. Feeling worried about illness	11 (6.3%)	39 (22.4%)	47 (27%)	38 (21.8%)	29 (16.7%)	10 (5.7%)	39 (22.4%)
4. Ability to share feelings with family/ friends	8 (4.6%)	5 (2.9%)	26 (14.9%)	64 (36.8%)	25 (14.4%)	46 (26.4%)	71 (40.8%)
5. Feeling life is worthwhile	6 (3.4%)	10(5.7%)	28 (16.1%)	58 (33.3%)	48 (27.6%)	24 (13.8%)	72 (41.4%)
6. Feeling at peace	4 (2.3%)	15 (8.6%)	25 (14.4%)	51 (29.3%)	56 (32.2%)	23 (13.2%)	79 (45.4%)
7. Had help/ advice for family to plan for future	7 (4%)	10 (5.7%)	36 (20.7%)	40 (23%)	50 (28.7%)	31 (17.8%)	81 (46.5%)
8. Information were provided to family members	14 (19.4%)	10 (13.9%)	16 (22.2%)	7 (9.7%)	16 (22.2%)	9 (12.5%)	25 (34.7%)
9. Family confidence in caring for patient	9 (12.5%)	8 (11.1%)	8 (11.1%)	17 (23.6%)	20 (27.8%)	10 (13.9%)	30 (41.7%)
10. Family worried about patient	4 (5.6%)	5 (6.9%)	9 (12.5%)	19 (26.4%)	18 (25%)	17 (23.6%)	35 (48.6%)

>=4 is considered as severe symptoms

*provides the most severe challenges in the APOS items

Table 2 Association analysis with sociodemographic factors and PC need

Variable	Palliative Care Required?		Total (%)	*P*–value
	Yes ($n = 57$)	No ($n = 126$)		
Gender ($n = 183$)				
Female	38 (30.4%)	87 (69.6%)	125 (68.3%)	0.748
Male	19 (32.8%)	39 (67.2%)	58 (31.7%)	
Age Group ($n = 172$)				
18–40	8 (28.6%)	20 (71.4%)	28 (16.3%)	0.603
41–60	23 (26.7%)	63 (73.3%)	86 (50%)	
60+	20 (34.5%)	38 (65.5%)	58 (33.7%)	
ECOG Performance ($n = 183$)				
Score 0–2	35 (24.1%)	110 (75.9%)	145 (79.2%)	**< 0.001**
Score 3–4	22 (57.9%)	16 (42.1%)	38 (20.8%)	
Disability ($n = 183$)				
Yes	36 (38.3%)	58 (61.7%)	94 (51.4%)	**0.046**
No	21 (23.6%)	68 (76.4%)	89 (48.6%)	

half (48.6%) of patients' families worried about them, and 46.5% needed help planning. Despite these challenges, a significant portion of patients reported feeling peace (45.4%) and that life was worthwhile (41.4%). In terms of pain, 15.5% of patients had severe pain, 60% had moderate pain, and the remaining 24.5% had their pain controlled. The high scores in emotional and social domains highlight the significant psychosocial needs of chronic illness patients. While a substantial proportion experienced severe or moderate pain, it is encouraging that nearly a quarter had their pain controlled.

PC need by ECOG performance and disability

Table 2 provides the bivariate analysis with palliative care needs by age, gender, disability and ECOG performance. Gender did not have a significant association with palliative care needs. However, a slightly higher proportion of male patients with advanced chronic illness required palliative care compared to females. Palliative care needs increased with advancing age and 34.5% of diseased individuals aged 61 years and above required PC, compared to 27% for those aged 41–60 years. Patients with severe functional limitations (ECOG performance status 3–4) had a much higher PC need (58%) compared to those with moderate or no functional limitations (ECOG 0–2) at 24%. Disabled individuals with chronic illness had a higher PC-need (38.3%) compared to those without disabilities. The findings suggest that age, functional status, and disability are important factors associated with increased PC-needs among chronic illness patients. However, gender did not appear to be a significant determinant of PC requirements.

Overall QOL among adults with or without chronic conditions

The WHOQOL-BREF includes two questions that assess overall quality of life (QOL) and overall health status independently. Figure 3 (left) shows the overall QOL ratings among the chronic illness patients. Within the group that required PC, 70.1% rated their QOL as either poor or very poor. In contrast, 23.8% of the chronic illness patients who were not considered for palliative care provided poor or very poor QOL ratings. Figure 3 (right) illustrates the overall satisfaction with health ratings among the chronic illness patients. Among those who needed PC, 78% provided ratings of either poor or very poor regarding their overall health satisfaction. Meanwhile, 40.5% of the chronic illness patients who were not referred for palliative care gave poor or very poor ratings for their overall health satisfaction.

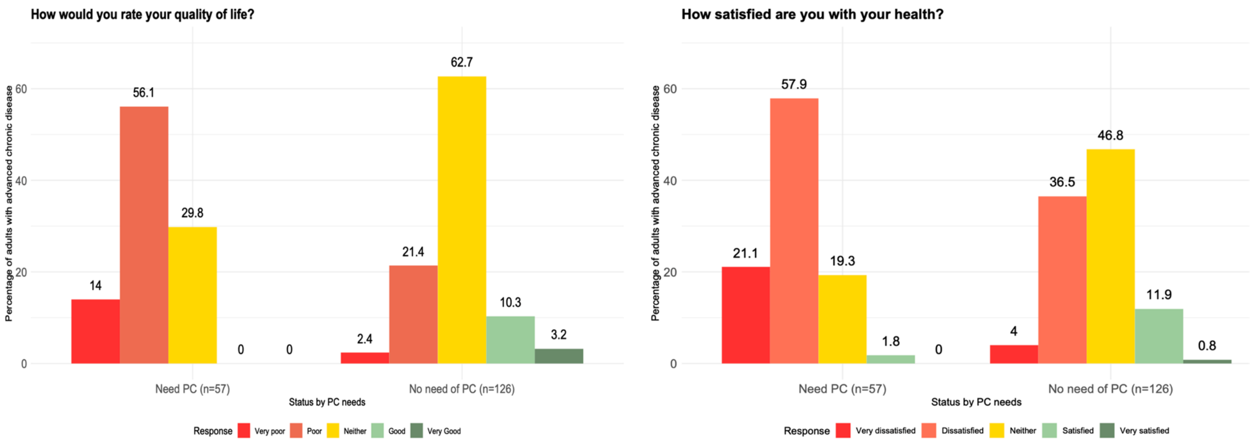

Fig. 3 Overall quality of life and overall satisfaction level with health among the chronic illness patients

Domains of QOL among adults with or without PC needs

The study assessed QOL across PC status, visualized in Fig. 4. Chronic illness patients who were not considered for PC-need demonstrated the highest QOL scores across the four domains measured. However, even in this group, the median scores of around 51 out of 100 indicated relatively poor QOL overall.

Among chronic illness patients with PC-needs, QOL score was poor across all four QOL domains. For the physical health domain, those requiring PC had a median score of about 40. The social relationships domain highlighted that individual with PC-needs had a very low QOL, with a median score of around 25.

The two-sample Wilcoxon test found statistically significant differences across all four QOL domains when comparing patients with and without PC needs. This indicates that chronic illness patients requiring PC had significantly worse QOL compared to those who did not

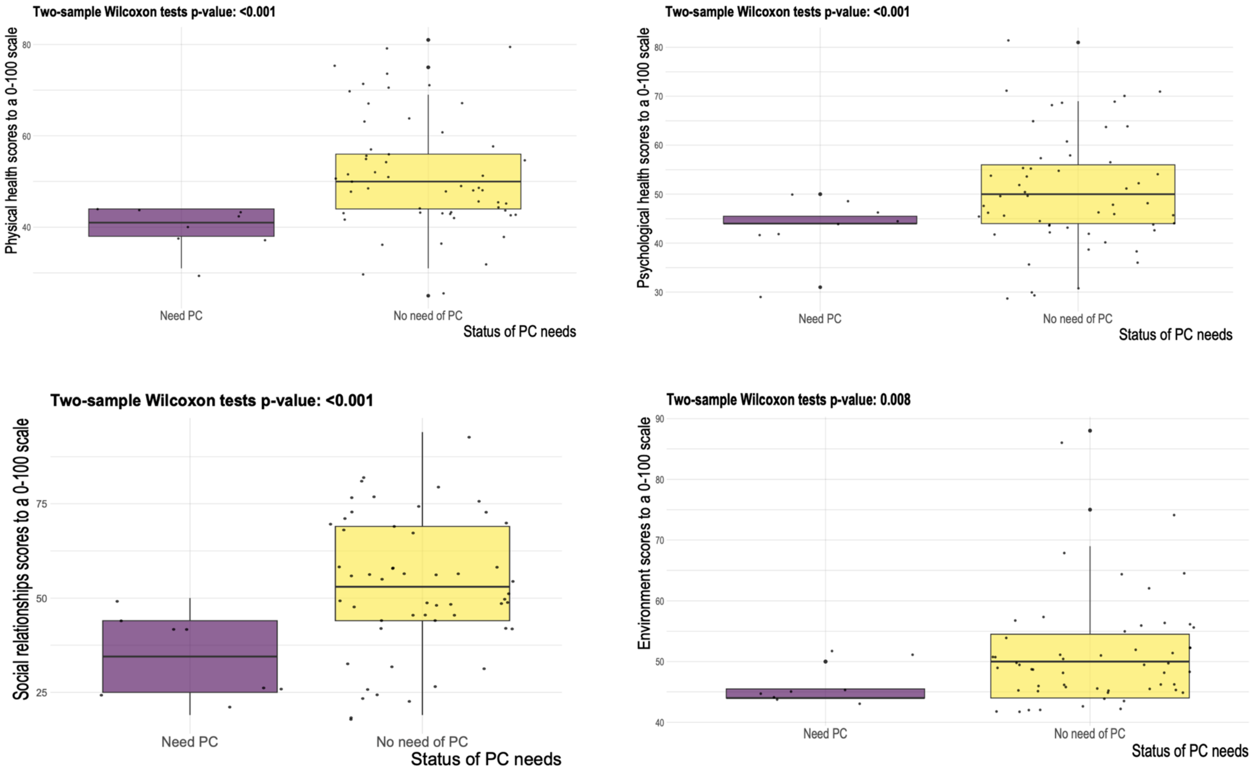

Fig. 4 Quality of life by status of PC needs

need PC. While chronic illness patients not needing PC still reported relatively poor QOL overall, those with identified PC needs fared significantly worse, especially in the physical and social domains (p-value < 0.001). The study demonstrates a significantly negative impact of advanced chronic illness on QOL and the importance of providing palliative support to poor people.

Discussion

Palliative care (PC), a holistic approach to care for patients with serious illnesses, is gaining global recognition. However, its implementation in low- and middle-income countries like Bangladesh remains a significant challenge. Accurately determining the prevalence of palliative care needs in Bangladesh is further complicated by underreporting, inconsistent definitions, and geographical disparities. Despite these challenges, a recent study revealed that a substantial number of patients in Bangladesh require palliative care. Specifically, 10.3% of chronic illness patients were found to need PC, with this figure rising to 31.1% among those with life-threatening conditions. These findings highlight the urgent need for increased access to palliative care services in Bangladesh. However, it's important to note that these figures may underestimate the true extent of the need. A comparison with studies conducted in countries, such as Uganda and Senegal, reveals that the prevalence of life-limiting illnesses and pain may be lower in Bangladesh [34, 35]. For instance, a study in Uganda reported that 46% of inpatients had active life-limiting diseases, a significantly higher proportion than found in the Bangladeshi study [34]. Similarly, a study in Senegal indicated that nearly 44.4% of inpatients had active life-limiting illnesses, with a substantial number experiencing moderate-to-severe pain [35].

The study's results indicate that the need for PC is not uniform across different chronic conditions. For instance, 87.5% of cancer patients were identified as needing palliative care, which aligns with the understanding that cancer often leads to severe symptoms and a high symptom burden. A few studies reveal that about 87% of cancer patients required palliative care due to severe symptoms [36, 37]. In contrast, 53.3% of patients with chronic kidney disease (CKD) required PC, which suggests that CKD, often associated with prolonged suffering and complex management issues, also warrants a robust palliative approach. Similar finding of CKD patients was highlighted in other studies [38, 39]. Furthermore, the study found that approximately 26% of patients with diabetes for over 10 years and 21% of patients with hypertension for more than 10 years needed PC. Unlike diabetes or hypertension, which are primarily managed by controlling the disease, cancer treatment often includes intensive interventions such as chemotherapy or radiation. Palliative care can complement these treatments by alleviating side effects and enhancing patient satisfaction. Cancer also presents a more uncertain prognosis compared to chronic conditions like diabetes or hypertension. Palliative care helps address this uncertainty by supporting discussions about end-of-life preferences and promoting informed decision-making. However, these findings challenge the common misconception that PC is solely for cancer patients, emphasizing its relevance for individuals with other chronic illnesses as well.

A significant finding is that nearly half of patients (45.4%) experienced a sense of peace despite severe illness. This unexpected peace could stem from psychological resilience, spiritual beliefs, effective symptom management, or social support. Further investigation into these factors could lead to improved palliative care strategies, particularly in addressing the emotional and spiritual needs of patients. Concurrent with this, 48.6% of families expressed worry. This concern can negatively impact patients' emotional well-being and potentially influence treatment decisions. Addressing family worries through counseling, education, and support can enhance both patient and family outcomes. A similar finding is discussed in a Portuguese multicenter study [40]. This highlights the significant psychosocial needs that accompany chronic illness, suggesting that emotional support and social resources are essential components of effective palliative care.

The data on pain reveal that 15.5% of patients experienced severe pain, while 60% reported moderate pain. This highlights a significant issue within palliative care, as effective pain management is crucial for improving patients' quality of life. A study in East Africa identified pain and information as the most severe problems faced by patients, underscoring the universal challenge of pain management in palliative care settings [41]. The prevalence of moderate to severe pain in palliative care underscores the need for continued focus on developing and implementing comprehensive pain management strategies. These strategies should be integrated into palliative care frameworks to ensure that all aspects of a patient's experience are addressed, thereby enhancing their overall quality of life.

Our finding suggests that, regardless of gender, the factors of age, functional status, and disability play a more pivotal role in determining palliative care needs. A few studies with cancer patients also highlight similar findings [36, 42]. Patients with severe functional limitations (ECOG status 3–4) exhibited a significantly higher need for palliative care. A study highlights lower functional status correlates with a higher symptom burden, suggesting that those with severe limitations require more intensive palliative interventions to manage their symptoms effectively [43]. This stark contrast emphasizes the necessity of assessing functional status in determining palliative care needs. Patients with advanced functional decline are likely to experience more complex symptomatology and require more intensive support. The findings also indicate that disabled individuals with chronic illness have a higher need for palliative care compared to those without disabilities. This suggests that disability exacerbates the challenges faced by patients, leading to increased palliative care requirements. Addressing the unique needs of disabled patients is essential for ensuring equitable access to palliative care services.

The data indicates that a significant majority of patients needing PC rated their QOL as poor or very poor. Another study indicates a similar QOL outcome among cancer patients in Bangladesh [44]. This disparity of QOL underscores the severe challenges faced by those with advanced chronic illnesses, suggesting that their condition significantly diminishes their perception of life quality. The findings regarding health satisfaction are equally concerning. Among patients requiring palliative care, a high proportion of patients rated their overall health satisfaction as poor or very poor. This indicates that patients with PC needs not only struggle with their QOL but also feel dissatisfied with their health status, which may exacerbate feelings of hopelessness and distress. Patients not requiring PC scored highest in these domains, yet even their median score of around 51 out of 100 suggests a generally poor QOL. Conversely, patients with PC needs exhibited significantly lower scores across all domains, especially in physical health (median score of about 40) and social relationships (median score of around 25). These results highlight the multifaceted nature of chronic illness and its pervasive effects on various aspects of life.

Limitations of the study

While the findings of this study provide valuable insights into the QOL and palliative care needs among chronic illness patients, several limitations must be acknowledged. The study employs a cross-sectional design, which captures data at a single point in time. This limits the ability to draw causal inferences regarding the relationship between chronic illness, quality of life, and palliative care needs. The reliance on self-reported measures, such as the WHOQOL-BREF, may introduce response bias. The study's sample size and demographic diversity may limit the generalizability of the findings.

Conclusion

The study underscores the necessity of a comprehensive approach to palliative care, addressing not just physical symptoms but also the psychological, social, and environmental factors that affect overall well-being. Early identification of patients who could benefit from palliative care and the provision of thorough resources for patients and families are crucial. Prioritizing these elements can significantly enhance the quality of life for vulnerable groups, leading to better health outcomes and higher patient satisfaction. The findings highlight the need for accessible and equitable palliative care to meet the complex needs of those with chronic illnesses, given the substantial quality of life and health satisfaction disparities between those requiring palliative care and others. The current healthcare practices must evolve to meet these urgent needs.

Supplementary Information

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Additional file 1.

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Authors' contributions

AH, MMH, and TR formulated and planned the experiments. AH devised the analytical approach and conducted the data analysis. AH, MMH, AA, HH, SAR, and MA drafted the manuscript. AH, TR, AA, SAR, HH, and MA edited, reviewed, and contributed to the acquisition and interpretation of data for the work. AH is accountable for the overall content as the guarantor. All authors contributed to the critical revision and endorsed the final version of the manuscript for submission.

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Data availability

The de-identified dataset, protocol, ethical approval letter from BMRC and questionnaire can be found at https://osf.io/pu3xg/.

Declarations

Ethics approval and consent to participate

This study was approved by the Bangladesh Medical Research Council (BMRC) under the reference number BMRC/HPNSP-Research Grant/2121–2022/08(1-10) on January 6, 2022. The respondents and/or their legal representatives provided written informed consent, acknowledging the study's objectives, procedures, associated risks and benefits, voluntary participation rights, the option to withdraw, and the assurance of data anonymity and confidentiality. The study was carried out in accordance with the Institutional Research Ethics and the Declaration of Helsinki, and its latest amendment was in October 2013, which is comparable to its ethical standards. The researchers adhered to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guidelines when conducting and reporting the findings of this observational study.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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