Journal of Biosciences and Medicines, 2025, 13(10), 153-171
https://www.scirp.org/journal/jbm
ISSN Online: 2327-509X
ISSN Print: 2327-5081

Health Literacy Profiles of Palliative Care Patients in a University Hospital in Benin and Associated Factors

André Otti[1,2,3*], Afiavi Julienne Estelle Dossou[2,3,4], Eusébe Coovi Ahossi[1,2,3], Ida Agbété[1,2,3], Harmonie Grâce de Dieu Cica Adomou[1,2,3], Falilath Okélèyè[5], Daniel Koutchonan[2,6], Rodrigue Hadékon[2,7], Mamie Misengabu[8], Lamine Baba-Moussa[9], K. Anthelme Agbodandé[10], Charles Sossa Jérôme[11]

[1]Department of Nursing, National Medico-Health Institute (INMeS), University of Abomey-Calavi (UAC), Abomey-Calavi, Benin
[2]Beninese Society of Nursing Sciences (SOBESI), Cotonou, Benin
[3]Laboratory for Research in Nursing and Obstetrical Sciences (LARSIO), National Medico-Health Institute (INMeS), University of Abomey-Calavi (UAC), Abomey-Calavi, Benin
[4]Department of Obstetrical Sciences, National Medico-Health Institute (INMeS), University of Abomey-Calavi (UAC), Abomey-Calavi, Benin
[5]Training Institute for Nursing, Nursing Assistants and Ambulance Drivers, Simone Veil Hospital Center in Blois, Blois, France
[6]AIDJEDO Health Center, Departmental Directorate of Coastal Health, Ministry of Health, Cotonou, Benin
[7]Department of Nursing, Institute of Training in Nursing and Midwifery (IFSIO), University of Parakou (UP), Parakou, Benin
[8]Non-Governmental Organization [NGO] Palliative Care at Home [SPD], Kinshasa, Democratic Republic of Congo (DRC)
[9]Laboratory of Biology and Molecular Typing in Microbiology, Faculty of Science and Technology, University of Abomey-Calavi, Abomey-Calavi, Benin
[10]Palliative Care Unit, University Clinic of Internal Medicine/Palliative Care, National University Hospital Hubert Koutoukou Maga (CNHU-HKM), Cotonou, Benin
[11]Regional Institute of Public Health (IRSP) Comlan Alfred QUENUM, University of Abomey-Calavi (UAC), Abomey-Calavi, Benin
Email: *otti.andre74@yahoo.com

How to cite this paper: Otti, A., Dossou, A.J.E., Ahossi, E.C., Agbété, I., Adomou, H.G.C., Okélèyè, F., Koutchonan, D., Hadékon, R., Misengabu, M., Baba-Moussa, L., Agbodandé, K.A. and Sossa Jérôme, C. (2025) Health Literacy Profiles of Palliative Care Patients in a University Hospital in Benin and Associated Factors. *Journal of Biosciences and Medicines*, **13**, 153-171.
https://doi.org/10.4236/jbm.2025.1310014

Received: September 9, 2025
Accepted: October 14, 2025
Published: October 17, 2025

Abstract

Introduction: A low level of Health Literacy (HL), especially in a palliative context, has negative consequences on patients' health, including erratic medical follow-up and low involvement in therapeutic decision-making. **Objective:** To analyze the HL profiles of patients followed in Palliative Care at the Hubert Koutoukou Maga National University Hospital Center (CNHU-HKM) in Benin. **Methods:** A mixed descriptive design with analytical purposes was adopted. Nutbeam's theory, proposing three dimensions of HL (functional, interactive, critical), served as a frame of reference. The standard HL assessment questionnaire, the FCCHL/HLS-14 (Functional, communicative and critical health literacy/14-item Health Literacy Scale), was used with respondents, selected by non-

probability sampling of the accidental type. An average score (SM) of LS was calculated by the sum of the scores assigned to each item, divided by the number of items. An SM ≤ 4 corresponded to a low level of HL. The student and Welch t-tests carried out using the IBM SPSS Statistics statistical analysis software, version 25.0, made it possible to analyze the influence of certain sociodemographic variables on HL ($p < 0.05$), reinforced by a thematic content analysis of the respondents' discourses according to the Braun & Clarke approach in order to enrich the reading of the results. **Results:** 25 palliative patients were included in the study (mean age: 55 years), of whom 76% had a low level of HL (total SM ≤ 4). The lowest SM levels were observed at the level of functional HL (1.83 ± 1.5) and critical HL (1.94 ± 1.61). Age, level of education, and language of communication significantly influence the HL of the respondents ($p < 0.05$). **Discussion and Conclusion:** Informational vulnerability and the limited ability of respondents to evaluate, filter, or question health information require strategies for linguistic adaptation of communication and therapeutic education materials.

Keywords

Health Literacy, Palliative Care, CNHU-HKM, Benin

1. Introduction

Health literacy is defined as the knowledge, skills, motivation, and ability to identify, understand, evaluate, and use health information in decision-making in care, disease prevention, and health promotion contexts to maintain or improve quality of life [1]. According to the World Health Organization (WHO) [2], it encompasses the knowledge, motivation, and skills of a subject that enable him or her to access, understand, evaluate, and apply health information in order to form an opinion, make decisions in daily life for his or her health, prevent diseases, and promote his or her health to maintain or improve one's quality of life throughout life.

Health literacy is recognized as a determinant of public health, a factor in effective population health management, individually and collectively, by empowering patients and strengthening their sense of self-efficacy [2]-[4]. It includes three dimensions: functional health literacy, communicative or interactive health literacy, and critical health literacy [5]. Indeed, functional health literacy refers to the search for and understanding of health information, which essentially refers to the general literacy of the subjects, *i.e.*, their knowledge and skills in the fields of reading, writing, speaking, arithmetic, or computer skills. Communicative or interactive literacy involves interaction with the health care system and all health professionals: these are the skills needed to extract, understand, and distinguish health information from different sources and apply new information to changing circumstances. Finally, critical health literacy consists of making a judgment and evaluating the relevance of information obtained from different sources, then using it in a way that modifies one's environment and situations that may impact one's

health [6].

A low level of health literacy has negative consequences on individual and population health: higher incidence of risky behaviours, including a sedentary lifestyle, alcohol and tobacco consumption, an unbalanced diet, or risky sexual behaviours; the occurrence of chronic pathologies and decompensations with the need for emergency hospitalizations; erratic medical follow-up; poor medical understanding, etc. [7]. This finding is more pronounced in the elderly due to a decrease in faculties associated with aging [8]. A European study [3] reported that nearly half of adults do not have a sufficient level of health literacy to be fully independent, even though it has been shown that a poor level of health literacy is associated with the early development of chronic pathologies (diabetes, cancer, cardiovascular disease, etc.) [9]-[11], which are more common in the elderly.

Palliative care is one of the main areas of treatment for these chronic pathologies with the aim of improving the quality of life of patients. They consist of caring for people suffering from life-threatening incurable diseases by relieving pain, symptoms of discomfort, and their suffering, and supporting them and their loved ones in difficult times, all this, in a holistic approach to care (physical, psychological, social, spiritual, etc.) [12]. Given that the participation of patients in health decision-making, especially in a palliative context, with the aim of becoming an actor in one's own care plan, is one of the major axes of contemporary medicine [2]-[4], it is essential to ensure their level of health literacy so that they are able to understand, evaluate and use health information on the different trajectories of care, dying and dying [13].

In the context of palliative care, adequate patient health literacy helps to understand the care options and treatments available, promotes better communication with caregivers and allows care focused on the patient's needs and expectations, hence the interest of this study, the objective of which was to analyze the health literacy profiles of patients followed at the Palliative Care Unit (PCU) of the National Hospital Center Hubert Koutoukou Maga University (CNHU-HKM) from Cotonou, Benin. The results could serve as a basis for strategies to improve communication and therapeutic education of palliative patients in their particular context.

2. Methods

2.1. Research Design and Theoretical Framework of Reference for the Study

A mixed descriptive design (quantitative and qualitative) with an analytical purpose has been adopted. Nutbeam's theory [6] was used as a frame of reference for the study, which made it possible to analyze the health literacy profiles of the respondents in their particular and very sensitive context: palliative care. Indeed, this theory proposes a detailed and hierarchical approach to health literacy at three levels, namely: 1) functional health literacy, which is the level of access of a patient to information about his or her health situation; 2) communicative or interactive

health literacy, which is the patient's level of understanding of information related to his or her health situation; and 3) critical health literacy, which is the level of knowledge that is the level of use by the patient, of information related to his or her health situation. The choice of Nutbeam's theory [6] as the frame of reference for the study is justified by the fact that it is particularly useful in assessing the health literacy of palliative care patients (the target population of the study) by providing a thorough understanding of the skills needed to navigate the health care system. These are four skills that contribute to the processing of health information (being able to find, understand, evaluate, and apply health information) at the level of the care and prevention system [14].

2.2. Target Population, Sampling Method, and Data Collection Tool

Data were collected from patients followed at the Palliative Care Unit (PCU) of the Hubert Koutoukou Maga National University Hospital (CNHU-HKM) in Cotonou (Benin), selected by non-probability sampling of the accidental type (for convenience). This type of sampling was chosen because these characteristics are most suitable for the study. Indeed, it is a type of sampling that requires the accessibility (or availability) of subjects at a specific location and at a specific time. Thus, patients were recruited at the USP of the CNHU-HKM in Cotonou either because they were hospitalized or because they came to receive outpatient care. The French adaptation of the standard health literacy assessment questionnaire, the FCCHL/HLS-14 (Functional, communicative and critical health literacy/14-item Health Literacy Scale) [15], was used as the main data collection tool to which certain sociodemographic variables (age, sex, level of education, language of communication) were added. This questionnaire was chosen because it deals with the three dimensions (functional, communicative or interactive and, critical) of health literacy divided into 14 items, each scored from 1 (low score) to 5 (high score) for a total score ranging from 14 to 70: the functional dimension being the sum of the items from 1 to 5 (total score varying from 5 to 25); the communicative or interactive dimension; the sum of items from 6 to 10 (total score ranging from 5 to 25) and the critical dimension, the sum of items from 11 to 14 (total score ranging from 4 to 20), which is consistent with Nutbeam's theory [6], the reference framework for the study.

2.3. Methods of Analysis of the Data Collected

The data collected were categorized according to the three dimensions of health literacy, and the occurrences of variable modalities were presented in tables using descriptive statistics by calculating absolute frequencies, relative frequencies, and arithmetic mean. The average health literacy score per respondent and for each dimension of the FCCHL/HLS-14 standard questionnaire was obtained by the sum of the scores assigned to each item, divided by the number of items. An average score of less than or equal to 4 corresponded to a low level of health literacy [15].

In addition, the influence of certain sociodemographic variables (level of edu-

cation, age, sex, language of communication) on the level of health literacy was analysed by statistical inference tests as appropriate (the student t-test and the Welch t-test) using the IBM SPSS Statistics statistical software, version 25.0. The results of the statistical tests were interpreted according to the following criteria: a p-value < 0.05 indicates a potential influence of the factor studied on health literacy. On the other hand, a p-value > 0.05 does not necessarily mean that there is no influence, but that the data do not allow a conclusion to be drawn with sufficient certainty. Finally, in a qualitative approach, excerpts from the speeches (verbatims) of palliative patients surveyed illustrating links between the different dimensions of health literacy and sociodemographic variables that had been the subject of an inferential analysis, were carried out after a thematic content analysis according to the approach described by Braun & Clarke [16] taking into account their clinical relevance in order to enrich the reading of the results by giving a voice to each group. Indeed, qualitative data were used primarily for illustrative purposes to support and contextualize the quantitative statistical findings.

Note: In the search for the influence of sociodemographic variables on health literacy, the variable "occupation" was not included in the analysis because of its strong conceptual redundancy with educational attainment. Indeed, in this sample, occupational status stems, to a large extent, from educational background, making the two variables closely correlated. To avoid any analytical interference, educational attainment has been given priority as the main indicator of socio-educational capital.

3. Results

3.1. Sociodemographic Characteristics of the Palliative Patients Surveyed

Twenty-five (25) palliative patients were included in the study, with a predominance of female sex (16/25 or 64%). The results are reported in **Table 1**.

The average age of the respondents was 55 years, with extremes of 29 and 75 years. The modal age class was [49 - 58] (n = 07). More than half of the respondents spoke the mother tongue "Fon" (14/25 or 56%), and 15 said they were not in school. The most practiced religion was Christianity (15/25 or 60%), and the dominant professional activity was commerce (11/25 or 44%).

Table 1. Distribution of palliative patients surveyed according to their sociodemographic characteristics (n = 25).

Sociodemographic Characteristics		Frequencies	
		Absolute	Relative (%)
Sex	Masculine	09	36
	Feminine	16	64
	Total	25	100

Continued

Age	[29 - 38]	04	16
	[39 - 48]	03	12
	[49 - 58]	07	28
	[59 - 68]	06	24
	[69 - 78]	05	20
	Total	25	100
Language of Communication	French	07	28
	Fon	14	56
	Goun	03	12
	Mina	01	04
	Total	25	100
Religious Affiliation	Christianity	15	60
	Islam	07	28
	Animist	03	12
	Total	25	100
Level of Education	Not in school	15	60
	Primary	02	08
	Secondary	02	08
	Academic	06	24
	Total	25	100
Profession	Artisan	03	12
	Merchant	11	44
	State civil servant	06	24
	Housewife	05	20
	Total	25	100

3.2. Health Literacy Profiles of Palliative Patients Surveyed (n = 25)

The distribution of respondents according to the mean scores (MS) obtained for each of the three dimensions of health literacy, as well as the determination of their level of health literacy according to the threshold set (MS ≤ 4: low level of health literacy; MS > 4: high level of health literacy), are presented in Table 2 and Table 3 and in Figure 1 and Figure 2, .

According to the data in Table 2, 19 of the 25 respondents (76%) have an average total health literacy score ≤ 4, which means a low level of health literacy.

Table 2. Distribution of respondents according to their average health literacy scores (n = 25).

Investigated No.	Age	Sex	Average Health Literacy Scores			Total Literacy
			Functional Health Literacy	Communicative or Interactive Health Literacy	Critical Health Literacy	
01	65	F	1	2.2	1	1.40
02	**39**	**F**	**4.4**	**4.8**	**4**	**4.40**
03	60	F	1	2	1	1.33
04	**40**	**M**	**4.2**	**4.8**	**5**	**4.67**
05	61	M	1	2.4	1	1.47
06	49	F	1	2	1	1.33
07	32	F	1	2.2	1	1.40
08	71	M	1	2.2	1	1.40
09	69	F	1	2.8	1	1.60
10	**38**	**F**	**4.6**	**5**	**5**	**4.87**
11	52	M	1	2.4	1	1.47
12	64	F	1	2.2	1	1.40
13	**54**	**M**	**4.6**	**4.8**	**5**	**4.80**
14	**29**	**M**	4.2	4.4	4.25	**4.28**
15	32	M	1	2.6	1	1.53
16	69	F	1	2.4	1	1.47
17	**57**	**F**	**4.8**	**4.8**	**4**	**4.53**
18	57	F	1	2.2	1	1.40
19	63	M	1	2	1	1.33
20	49	F	1	2.4	1	1.47
21	75	F	1	2.4	2	1.80
22	47	F	1	2.4	2	1.80
23	71	F	1	2.4	1.25	1.55
24	50	M	1	2.2	1	1.40
25	74	F	1	2	1	1.33
Average Total Score			**1.83**	**2.88**	**1.94**	**2.22**

Table 3. Distribution of respondents according to their average health literacy scores (n = 25).

Dimensions of Literacy Healthy	Average Health Literacy Scores	Standard Deviation	Average Health Literacy Score ≤ 4		Average Health Literacy Score > 4	
			Actual	%	Actual	%
Functional Health Literacy	1.83	1.51	19	76%	06	24%
Communicative or Interactive Health Literacy	2.88	1.02	19	76%	06	24%
Critical Health Literacy	1.94	1.61	19	76%	06	24%
Total Literacy	**2.22**	**1.35**	**19**	**76%**	**06**	**24%**

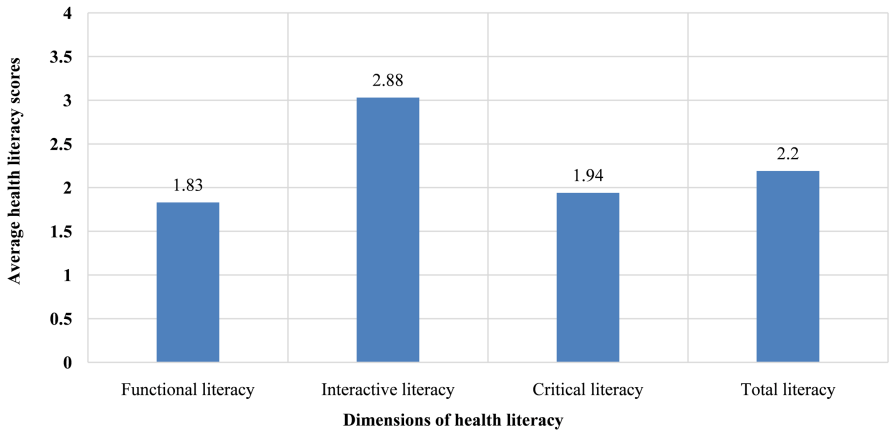

Figure 1. Distributions of total average respondent scores across the three dimensions of health literacy.

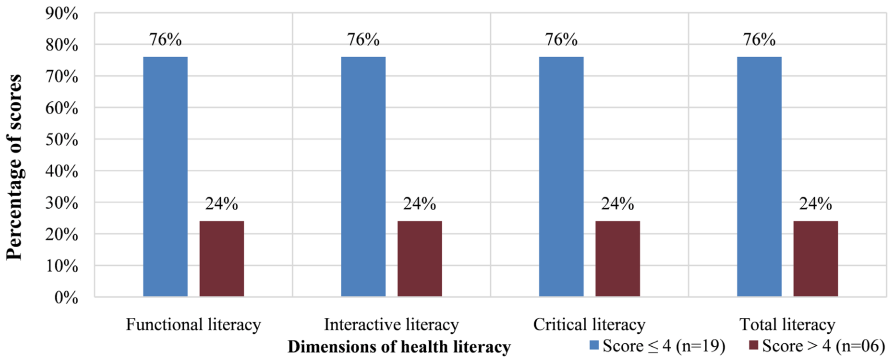

Figure 2. Comparative distribution of the proportions (%) of low (score ≤ 4) and high (score > 4) average scores by respondents by health literacy dimensions.

The analysis in **Table 3** shows that the low average health literacy scores observed among respondents are related to functional health literacy (1.83 ± 1.51) and critical health literacy (1.94 ± 1.61).

The analysis of **Figure 1** reveals that none of the three dimensions of health literacy reached threshold 4, which is considered to be indicative of a high level of health literacy by the respondents. It should be noted, however, that commu-

nicative or interactive health literacy appears to be more developed (mean total score = 2.88 ± 1.02) in palliative patients compared to functional and critical patients.

The data in Figure 2 shows a consistency in the proportions of low (≤4) and high (>4) scores observed between the different dimensions of health literacy, indicating a potential interdependence between them.

3.3. Influence of Sociodemographic Variables on Health Literacy

3.3.1. Influence of Educational Attainment on Health Literacy

The results from the analysis of correlations between the level of education of the respondents and the different dimensions of health literacy are recorded in Table 4 and Table 5.

Table 4. Respondents' average health literacy scores by level of education: Welch's t-test results (n = 25).

Dimensions of Literacy Healthy	Level of Education	Actual	Average Literacy Score Healthy	Standard Deviation (σ)	Test t	Degree from Freedom	p-value
Functional Health Literacy	School	10	**3.08**	1.84	−3.78	≈9.8	0.0038
	Not in School	15	1.00	0.00			
Communicative or Interactive Health Literacy	School	10	**3.64**	1.22	−3.74	≈10.6	0.0036
	Not in School	15	2.28	0.21			
Critical Health Literacy	School	10	**3.23**	1.64	−4.03	≈10.8	0.0023
	Not in School	15	1.08	0.26			
Total Literacy	School	10	**3.42**	1.58	−4.58	≈10.3	0.0010
	Not in School	15	1.46	0.09			

Table 5. Verbatim illustrating the influence of educational attainment on the different dimensions of health literacy.

Dimensions of Health Literacy	Verbatim Schooled Patient Patient N˚10, 38 Years Old, Sex F	Verbatims Out-of-School Patient Patient N˚23, 71 Years Old, Sex F
Functional Health Literacy	"*I know how to read prescriptions and recognize the names of medications. It reassures me*"	"*I can't read so I take medication when I'm only told to*"
Communicative or Interactive Health Literacy	"*When I don't understand, I ask the doctor or nurse questions*"	"*I don't talk too much, I just listen and I do what I'm told*"
Critical Health Literacy	"*I compare the information I am given with what I have read on the internet*"	"*I don't discuss medical decisions, I trust people who know, I'm not 'doto'*" *

*__Doto__: Term used locally in the mother tongue "fon" in Benin to designate the health worker.

Reading the data in Table 4, it is noted that palliative patients who were in school (n = 10) obtained average health literacy scores significantly higher than those who were not in school (n = 15) for all three dimensions of health literacy evaluated. These results highlight a statistically significant influence of educational attainment

on health literacy scores, a difference confirmed by Welch's t-tests performed with p-values all less than 0.05.

Reading the verbatim presented in Table 5, it appears that the statements of palliative patients in school show a more active, autonomous, and reflective posture in the face of medical information. Conversely, palliative patients who do not attend school express a more passive reception, marked by implicit trust in professionals and difficulty interacting with or evaluating the information received.

3.3.2. Influence of Age on Health Literacy

The results from the analysis of correlations between the age of respondents and the different dimensions of health literacy are shown in Table 6 and Table 7.

Table 6. Respondents' average health literacy scores by age: Welch's t-test results (n = 25).

Dimensions of Literacy Health	Age	Actual	Average Literacy Score Healthy	Standard Deviation (σ)	Test t	Degree from Freedom	*p*-value
Functional Health Literacy	Under 60 years of age	11	2.91	1.87	−3.42	≈10.0	0.0067
	60 years and over	14	1.00	0.00			
Communicative or Interactive Health Literacy	Under 60 years of age	11	3.38	1.45	−2.79	≈11.7	0.0017
	60 years and over	14	2.14	0.20			
Critical Health Literacy	Under 60 years of age	11	3.29	1.46	−3.84	≈11.3	0.0027
	60 years and over	14	1.14	0.17			
Total Literacy	Under 60 years of age	11	3.15	1.52	−3.79	≈10.6	0.0034
	60 years and over	14	1.44	0.09			

Table 7. Verbatim illustrating the influence of age on different dimensions of health literacy.

Dimensions of Literacy Healthy	Verbatims Patient with Age < 60 Patient N˚14, 29 Years Old, Sex M	Verbatim Patient with Age 60 and over Patient N˚25, 74 Years Old, Sex F
Functional Health Literacy	"*I read everything before I take. If it's not clear, I ask*"	"*Even if the doctor writes well, I often have trouble deciphering the words. My eyes are already tired*"
Communicative or Interactive Health Literacy	"*When what is written is beyond me, I ask to know more*"	"*I prefer to listen only, anyway, I'll forget afterward*"
Critical Health Literacy	"*I look at my phone to see if it's true what they told me*"	"*I don't think too much about it right now, my condition is already a major concern*"

Analysis of the data in Table 6 shows that palliative patients under 60 years of age (n = 11) obtained significantly higher average health literacy scores than those aged 60 years and over (n = 14) for all three dimensions of health literacy assessed. These results highlight a statistically significant influence of age (less than 60 years) on health literacy scores, a difference confirmed by Welch's t-tests performed

with *p*-values all less than 0.05.

The collection of verbatim presented in Table 7 highlights differences in posture and understanding according to the age of the palliative patients surveyed. Participants under the age of 60 demonstrate more active health literacy by expressing the need to read, question, compare, or decide. On the other hand, patients aged 60 and over mention limitations related to cognitive wear, memory, and visual abilities that affect their access to health information.

3.3.3. Influence of Gender on Health Literacy

The results from the analysis of correlations between the sex of the respondents and the different dimensions of health literacy are recorded in Table 8.

Table 8. Respondents' average health literacy scores by sex: Student's t-test results (n = 25).

Dimensions of Literacy Healthy	Sex	Actual	Average Score Literacy Healthy	Gap-Type (σ)	Test t	Degree from Freedom	*p*-value
Functional Health Literacy	F	16	1.76	1.17	−0.47	≈13.5	0.646
	M	09	2.04	1.52			
Communicative or Interactive Health Literacy	F	16	2.49	0.91	−0.88	≈13.3	0.396
	M	09	2.91	1.23			
Critical Health Literacy	F	16	1.34	0.79	−1.13	≈10.6	0.285
	M	09	1.86	1.46			
Total Health Literacy	F	16	2.09	1.32	−0.46	≈13.8	0.653
	M	09	2.38	1.50			

Analysis of the mean health literacy scores of palliative patients surveyed by sex (Table 8) reveals no statistically significant difference between women (n = 16) and men (n = 9) for functional health literacy ($p = 0.646$), communicative or interactive ($p = 0.396$), critical ($p = 0.285$) or total health literacy ($p = 0.653$). Although males had slightly higher averages in each of the three dimensions of health literacy assessed, the student's t-test consistently found *p*-values above the 0.05 cut-off, invalidating any conclusion of an effect of gender on health literacy in this sample.

In addition, since the variable "sex" did not have a significant effect on the levels of health literacy observed, unlike the other sociodemographic variables evaluated, a qualitative content analysis of the verbatim of the palliative patients surveyed was inappropriate.

3.3.4. Influence of Language of Communication on Health Literacy

The results from the analysis of correlations between the language of communication of the respondents and the different dimensions of health literacy are recorded in Table 9 and Table 10.

Table 9. Respondents' average health literacy scores by language of communication: Wesh t-test results (n = 25).

Dimensions of Literacy Healthy	Languages of Communication	Actual	Average Score Literacy Healthy	Standard Deviation (σ)	Test t	Degree of Freedom	*p*-value
Functional Health Literacy	National languages	18	1.42	0.09	−5.35	≈7.9	0.007
	French language	07	**3.22**	**1.10**			
Communicative Health Literacy or Interactive	National languages	18	2.18	0.13	−33.12	≈8.2	<0.0001
	French language	07	**4.73**	**0.20**			
Critical Health Literacy	National languages	18	1.14	0.08	−45.38	≈8.9	<0.0001
	French language	07	**4.52**	**0.22**			
Total Health Literacy	National languages	18	1.58	0.08	−55.12	≈9.0	<0.0001
	French language	07	**4.16**	**0.13**			

Table 10. Verbatim illustrating the influence of language of communication on the different dimensions of health literacy.

Dimensions of Literacy Healthy	Verbatim of a Patient Expressing Himself in French. Patient N˚02, 39 Years Old, Sex F	Verbatim of a Patient Expressing Himself in National Languages. Patient N˚03, 60 Years Old, Sex F
Functional Health Literacy	"*When the doctor or nurse explains to me in simple French, I understand well. I read the prescription on my own, and I know when and how to take the medication*"	"*When doctors explain too quickly in French, I just say 'yes', but often I don't understand anything and I'm ashamed to express it*"
Communicative or Interactive Health Literacy	"*I am unabashedly asking for all the medical jargons that seem vague to me*"	"*In order not to tire myself out, I simply accept what they say*"
Critical Health Literacy	"*Sometimes I discuss treatments, especially when I've read about my pain on the internet*"	"*I can't argue because everything they say is beyond my level and French is not my language*"

Based on the data in Table IX, the comparative analyses by language of communication of the palliative patients surveyed show very significant differences in health literacy scores. Participants who spoke French (n = 7) scored significantly higher than those who spoke national languages (n = 18) for all three dimensions of health literacy assessed. In functional health literacy, Francophones have an average of 3.22 (±1.10) compared to 1.42 (±0.09) for respondents in national languages (t (7.9) = −5.35; $p = 0.007$). In communicative or interactive health literacy, the difference is even more pronounced: 4.73 (±0.20) versus 2.18 (±0.13) with a *p*-value of less than 0.0001. Similar trends are observed in critical health literacy (4.52 vs. 1.14; t (8.9) = −45.38; $p < 0.0001$) and total health literacy (4.16 vs. 1.58; t (9.0) = −55.12; $p < 0.0001$).

The verbatim of the palliative patients surveyed presented in Table X highlight a factor that is often underestimated in the caregiver-patient relationship: the nature of the language of communication used in medical exchanges and in health care situations. Patients who express themselves in the same language of communication as the caregiver (in this study, it is the French language) show better understanding, an ability to interact, question and participate in decisions. Those

who speak mainly in national languages (which are not the official language of communication at work) report difficulties related to the terminologies used by the nursing staff, the rhythm of speech and the feeling of being left out.

4. Discussion

The study revealed that more than 3/4 (76%) of respondents have a reliable general level of health literacy regardless of the dimensions (average total health literacy score ≤ 4) (**Table 2**), which illustrates a certain informational vulnerability in this specific context of palliative care, while limited knowledge of health is consequently limited, posing a threat to health care outcomes, improved population health, and health equity [17]. Also, according to some authors [18]-[21], in clinical departments (such as that of the Palliative Care Unit of the CNHU-HKM in Cotonou/Benin, the setting of the study), low health literacy is perceived as a risk factor for poor health and imperfect application of care advice. Better still, in public and community health, health literacy is seen as a personal and population asset that offers greater autonomy and allows for better control over health decision-making, thereby improving individual empowerment and action on the social determinants of health. In fact, health literacy is increasingly seen as a determinant of health [22] and high levels of health literacy can support a wide range of health-promoting actions, including personal behaviour change, health-promoting social actions, and influencing others to make good choices for their health [17]. Better still, Van Den Broucke and Renwart [23] believe that health literacy could act as a mediator of social inequalities and health behaviours.

The lowest average health literacy score was observed in functional health literacy (1.83 ± 1.51) (**Table 3**), which may reflect significant difficulties in understanding health-related written or digital media. This corroborates the results of the work of Ishikawa *et al*. [24], who showed that patients with chronic diseases (as is most often the case in palliative care, the specific context of the study) often have limited skills to understand written health materials. For Sorenson *et al*. [3], functional health literacy remains the most fragile in contexts of vulnerability or low socio-educational level.

The mean critical health literacy score (1.94 ± 1.61) (**Table 3**) was also low, showing a limited ability of the palliative patients surveyed to assess, filter, or question health information, which could impede their informed decision-making. According to Adegoke *et al*. [25], critical health literacy is the weakest of the three components of health literacy. McCaffery *et al*. [26] evolve in the same paradigm as Adegoke *et al*. [25], noting that critical health literacy remains difficult to develop, even in literate patients, because it requires increased reflective skills and cognitive autonomy. In contrast, communicative or interactive health literacy has a higher average score (2.88 ± 1.02) (**Table 3**), indicating that respondents are relatively more comfortable in verbal or collaborative exchanges on health issues. This confirms the ideas of Paashche-Orlow *et al*. [27], who believe that some patients, although they have reading difficulties, manage to compensate for their shortcom-

ings partially through interactions with caregivers.

The results of the study showed a potential interdependence between the different dimensions of health literacy through a consistency in the proportions of low (≤4) and high (>4) scores observed (**Figure 2**). This could be explained by the fact that since the assessment of health literacy begins with functional health literacy and that this is the foundation of basic skills in reading, comprehension and use of medical information, it is plausible that limitations at this level may hinder the development of the other two dimensions of health literacy (communicative or interactive health literacy and critical health literacy). This hypothesis fits perfectly with the study's frame of reference, Nutbeam's theory [6] that health literacy moves in hierarchical steps from basic understanding to critical engagement.

Palliative care patients under 60 years of age had significantly higher mean health literacy scores than those aged 60 years and older, highlighting a statistically significant influence of age (less than 60 years) on health literacy (p-values all less than 0.05 for all three dimensions of health literacy assessed) (**Table 6**). These results highlight the influence of age on the understanding, interaction, and evaluation of health information, which confirms the observations made by Dignard [28], who points out that age has a significant impact on health literacy, with a general trend towards a decline in health literacy skills with advancing age. Sorensen *et al*. [3] follow the same paradigm as Dignard [28] in finding that nearly half of adults do not have a sufficient level of health literacy to be fully independent. Better still, those particularly at risk of low health literacy are the elderly due to a decrease in faculties associated with aging [8]. A publication by the Institut National de Santé Publique du Québec (INSPQ) [29] reported that in Quebec, more than 60% of adults do not have a sufficient level of literacy to take adequate care of their health, and that this percentage is higher among the elderly.

The study notes that school-educated palliative patients have significantly higher average health literacy scores than those who are not in school (**Table 7**), showing a statistically significant influence of educational attainment on health literacy scores (*p*-values all less than 0.05 for all three dimensions of health literacy assessed). These results are consistent with those of Sorenson *et al*. [3], who show that education is one of the most powerful determinants of health literacy. An INSPQ study [29] reported that people with a low level of education were up to three times more likely to have insufficient health literacy.

In the study, the majority (72%) of the palliative patients surveyed expressed themselves in their mother tongues (Fon, Goun, Mina), which reflects the sociolinguistic reality of Benin (**Table 1**). However, respondents who expressed themselves in French obtained average health literacy scores that were significantly higher than those who expressed themselves in national languages (**Table 9**), which shows that the language of communication significantly influences health literacy scores (*p*-values all less than 0.001 for all three dimensions of health literacy assessed). The use of French, the dominant language in institutional and health communication media in French-speaking Africa, seems to confer a significant

advantage in terms of health literacy. This finding corroborates the results of the study by Dray *et al*. [30], which have shown that language barriers are a major barrier to accessing care and understanding health messages among immigrant or Francophone populations. For these authors [30], health literacy is severely compromised when information materials are not adapted to the language or cultural context of patients. All this calls for linguistic adaptation strategies, particularly for audiences speaking in national languages, in order to guarantee equitable access to information in a multilingual context. The INSPQ [29] also recommends that culture, values, beliefs, and mother tongue be taken into consideration to ensure that the messages and formats of written material reach the target audience.

The study showed that the variable "sex" did not show a statistically significant influence on health literacy scores for any dimension ($p > 0.05$) (**Table 8**). This lack of effect contrasts with the work of other authors such as Lechevallier [8], who tells us that sex is not always a discriminating factor, especially when it is adjusted for other variables such as age, level of education, or mother tongue. On the other hand, a publication by the INSPQ [29] indicates that gender can influence informational preferences, search behaviours and the ability to understand certain media, particularly in relation to social roles. Finally, it was noted that the majority of respondents (16/25) were shopkeepers (44%) and housewives (20%). According to Clouston *et al*. [31], people in manual or low-skilled occupations (manual workers, commercial employees, housewives) (such as these respondents) have significantly lower health literacy scores than managers or intellectual professions.

In sum, sociodemographic variables such as age, level of education, and language of communication have statistically significant influences on the health literacy of the palliative patients surveyed. These results are consistent with those obtained by Boumendil [32], who highlights a heterogeneity in health literacy skills and a sensitivity to sociodemographic determinants (age, level of education, clinical experience) that significantly influence the scores obtained by the respondents. The verbatims illustrating the influence of the level of education, age, and language of communication on the various dimensions of health literacy (Tables V, VII, and X) extended and illustrated the statistical trends observed through the statistical tests carried out. This qualitative approach gives a human depth to the numerical results (quantitative analysis) by showing how skills are concretely translated into the way patients experience their relationship with medical information. It should therefore be stressed that this complementary approach does not modify the quantitative aspect of the study in any way: it is indeed an illustrative approach.

5. Conclusions

The evaluation of the level of health literacy of patients followed in the USP of the CNHU-HKM in Cotonou proved essential to understand the potential obstacles to therapeutic communication and the co-construction of end-of-life decisions. This study provided a nuanced picture of respondents' health literacy profiles, revealing overall low to moderate scores with a predominance of difficulties in func-

tional health literacy and critical health literacy, while interactive health literacy remained relatively preserved. The statistical analysis revealed a significant influence of age, level of education, and language of communication on the observed health literacy scores. Younger patients (under 60 years of age), those with a higher level of education, and those who speak French had higher health literacy scores with *p*-values of less than 0.01, respectively, for each of the dimensions tested.

These results show that health literacy, far from being a universal achievement, is dependent on structural, cultural, and linguistic inequalities. Health literacy is also considered a tool for intervention in prevention and health promotion, a tool to help public policies that have several fields of action: improving health communication, creating environments that are more open to people with lower skills, understanding the obstacles and factors to improve the population's literacy levels, understand the links between health literacy and health inequalities [33] [34]. According to Van den Broucke [34], improving the level of health literacy is a major public health issue if the population is to be able to take care of its health in the best possible way.

The results of the study call for an adaptation of information materials, educational approaches, and professional practices to the realities of patients in a palliative context. Beyond the simple diagnosis, this research highlights the urgency of developing contextualized, sustainable, and culturally appropriate interventions to promote better understanding and dignified support until the end of life. As an example, the design of a user welcome booklet for the USP of the CNHH-HKM of Cotonou translated into one of the most widely used mother tongues in Benin such as "Fon" and presenting the structure, its mode of operation, the rights and duties of caregivers, as well as the creation of a user welcome and information corner within the USP and animated in the main mother tongues of Benin, could improve the quality of the caregiver-patient/caregiver relationship of palliative patients. Indeed, according to Malaboeuf [35], there are four levels of caregiver-patient relationship which are established in ascending order, namely:

- **The Civility Relationship:** This generally occurs outside of care and corresponds to the social ritual of recognizing others, which is part of the rules of civility and socio-cultural codes, such as knocking before entering, saying hello, introducing oneself, shaking hands, etc. Their absence can have serious consequences and indicate, in particular, rudeness, a lack of respect, contempt, etc.
- **The Functional Relationship:** This generally corresponds to an investigative function through the gathering of information about the patient in order to better understand them and guide their care.
- **The Relationship of Understanding (or Support or Reassurance):** This intervenes with an empathic aim to support the patient.
- **The Therapeutic Helping Relationship:** This is established gradually by establishing a climate of trust while respecting at least two prerequisites: the minimum time to be devoted to the patient and to oneself, and a minimum of psychological "availability." Indeed, the helping relationship is the ability that a

caregiver can have to assist all people in difficulty in mobilizing their resources to better experience a situation: it is relational care.

The study also opens the way to future research focused on strengthening health literacy as a lever for autonomy and social justice at the end of the life course.

It should be noted that the study has a significant methodological limitation, that of the sample size (n = 25), but this does not affect the scientific quality of the results obtained. Indeed, this sample size reflects the operational characteristics of Palliative Care Units, which generally do not have many patients. It is therefore less linked to a methodological choice than to a structural and ethical constraint inherent to the reality of the palliative field. In the sampling process, not only patients hospitalized at the time of the survey were included, but also those followed on an outpatient basis, particularly for chemotherapy or morphine. This methodological choice is therefore part of an exploratory and contextualized logic aimed at covering the entire target population accessible to the USP of the CNHU-HKM in Cotonou, the framework of the study. Although this approach does not allow us to claim national representativeness, it constitutes a solid basis that has made it possible to produce localized quantitative data and shed light on a poorly documented issue, and offers a first structured empirical basis for identifying significant trends and laying the groundwork for future research on a larger scale.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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