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Assessment of nursing staff knowledge and practices regarding chronic gastritis: a descriptive cross-sectional study conducted at the Bolenge General Referral Hospital (DRC)

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Abstract

Introduction: Chronic gastritis affects approximately 50% of the world's population. In the Democratic Republic of the Congo (DRC), nurses play a central role in the management of this condition, although their theoretical and practical skills remain poorly documented. The aim of this study was to assess the level of knowledge and the nature of the attitudes of nursing staff at the Bolenge General Reference Hospital (HGR) regarding this condition.

Methods: A descriptive cross-sectional study was conducted from January to March 2026 among 85 nurses. Data were collected using a self-administered questionnaire comprising 15 items on knowledge and 12 on attitudes. Statistical analyses included univariate and bivariate approaches (Chi-square test χ^2) and logistic regression.

Results: The analysis revealed that 42.4% of nurses had an overall insufficient level of knowledge, and 56.5% displayed a negative attitude, characterised in particular by low involvement in patient therapeutic education. Level of education (Master's degree) and participation in continuing professional development were significantly associated with better practice (OR = 2.5; 95% CI: 1.4–4.6). In contrast, professional seniority, in the absence of refresher training, was not correlated with improved skills.

Conclusion: The cognitive and behavioural gaps identified fully justify the development of a local standardised care protocol and the introduction of targeted continuing professional development programmes in gastroenterology at the Bolenge General Hospital.

Keywords: Chronic gastritis, Knowledge, Attitudes, Nursing staff, DRC, Bolenge General Hospital.

1. Introduction

Chronic gastritis is defined as a persistent inflammatory infiltration of the stomach lining, which may progress to peptic ulcers or, at a more advanced stage, gastric adenocarcinoma [1]. Globally, this condition affects nearly half the world's population; its incidence is particularly high in developing countries, a situation largely attributable to the

high prevalence of *Helicobacter pylori* infection and poor basic sanitation [2]. In the Democratic Republic of the Congo (DRC), this condition is one of the leading causes of consultation in internal medicine. The clinical picture is frequently complicated by the recurrent use of self-medication and the uncontrolled consumption of non-steroidal anti-inflammatory drugs (NSAIDs) [3].

At the heart of the care pathway, nursing staff bear crucial responsibilities for ensuring long-term patient follow-up, encompassing the monitoring of clinical parameters, nutritional support and the provision of therapeutic education [4]. Nevertheless, the scientific literature highlights significant discrepancies from international standards, estimating that nearly 40% of nursing interventions deviate from evidence-based clinical recommendations [5]. However, the stance and attitudes adopted by healthcare teams directly influence the patient's adherence to their treatment plan [6]. In the Congolese context, the work of Kabasele [7] has notably highlighted a tendency among nurses to favour a directive approach at the expense of a genuinely educational and collaborative dynamic.

The Bolenge General Referral Hospital (HGR), located in Equateur Province, is no exception to this epidemiological reality. Institutional data from the hospital reveal a 20% rise in admissions related to chronic gastritis during 2025 [8], an increase occurring against a backdrop marked by the absence of a standardised protocol formalising nursing care. Furthermore, empirical field observations suggest that care is primarily focused on the pharmacological aspect, relegating the essential psycho-nutritional support for the patient to a secondary role [9].

2. Methods

2.1. Study type and setting

This study is quantitative, cross-sectional and descriptive. It aims to assess, at a specific point in time, the level of knowledge and attitudes of nurses regarding the management of gastroenterological conditions, particularly in a hospital setting. The quantitative approach allows for the collection of measurable data from participants, whilst the cross-sectional nature provides a snapshot of the situation during a specific period, without follow-up over time. The study took place from January to March 2026 at the Bolenge General Referral Hospital, a healthcare facility with a capacity of 150 beds. The study focused specifically on the internal medicine and emergency departments, due to their direct involvement in the reception, assessment and management of patients with digestive disorders.

2.2. Population and sampling

The study population consisted of nurses working at the Bolenge General Referral Hospital, specifically in the departments targeted by the survey. The sampling method used was exhaustive non-probability sampling, covering a total of 85 nurses. This choice was justified by the desire to include all nurses meeting the defined criteria in order to obtain a comprehensive representation of the population available for the study. Included were nurses with A1, A2, LMD or Master's qualifications, who were in active service at the time of the survey, had at least six months' seniority within the facility, and were present during the data collection period. Conversely, nurses on long-term leave, particularly for illness or maternity, as well as those who refused to participate in the study, were excluded.

2.3. Data collection tool

Data collection was carried out using an anonymous self-administered questionnaire. This tool was designed in a structured manner to gather relevant information in line with the study's objectives. It was divided into three main sections. The first section focused on the participants' socio-professional profile, including qualifications, years of professional experience and participation in continuing professional development in gastroenterology. The second section assessed nurses' knowledge through 15 closed-ended items covering essential aspects such as aetiology, notably *Helicobacter pylori* infection, complications such as haemorrhages and perforations, eradication treatment, dietary management and monitoring of atrophy. Finally, the third section concerned nurses' attitudes through 12 items measured on a four-point Likert scale, covering therapeutic education, empathy, nutritional proactivity and record traceability.

2.4. Validity and reliability of the tool

To ensure the quality of the data collection tool, a pre-test was conducted with 10 nurses working in a similar healthcare setting but not part of the main study. This step allowed for an assessment of the clarity of the questions, the comprehensibility of the items, and the overall relevance of the questionnaire. The necessary adjustments were made prior to the final data collection. Furthermore, the reliability of the tool was assessed through internal consistency, measured by Cronbach's alpha. The coefficient obtained was $\alpha = 0.82$, which indicates good reliability of the instrument and confirms that the items used consistently measured the dimensions under study.

2.5. Operational definitions

For the purposes of this study, certain concepts were defined operationally to facilitate the analysis and interpretation of the results. Knowledge was considered sufficient when the participant achieved a score of 60% or more correct answers to the knowledge-related items. An attitude was deemed positive when the average score obtained on the Likert scale was 3 out of 4 or higher for all the statements assessed [10]. As for continuing professional development, this was defined as having attended at least one module, workshop or seminar in gastroenterology over the past three years. These definitions enabled the establishment of objective criteria for classifying respondents according to their level of knowledge, their professional attitude and their exposure to continuing professional development.

2.6. Statistical analysis

The data collected were processed and analysed using R software, version 4.3. The statistical analysis was carried out at three complementary levels. Firstly, a univariate analysis was used to describe the participants' characteristics by calculating frequencies, percentages, means accompanied by standard deviation, and medians where necessary. Secondly, a bivariate analysis was carried out to examine the associations between the different variables. Pearson's chi-square test was used to cross-tabulate categorical variables, with a significance threshold set at $p < 0.05$. Finally, a multivariate analysis using binary logistic regression was conducted to identify the factors associated with a positive attitude. The adjustment variables selected were level of education, continuing professional development and years of professional experience.

2.7. Ethical considerations

Ethical considerations were taken into account throughout the conduct of this study. The research protocol was approved by the ISTM-Mbandaka Management Committee under number 046/2026. Participation by nurses in the survey was voluntary and subject to the prior signing of an informed consent form. Participants were informed of the study's objectives, the confidentiality of the information collected, and their right to withdraw at any time without any consequences. To ensure anonymity, no information that could directly identify respondents was collected. The data were secured and used solely for scientific purposes, in accordance with the ethical principles of research.

3. Results

3.1. Socio-professional characteristics of the sample

The sample comprised 85 nurses. The median age was 38 years (IQR: 30–47) and women predominated (58.8%).

Table I: Socio-professional profile of nurses (N=85)

Variable	Number (n)	Percentage (%)
Level of education		
State diploma (A2)	45	52.9
Bachelor's degree	30	35.3
Master's	10	11.8
Length of service		
Less than 5 years	28	32.9
5 to 10 years	37	43.5
Over 10 years	20	23.6
Continuing professional development in gastroenterology		
Yes	30	35.3
No	55	64.7

3.2. Assessment of theoretical knowledge

The participants' average overall score was 42.4%, which indicates an insufficient level. Only 35.3% of nurses (n=30) reached the pass mark (at least 60% correct answers).

Table II: Level of mastery of the assessed topics

Topic assessed	Correct answers (%)	Interpretation
Etiopathogenesis (*H. pylori*)	68.2	Good
Signs of haemorrhagic complications	41.1	Inadequate
Eradication protocol (7 vs 14 days)	34.1	Very inadequate
Specific diet	32.9	Very inadequate
Monitoring of gastric atrophy	28.2	Critical
Average overall score	42.4	Inadequate

3.3. Analysis of professional attitudes

The overall attitude was judged to be negative among 56.5% of respondents, mainly characterised by shortcomings in nutritional support and therapeutic education.

Table III: Distribution of nurses' attitudes

Attitude assessed	Positive attitude (%)	Negative attitude (%)
Systematic therapeutic education	28.2	71.8
Empathy and active listening	62.4	37.6
Nutritional proactivity (dietary advice)	24.7	75.3
Documentation of dietary habits	31.8	68.2
Overall attitude	43.5	56.5

The bivariate analysis revealed that adopting a positive attitude was significantly associated with Master's degree level (chi-square = 8.92; p = 0.003) as well as with undertaking continuing professional development (chi-square = 12.45; p < 0.001). No significant association was observed with length of service alone (p = 0.21).

3.4. Determinants of a positive attitude (multivariate analysis)

Table IV: Factors associated with a positive attitude in logistic regression

Factor	Adjusted OR	95% CI	p-value
Master's level (vs A2)	2.5	1.4 – 4.6	0.002
Continuing professional development (Yes vs No)	3.1	1.7 – 5.8	< 0.001
Length of service > 10 years (vs < 5 years)	0.9	0.5 – 1.6	0.680

Interpretation: The analysis shows that a Master's degree and recent continuing professional development are the main drivers of performance, increasing the probability of adopting an appropriate attitude by a factor of 2.5 and 3.1 respectively. Conversely, professional seniority acquired without ongoing professional development does not constitute a protective factor (p = 0.68).

4. Discussion

4.1. Nurses' knowledge and attitudes

The cognitive (42.4%) and behavioural (56.5%) shortcomings observed at Bolenge General Hospital are consistent with the literature in sub-Saharan Africa. Mbeki [11] also reported similar weaknesses, with fewer than 50% of nurses identifying the signs of gastric malignancy. Furthermore, the gaps in knowledge regarding the exclusion diet (32.9% correct answers) corroborate the findings of Ndjoli *et al.* [12] in Mbandaka, who reported that 55% of nurses did not fully understand this dietary restriction.

The critical shortfall regarding eradication protocols (34.1%) and monitoring of atrophy (28.2%) exposes patients to an increased risk of progression to gastric adenocarcinoma [13].

This finding can be explained by the absence of a local institutional protocol [8] and by a major shortfall in continuing professional development, with 64.7% of respondents having received no refresher training in three years.

4.2. Therapeutic education and associated factors

The absence of systematic therapeutic education among 71.8% of nurses is consistent with Brown's findings [14], where only 45% of staff provided nutritional advice in a hospital setting. This passive approach often stems from an underestimation of the severity of gastritis, which is mistakenly perceived as a benign condition requiring no standardised educational follow-up [15].

Multivariate analysis shows that continuing professional development is the main driver of improvement (OR = 3.1), validating the observations of Kabasele [7] in the DRC. Whilst a Master's degree level of education proves to be protective, seniority alone does not guarantee optimisation of skills, confirming the risk of becoming entrenched in a professional routine that does not evolve [16].

4.3. Limitations of the study

This study has limitations: its single-centre nature, the self-reported nature of the data (leading to social desirability bias) and the lack of direct observation of practices in real-world conditions. Nevertheless, the robust internal consistency and the use of a validated tool ensure the reliability of the identified trends.

5. Conclusion and Recommendations

This study confirms that theoretical shortcomings and passive attitudes among nursing staff hinder the quality of care for chronic gastritis at Bolenge General Hospital. The lack of continuing professional development and the absence of a local consensus on care represent the main modifiable factors.

Recommendations:

1. **Protocolisation:** Develop and disseminate a standardised local protocol for nursing care (screening, education, dietetics).

2. **Training:** Introduce quarterly continuing professional development sessions focused on gastroenterology.

3. **Educational tools:** Publish and distribute a practical guide to nutritional advice for use by healthcare staff and patients.

4. **Supervision:** Organise monthly clinical audits to assess and evaluate therapeutic education skills.

5. **Logistics:** Equip the target departments with pulse oximeters (to monitor haemorrhagic complications) and visual information materials.

References

[1] Sugano K, et al. Chronic gastritis and gastric cancer risk. Gut. 2022;71(1):15-24.

[2] Hooi JKY, et al. Global prevalence of Helicobacter pylori infection. Gastroenterology. 2017;153(2):420-429.

[3] Mukendi R, et al. Chronic gastritis and self-medication in the DRC. Black African Medicine. 2023;70(2):88-95.

[4] Ford AC, Moayyedi P, Hunt RH. Management of chronic gastritis. Gut. 2020;69(4):625-633.

[5] Smith R, Johnson K. Knowledge gaps in nurses managing chronic gastritis. J Adv Nurs. 2021;77(6):2678-2687.

[6] O'Connor S, Williams P. Empathy in chronic disease management. Nurse Educ Today. 2023;120:105-112.

[7] Kabasele J. Nursing skills in gastroenterology in the DRC. Rev Congolaise Sci Infirm. 2022;8(1):44-52.

[8] Bolenge General Hospital Annual Report. Internal Medicine Department. Bolenge; 2025.

[9] Mboyo E. Internal evaluation of nursing practices at Bolenge General Hospital. Bolenge; 2024 (unpublished).

[10] Miller L, et al. Attitudes and therapeutic education in chronic care. J Clin Nurs. 2023;32(5):897-907.

[11] Mbeki T. Nurses' knowledge of gastric cancer precursors in Africa. Pan Afr Med J. 2021;38(2):115–122.

[12] Ndjoli A, et al. Nurses' knowledge of the management of chronic gastritis in Mbandaka. J Health Res Equateur. 2023;3(2):45-51.

[13] Okodo E, et al. H. pylori prevalence in Sub-Saharan Africa. Trop Med Int Health. 2022;27(4):389-398.

[14] Brown T. Nutritional counselling in chronic gastritis nursing practice. J Gastroenterol Nurs. 2022;45(3):210-218.

[15] Lofaka D. Nursing and traditional beliefs in Mbandaka. Cahiers du CERPED. 2022;7:55-62.

[16] Potter PA, et al. Fundamentals of Nursing. 10th ed. Elsevier; 2021.