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Knowledge of peptic ulcer disease among health students in a Ghanaian University

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Abstract
Introduction: The study investigated the level of knowledge of Peptic Ulcer Disease among final-year Physician Assistantship and Nursing students at Garden City University College.
Methods: A structured questionnaire on thematic areas of the condition, including etiology, symptoms, predisposing factors, differential diagnosis, complications, diagnosis, pathophysiological differentiation and treatment was used to assess the participants' knowledge.
Results: The overall mean knowledge was 64.0% for Physician Assistantship students and 53.5% among the Nursing students. The proportion of students with ''Good or Adequate'' knowledge was 37.5% in the Physician Assistantship class and 9.0% in the Nursing class. Majority of the students had average or moderate knowledge on the specific parameters in the questionnaire. The only exception was in the area of pathophysiological differentiation between gastric ulcer and duodenal ulcer.
Conclusion: There is average knowledge of PUD among the students, hence a need for improvement in curricular and implementation to compensate for this knowledge gap.

Keywords: knowledge, peptic ulcer disease, helicobacter pylori, physician assistantship students, nursing students, Ghana

1. Introduction
Peptic ulcer disease (PUD) is now considered one of the most common disorders in the world, accounting for a significant portion of hospital visits [1]. *Helicobacter pylori* infection has been implicated as the commonest cause of the condition [2], accounting for 95 % of duodenal ulcers and 80 % of gastric ulcers [3]. Although there is limited data on the prevalence of PUD in Ghana, prevalence rates of between 45% to 75% has been reported among dyspeptic individuals [4, 5]. Studies from many settings have reported a low level of knowledge of PUD in the general population [6, 7, 8, 9]. A report by Huang *et al.* [10] suggested that significant discrepancies still exist in the understanding of *H. pylori* among primary care givers with respect to the pathogenesis, diagnosis and treatment of PUD. The overall aim of the study was to investigate the level of knowledge of PUD among final year Physician Assistantship Studies and Nursing students at Garden City University College in Ghana.

1.2 Methods
1.2.1 Subjects
The study participants were made up of the final-year (4th year) class of the Physician Assistantship Studies and Nursing at the Garden City University College.

1.2.2 Data collection
A structured questionnaire made up of questions pertaining to etiology, symptoms, predisposing factors, differential diagnosis, complications, diagnosis, pathophysiological differentiation and treatment of PUD was used to extract levels of knowledge from the study participants.

1.2.3 Study protocol
After introduction of the study to the participants, the questionnaires were administered to the participants to give answers about questions on the thematic areas. To assure authenticity of the level of knowledge, the subjects were not allowed to refer to textbooks or discuss the questions with colleagues.

1.2.4 Data analysis
For simplicity in analysis, a correct answer was assigned a mark of (+1) whilst a wrong answer or "no idea" was assigned a mark of zero (0). Mean overall correct scores were calculated from correct answers to the specific thematic areas and proportion of participants with "good or adequate" knowledge, "average or moderate" knowledge and "poor or inadequate" were calculated in percentages based on the number of correct answers.
Classification of level of knowledge was designated as follows:
1. ≥ 70%: "Good or Adequate" Knowledge.
2. 50 – 69%: "Average or Moderate" knowledge.
3. <50%: "Poor or Inadequate" knowledge.

2. Results
The study participants were 48 (33 males and 15 females) final-year Physician Assistantship students and 88 (28 males and 60 females) final-year Nursing students. The general summary of the level of knowledge among the participants based on correct answers is shown on Tables 1 and 2. The results showed that the overall mean knowledge among the students was 64.0% for Physician Assistantship students and 53.5% among the Nursing students. The results also showed that in terms of proportions, 18 (37.5%) had "Good or adequate" knowledge, 25 (52.0%) had "average or moderate" knowledge whilst 6 (12.5%) had "poor" knowledge in the Physician Assistantship class. In the Nursing class, 8 (9.0%) had ''Adequate'' knowledge, 69 (78.4%) had "average or moderate" knowledge whilst 11 (12.5%) had "poor" knowledge. The results in Table 2 showed that majority of the students had moderate level of knowledge on the specific

parameters of PUD in the questionnaire. The only exception was in the area of pathophysiological differentiation between gastric ulcer and duodenal ulcer (mean knowledge was 41.0% and 36.0% among Physician Assistantship and Nursing students respectively).

Table 1: Summary of the overall level of knowledge among the participants.

Parameter	Physician Assistantship students	Nursing students
Overall Mean knowledge	64.0%	53.5%
Proportion with Adequate Knowledge	18 (37.5%)	8 (9.0%)
Proportion with Average or Moderate Knowledge	25 (52.0%)	69 (78.4%)
Proportion with Poor or Inadequate knowledge	6 (12.5%)	11 (12.5%)

Results are presented as percentages.

Table 2: Distribution of Correct answers among the participants.

Parameter	Physician Assistantship students	Nursing students
Etiology	75.0	62.0
Symptoms	76.7	61.7
Differential Diagnosis	62.5	52.5
Complications	87.5	55.5
Diagnosis	55.0	55.0
Treatment	50.0	51.8
Pathophysiological differentiation	41.0 [α]	36.0 [α]

Results are presented as percentages. [α]: Poor or Inadequate level of knowledge.

3. Discussion

About half of the world's population harbor *H. pylori* in their upper gastrointestinal tract and therefore considered the most extensive infection in the world [1]. In the current study, majority of the students had average or moderate knowledge of PUD. The findings were consistent with previously reported studies [10, 11, 12, 13]. Huang et [10] have therefore suggested that significant discrepancies still exist in the understanding of *H. pylori* among primary care givers with respect to the pathogenesis, diagnosis and treatment of *H. pylori* infection. The findings of the current study showed that the thematic area were the students were most deficient was in the pathophysiological differentiation of gastric and duodenal ulcers.

4. Conclusion

There is average knowledge of PUD among the students, hence a need for improvement in curricular and implementation to compensate for this knowledge gap.

5. References

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