

A Qualitative Study of Malaysian University Students' Experiences on Self-Care of Gastritis: Effects, Challenges, and Coping Strategies

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ABSTRACT

Introduction: Gastritis is a common problem, impacting 51 to 78% of people worldwide. It is thought to be caused by lifestyle changes, drugs, stress, and life habits. Gastritis is perceived to contribute to emotional problems, relationship difficulties and reduced quality of life. Despite the high prevalence of gastritis (56.6 to 62%), there are no reports of Malaysian experiences with gastritis. **Methods:** This study uses a qualitative approach to explore the lived experiences of health science university students regarding the self-care of gastritis. Nine participants with gastritis were recruited using purposive sampling. The participants participated in audio-recorded, semi-structured, and face-to-face or online interviews. All the interviews were transcribed verbatim and analysed using thematic analysis. **Results:** Participants conveyed their experiences regarding effects, challenges, and coping mechanisms. Generally, all participants encountered similar gastritis symptoms such as pain, nausea, vomiting, and bloating. Gastritis affected the participants regarding limited physical activity, physiological changes, sleep cycle, and food and drink intake. The participants also encountered emotional imbalance, decreased academic and clinical performance, and financial problems. The effects of gastritis and managing its challenges greatly affected their daily lives, and they developed coping strategies to control the symptoms. **Conclusion:** This study highlights the self-care of health science undergraduate students with gastritis based on the perspectives of the young and educated generations. Future research could explore the self-care in gastritis among the deprived population and its disadvantages when medical outreach is not applicable.

KEYWORDS: Gastritis, effect, challenges, coping strategies

INTRODUCTION

Gastritis is considered one of the commonest problems in many different societies. Gastritis is an inflammation of the stomach lining that causes varying degrees of epigastric pain, nausea, and vomiting. In more severe cases, erosion, ulceration, bleeding, haematemesis, melena, or massive blood loss may also occur in rare instances [1]. The most common causes of gastritis are *Helicobacter pylori* infection, non-steroidal anti-inflammatory drugs (NSAIDs), autoimmunity, lifestyle changes, drugs, stress, and life habits [2].

The prevalence of gastritis due to *H. pylori* differs in developing countries, depending on

geographical region and socioeconomic stability. For example, it has been estimated as 69% in Africa, 78% in South America, and 51% in Asia [3]. Meanwhile, in Malaysia, the prevalence of gastritis been reported to range between 56.6 and 62% [4-5]. Gastritis is common among those aged between 18 and 28 years [6-7]. A consistent association between gastritis and adult psychiatric symptoms [8] such as anxiety and depression [9] has been reported. Ozyurt et al. [10] reported that adolescents with chronic gastritis experienced more emotional problems and difficulties in peer relations and family functioning. Gastritis could also lead to reduced performance and adversely affect



those physically active, affecting their quality of life [11]. Overall, gastritis negatively impacts one's life.

While gastritis is considered a common disease, empirical evidence on the experience of patients diagnosed with gastritis in Malaysia is scarce. In the USA, Bedell et al. [12] identified the impact of gastritis on health-related quality of life (HRQOL) such as the psychological impact of the diagnosis, social relationships, finances, and the body.

In Malaysia, students can enrol in university programmes at the age of 18 years and above. Since gastritis is common at this young age, it is crucial to study their experience with gastritis. Therefore, for healthcare professionals to provide adequate information and increase awareness, this study explored the experience of health science students with gastritis, including their self-care to cope with gastritis symptoms, particularly among the newly diagnosed population.

MATERIALS AND METHODS

Design and sampling

This study used a qualitative approach to understand individuals' experiences in the self-care of gastritis. Purposive sampling was used to recruit participants from one of the public universities in Malaysia. The inclusion criteria for the participants were: 1) diagnosed with gastritis within a year, 2) do not have any other comorbid disease, 3) able to speak Malay or English, and 4) agree to participate in the study.

Ethical Considerations

Study participation was voluntary, and a written consent was received from each participant before data collection. All the participants were guaranteed confidentiality as well as anonymity throughout the study. This study was approved by the Kulliyyah of Nursing Postgraduate and Research Committee (KNPGRC) and IIUM Research Ethics Committee (IREC 2022-KON/70).

Data Collection

Participants were recruited from February 2022 until June 2022. After obtaining approval from the ethics committee, the names of potential participants were

obtained from the university's health clinic. Potential participants were approached during their visit to the clinic and verbally explained about the study. They were given time to consider it first and contact the researcher through phone or email provided in the participant information sheet (PIS). The interviews were conducted in an informal, semi-structured, face-to-face, or online conversational style and guided by an interview guide. Five interviews were conducted face-to-face at the university, while the others were through phone calls. Each interview lasted between 20 and 40 minutes. The interviews were conducted by a single interviewer who was well-trained and with extensive experience in qualitative research. The study's sample size was determined by data saturation, and interviews were stopped when there was no new information contributed during the interview and no new codes could be produced [13].

Data Analysis and Interpretation

This study employed thematic analysis, an appropriate method for analysing qualitative data to understand experiences, thoughts, or behaviours across a data set [14]. A six-step process of analysis was followed [14]. First, the researcher familiarises himself or herself with the data. All data from the audio files were transcribed verbatim into the Malay language used by the participants during the interview. The transcripts were sent to the participants to check the accuracy of the transcription. Then, the researcher went through the transcripts and actively observed meanings and patterns that appeared across the data set. The second step involved generating initial codes representing the data's meanings and patterns. At this stage, a discussion was held among the research team, who were experts in qualitative research, to improve the study's rigor indirectly. Relevant excerpts were identified, and appropriate codes were applied. Excerpts that represent the same meaning were grouped under the same code. The third step was searching for themes. All the codes were examined to look for potential themes. The themes were reviewed to ensure the fitness and relevance of all codes. The fifth step involved defining and naming the themes, followed by producing the report and describing the findings. Five team members, experts in qualitative research, were involved in discussing the final themes of this study.

and determination to do due to gastritis

Food and beverage
Medication
Position

Coping
The method of dealing with problem due to gastritis

Trustworthiness of Data

An audit trail can achieve dependability and confirmability [15-16]. An audit trail was, therefore, kept in this study to maintain track of the steps and/or changes throughout the processes of data collection, analysis, interpretation and writing up the findings. The credibility of this study was obtained through member checks [17] where the transcripts were sent to the participants for feedback. This step was to ensure the accuracy of the transcription.

RESULTS

Throughout the period of data collection, nine participants agreed to participate in this study. The background of the participants is summarised in Table 1. Three themes were identified using thematic analysis related to gastritis: 1) effects; 2) challenges; and 3) coping. Table 2 shows the summary of subthemes and themes.

Table 1 Demographic details of the participants (n=9)

	Participants	Frequency, n (%)
Age	20-25 (mean: 22.2)	
Gender	Male	3 (33.3)
	Female	6 (66.7)
Kulliyah/ Faculty	Nursing	3 (33.3)
	Medicine	2 (22.2)
	Dental	1 (11.1)
	Pharmacy	2 (22.2)
	Allied health science	1 (11.1)
Diagnosed (months)	1-3 months	1 (11.1)
	4-6 months	3 (33.3)
	7-9 months	2 (22.2)
	10-12 months	3 (33.3)

Table 2 Sub-themes and themes revealed during data analysis

Sub-themes	Themes
Physical/physiological changes	Effects
Physical activity	Something that happens because of gastritis
Sleep cycle	
Food and beverage intake	
Academic and clinical performance	
Emotional imbalance	Challenges
Clinical performance	Something difficult or troubling condition that required great effort
Financial	

Theme 1: Effects

All participants experienced similar gastritis symptoms such as pain in the stomach region, which interfered with their daily life routine as university students. Some participants experienced nausea, vomiting, diarrhoea for several days, light-headedness, bloating, and fever.

“I can feel the gastric juice secretion in my stomach, and I cannot stand up properly. The pain is sharp and I feel difficult to breathe. Sometimes, my face sweats due to the pain. I also have fainted once but just for a few minutes.” (P1)

“I usually will get nausea, vomiting, light-headedness and pain in my epigastric.” (P3)

“I got pain in my stomach, like the whole abdomen, and my whole body feels pain too. I also have diarrhoea, like watery stool almost 5 times daily for 3 days. And I feel nausea too, but no vomiting. And I have a fever of 38°C.” (P9)

Based on the excerpts above, the study participants highlighted how the gastritis symptoms they experienced affected their breathing, pain and comfort, mobility, and nutritional requirement.

Several participants reported that their physical activity was limited due to gastritis. For example, three physically active participants reported that they could not participate in the activity due to abdominal discomfort.

“As for exercise, I find it helpful to control my stress. But not during the gastritis attack. I cannot stand up at all because of gastritis.” (P2)

“I usually play badminton and hiking every week. But, when the gastritis attack, it will limit my active lifestyle. So, I can't play both of them and I will just take a rest.” (P4)

“I do not like exercise so much, but when the gastritis attacks, I cannot perform so many tasks because I will just be lying on my bed.” (P6)

Other participants mentioned their sleep cycle was disturbed during a gastritis attack.

"I usually get gastritis at late night, around 2 to 3 am. So, I could not sleep." (P3)

"I could say that most of my gastritis attacked before I went to sleep. The pain will not allow me to sleep." (P9)

Two participants admitted that their body weight was affected since being diagnosed with gastritis.

"Since last year, my weight has decreased from 55kg to 45kg. I think maybe because I cut my fast foods and tried a healthy diet due to gastritis." (P9)

Meanwhile, some participants also expressed that gastritis affected their academic and clinical performance. They could not focus on lectures and were sometimes absent from the class.

"For me, gastritis wastes my time doing the assignments as I have to eat first and rest when the gastritis attack. And during physical class, I had to excuse myself from the class and go to the surau to rest. And I once needed to take a leave from my clinical posting as gastritis attacked severely." (P3)

"When I get gastritis attacks, I cannot focus on doing work well. I will rest first and do the homework later. My clinical performance was also quite dissatisfactory as I could not do many tasks and had to rest and let my friends do the tasks." (P8)

Theme 2: Challenges

Some participants mentioned that they experienced emotional challenges during gastritis attacks. They felt sad, angry, stressed, and anxious.

"I can't focus on my homework and I felt irritated, sad and angry. If someone approaches me and asks me about homework, I can entertain but if they come to me and want to share their problems, I will ask them not to disturb me." (P1)

"I feel stressed and anxious. I always wonder why gastritis attacks me when I have work and tasks that need to be done." (P5)

"I feel quite sad and stressed ... Sometimes when the gastritis attack, I cry because it hurts so much, and I keep praying that Allah will reduce the pain." (P9)

Additionally, the nature of the nursing course with a full schedule can induce stress, worsening gastritis symptoms. Stress was notable in the participants' accounts in which the nursing students must submit academic assignments and clinical requirements as part of the trainee.

"When gastritis attacked, I was stressed at that time due to many assignments and clinical assessments. My schedule is so tight that I have no time to eat. And when I'm hungry, I become more stressed." (P1)

"And when I feel stressed for a long time, with the assignments and practical, make me have a packed schedule, like a few days ago, I can get gastritis." (P8)

Meanwhile, some participants also admitted that they required a lot of physical effort to deal with clinical tasks.

"I cannot focus in class. While in clinical posting, I could not focus or do my job properly. Sometimes my clinical instructor asks me about my performance. So, I will be honest and tell them that I have gastritis. I also push myself to stand up for a long time during clinical assessment as I have no other choices." (P1)

Another challenge faced by the participants was financial issues. They have to spend money on food and medication to treat their condition.

"I think gastritis affects my finances. Gaviscon is quite expensive for a student like me. And that coffee I drink every morning costs me RM30 per pack and I need to buy it every month." (P2)

"I would say that having gastritis quite consumes my money as I need to spend more to buy food. For example, when the gastritis attack, I have to eat more, maybe two or three meals on that day. So, my expenses will increase" (P5)

"I am a student and the MMT (Magnesium Trisilicate) that I have to buy from the pharmacy is quite pricey, like RM 10-20 per bottle. Also, pantoprazole is quite expensive. For me, it's quite challenging to my finances." (P9)

Theme 3: Coping

In coping with gastritis, several participants recognised the trigger factors were stress, improper mealtime, or the type of food. For them, adjusting their dietary intake is necessary to avoid gastritis symptoms. Four participants also revealed that they must be selective in their food and drink intake.

"I have started to take frequent meals like biscuits and carry biscuit with me all the time. I prevent myself from drinking bicarbonate drinks and eat fruits like orange, lime and pineapple." (P2)

"I avoid sour foods during the gastritis attack. But when gastritis is resolved, I will eat the sour foods but control the portion..." (P4)

"I think I cannot drink milk. I can feel that milk will trigger my gastritis. So, I just avoid any milk." (P5)

All participants stated that they manage gastritis by taking medications such as MMT, pantoprazole, omeprazole, and Gaviscon; they felt that the medications helped reduce gastritis symptoms.

"...I will take Gaviscon, the double strength version (pink colour) ..." (P2)

"...I will eat pantoprazole, MMT, buscopan and actifast that I bought from the pharmacy." (P4)

"When the gastritis attack, I will drink the MMT. But if the MMT is not effective for like an hour after that, I will take pantoprazole..." (P9)

Some participants even brought along food and drink to cope with gastritis. They will eat and drink immediately when they encounter a gastritis attack to reduce the symptoms.

"I drink coffee from Najeehah brand. It contains dates, arabica coffee and Bidara leaf and it was introduced by a friend of mine who also has gastritis." (P2)

"I always bring along foods like biscuits and chocolate with me everywhere. I will eat them when gastritis attacks..." (P3)

"Usually, if I feel the gastritis attack, I will straight away drink Yakult. Because it helps me to reduce the symptoms..." (P4)

Additionally, three participants applied specific body positioning to seek comfort despite gastritis. The participants found it helps handle the pain of gastritis.

I need to raise my head with more pillows at night or I will experience GERD (Gastroesophageal reflux disease). It is very unpleasant as the stomach juice keeps coming up to the throat when I lie down flat trying to sleep." (P4)

"...I will take a rest in bed. I am always in the left side-lying position with my legs near to my stomach, like a baby position every time gastritis attacks as it relieves the pain." (P6)

"I will bear the pain, and rest on my bed. I will do the baby position with right lateral lying..." (P7)

To conclude, the coping strategies of the study participants imply self-care strategies in avoiding the factors that trigger the symptoms and minimising the effects of gastritis themselves. It is believed that the self-care approaches by the study participants were outside of hospital services as none of the participants were hospitalized because of the complications of gastritis.

DISCUSSION

Three factors were identified to trigger gastritis among the participants in this study, such as stress, improper mealtime, and type of food intake. Similar reasons were identified in other studies too [6, 18-19]. Additionally, it could be due to the number of assignments together with attending clinical postings simultaneously that induced stress in the participants, potentially leading to gastritis. Stress could trigger dysregulation of gastric pH, leading to stomach inflammation and stress besides elevating acetylcholine and histamine levels, resulting in increased acid production-induced gastritis [20]. Furthermore, gastritis is commonly triggered by irregular eating habits, which heightens gastric sensitivity to the increased production of gastric acid [21].

The participants also reported limited physical activity due to the effect of gastritis. Most of them had their usual hobbies and exercise, which were impacted by gastritis attacks. This finding is congruent with that of Wen et al. [22], who reported that individuals with gastritis have a decreased quality of life, including physical functioning. It is very important for people with gastritis to maintain their daily physical activity, however it has to be in a controlled manner while

ensuring having enough rest [23]. Moreover, participants in this study also revealed that their sleep cycles were disturbed due to gastritis. Gastritis has impaired sleep and life quality has been reported many times in the literature [24-25]. A strong association has been reported between gastrointestinal diseases and sleep disturbances, affecting the sleep-wake cycle and leading to poor sleep [26].

All the participants in this study also mentioned that they have had to change their food and beverage intake. Recurrent gastritis attacks made them aware and cautious in choosing foods and beverage. Most avoid eating fast food, spicy foods, and carbonated drinks. Li et al. [18] report that many chronic gastritis individuals have unhealthy eating habits and food preferences, such as salty and too spicy foods besides sweets. Significant relationship has been reported between gastritis symptoms and spicy food intake [27]. In fact the risk of chronic gastritis was estimated to be about two times higher among those eating spiced foods [7]. The development of gastritis is usually preceded by irregular eating habits and the type of food that heighten gastric sensitivity to the increased production of gastric acid [21]. Having a good diet with an individual preference for the right choice of foods and drinks is important to avoid the worsening of gastritis condition.

Most of the participants in this study also experience physiological changes involving their body weight. For example, some of them gained weight, while others lost weight. Those who gained weight thought it was possibly due to overeating to avoid recurrent gastritis, while the possible cause for weight loss is more about the food they ate. However, Czornog [28] posits that the use of proton pump inhibitors (PPI) might increase or reduce the weight remains unclear, and the underlying reasons for this are still largely unknown at this time.

The participants also mentioned that their symptoms had contributed to some emotional imbalance, such as feeling sad, stressed, anxious, and unable to focus. This indicates that gastritis exerts negative effects on the participants' emotional states. Moreover, all the participants in this study were still at a young age. Women under the age of 50 years with gastritis are at the highest risk of experiencing psychological distress and depressive moods [29].

Gastritis is shown to be significantly related to increased emotional problems [10]. A significant burden falls on the patient in managing gastritis, resulting in stress and reduced health status and quality of life [12].

Most of the participants raised their concerns about their academic and clinical performance. Being student nurses is very challenging because they have to attend lectures and clinical rotations at the hospital. They admitted that their academic and clinical studies were affected, particularly during episodes of gastritis. This finding was supported by Firdous [19] who reported that most students with gastritis were stressed, impacting their academic and clinical performance. Participants in this study also experienced financial problems. They have to spend their money on medications, foods, and drinks to reduce the signs and symptoms of gastritis. Medications such as MMT and pantoprazole are quite expensive for them to buy. Bedel et al. [12] reported that most participants in their study experienced financial instability because they had to pay for bills, medications, and other personal needs. Another study reported that the medical cost of hospitalization, consultation and cost of other drugs were higher than non-medical cost among gastritis patients [30].

The findings show that most participants always had a supply of medications. Medications such as MMT, Gaviscon, pantoprazole, and omeprazole are the most common medications for gastritis. Malaysia Ministry of Health [31] guidelines state that medications such as antacids and proton pump inhibitors are good for controlling gastritis's signs and symptoms. This study shows that the participants used the proper medications to treat gastritis symptoms. Most of them also will bring suitable foods and drinks. Foods such as biscuits and chocolates and beverages such as *Yakult* and milk could help them reduce gastritis symptoms. Non-spicy foods and milk help to reduce gastritis symptoms [31]. The participants also revealed that body positioning, such as the right and left lateral positioning, helped them to reduce the pain of gastritis. The right lateral position could reduce gastrointestinal symptoms compared to the left lateral position [32]. This suggests that participants actively managed and coped with gastritis by following their preferences for diet, positioning, and medications.

The main strength of this study is the qualitative design and unique insight into the issues since studies regarding the experience of gastritis in Malaysia are scarce. Having participants diagnosed with gastritis within 3 to 12 months is the strength of the data because their memories are still fresh from the experience during the interview, despite it being acknowledged as retrospective accounts. One limitation of the study is that some interviews were conducted through phone calls. This is due to the Movement Control Order (MCO) imposed by the government and academic institutions during the data collection phase. It can be difficult to establish rapport and obtain non-verbal cues compared to face-to-face methods. However, the rich depth of data obtained makes up for the shortcoming of this study. Finally, as healthcare students, the participants were likely to be younger and more knowledgeable about managing gastritis through diet, medications, and body positioning strategies than older lay people. Future research could investigate older lay people's experiences in the self-care of gastritis and the impact of gastritis on their quality of life.

CONCLUSION

This study contributes to new knowledge regarding individual self-care of young and educated generations that live with gastritis. The finding emphasised that the individuals had similar experiences of gastritis. The effects and challenges of gastritis greatly affected the participants' daily lives in this study. Therefore, healthcare professionals should increase awareness among the public regarding gastritis through health promotion. They should encourage the community to apply self-care for the gastritis symptoms or seek treatment for severe gastritis symptoms to avoid serious complications such as a peptic ulcer. Healthcare professionals should also emphasise the side effects of the common drugs used by the participants in the management of gastritis in long-term usage and advise individuals to apply non-pharmacology methods to reduce the symptoms. More research is needed to explore the benefits or disadvantages of self-care without medical consultations, particularly, in the disadvantaged population, such as those with no access to information regarding gastritis who live in rural areas and are far from medicinal resources.

Conflict of interest

Authors declare none.

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Authors' Contribution

WHWM conceptualized the manuscript; NAH did the data collection and initial analysis together with WHWM, NMS, SHAH, SRMA and NJ contributed to the revisions of the thematic analysis and findings. WHWM created the first draft, and all authors contributed to critical revisions of the manuscript. All authors approved the final submission of the manuscript to the journal.

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