



Patients' Perception Regarding Factors Aggravating Esophageal Variceal Bleeding

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ABSTRACT

Background: Esophageal variceal bleeding (EVB) is a major complication in patients with liver cirrhosis. **Aim:** This study aimed to assess patients' perception regarding factors aggravating esophageal variceal bleeding. **Design:** A Descriptive exploratory research design was utilized. **Setting:** This study was conducted in endoscopy unit at Fayoum General Hospital **Sample:** A purposive sample of (152) adult patients from both sex were included in the study **Tools:** two tools were used in this study Tool I: Patients' structured interviewing questionnaire consisted of 3 parts, part I: Patients' demographic characteristics, part II: Medical history of the patients with esophageal variceal bleeding, part III: patient's knowledge regarding nature of the disease and factors that aggravate EVB, and Tool II: Illness perception questionnaire (IPQ) **Results:** The present study illustrates that, there were 40, 8 % of the studied patients was from 40- 50 years old, 44.7% of them are females and 55.3 % males, 65.8 % of the studied patients had unsatisfactory level of total knowledge regarding esophageal variceal bleeding. Regarding patients' total illness perception, the present study represented that 51.3 % of the studied patients had higher level of total illness perception. **Conclusion:** The results of the present study indicated that nearly two third of the studied patients had unsatisfactory level of total knowledge regarding esophageal variceal bleeding, with approximately more than half of them had a higher level of total illness perception. **Recommendation:** Developing a simplified and comprehensive booklet including basic information about esophageal variceal bleeding .

Keywords: factors, Perception, esophageal variceal bleeding.

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Introduction

Acute esophageal variceal bleeding is a direct consequence of portal hypertension and continues to be one of the most lethal complications of cirrhosis. Over the past three decades, mortality due to variceal bleeding has steadily decreased with improved endoscopic and pharmacological treatments. Despite this improvement in treatment modalities, bleeding from esophageal varices continues to have high mortality (15%–20%) in patients with underlying cirrhosis (*Hagström, et al., 2023*).

Factors that contribute to hemorrhage are muscular exertion from lifting heavy objects, straining at stool, sneezing, coughing, vomiting, esophagitis, irritation of vessels by poorly chewed foods or irritating fluids or reflux of stomach contents (especially alcohol). Salicylates and any medication that erodes the esophageal mucosa or interferes with cell replication also may contribute to bleeding (*Hussien, et al., 2020*).

Portal hypertension and a large size of varices are risk factors for bleeding. Red color signs are elevated red areas which are important for predicting variceal risk, and red wale markings,

dilated venules oriented longitudinally on the mucosal surface, have been considered to be the signs of highest risk. Vomiting, severe coughing, constipation, and excessive alcohol consumption may precipitate rupture of esophageal varices (*Kubtan, 2022*).

The main complications, whatever the cause of bleeding, include bacterial infections (such as aspiration pneumonia or spontaneous bacterial peritonitis (SBP)), hepatic encephalopathy and deterioration of renal function. Bacterial infections are observed in more than 50% of patients and may already be present at the time of bleeding (20%) acting as a precipitating event (*Mohamed, 2023*).

The nurse's role as a health educator has great impact on public perceptions of esophageal varices and its care. Patient education, defined as any set of planned educational activities designed to improve patients' health behaviors and health status. It is thought to be beneficial in helping patients to cope and co-operate with their disease and its management. Because of the chronicity of the disease, patients must learn to manage and cope with esophageal varices on a day-to-day basis. Nursing assessment act as a base to increase their

awareness about the risk factors, signs and symptoms, self-diagnosis, preventive measures, active involvement in management, and importance of adherence to treatment and health behaviors to promote safe and high-quality patient care (Shaban, et al., 2019).

Significance of the study

In Egypt, the incidence of esophageal varices in hepatitis C virus (HCV) patients with liver cirrhosis are pretty high, reaching about 62%, and the incidence of large varices reaches 47%. Hemorrhage from the upper gastrointestinal tract is around 4 times as common as bleeding from the lower GI tract. The prognosis of clients with variceal hemorrhage is rigorous with a 6-week death rate of 20–30%. Management for the prevention of re-bleeding from esophageal varices is very important. Despite of considerable progress in mortality in the last 25 years, variceal hemorrhage still a fatal (El-Kassas, et al., 2022).

Aim of the Study

This study aimed to assess patients' perception regarding factors aggravating esophageal variceal bleeding. The aim of this study achieved through the following objectives :

1. Assess patients' level of knowledge regarding factors aggravating esophageal variceal bleeding.
2. Assess patients' level of perception regarding factors aggravating esophageal variceal bleeding. .

Subject and methods :

I- Technical Item:

The technical item includes research design, setting, subjects and tools for data collection.

Research design:

Descriptive exploratory research design was used in this study.

Setting:

This study was conducted in endoscopy unit at Fayoum General Hospital. Endoscopy unit present in second floor, it consists of 2 units (endoscopy unit, hepatic unit). Endoscopy unit consist of 2 partitions: first partition for endoscopy and consist of three rooms, second partition for pre – post endoscopy and consist of 17 beds and the number of occupied beds from 13 – 15 bed \[days. Total number of nurse is 17 bedside nurses and 4 head nurse.

➤ Type of the sample:

A purposive sample of (152) adult patients from both sex have been recruited in this study .

Inclusion criteria:

- Adult patients of both genders from age 18 to 60 years.
- Patients' who are conscious and able to communicate verbally.

- Patients' who are free from active esophageal variceal bleeding.
- Patients' who have attended the gastro endoscopic unit for follow up only without intervention.
- Patients' willing to participate in the study.

Tools for data collection:

Data were collected using the following tools:-

Tool I: Patients' structured interviewing questionnaire:

- It was developed by the investigator and included three parts:

Part I: this part was concerned with patient's socio-demographic characteristics (age, gender, marital status, educational level, occupation, family income and place of residence).

Part II: concerned with patients' medical history, it included 11 closed ended questions, 9 for past history and 2 for present history. Past history included the items regarding comorbid conditions, previous operation, previous admission with EVB, question relates to smoking and medical treatment. Present history included questions that assess patient's chief complaint and causes of current admission.

Part III: This tool was adapted from (Ali, et al . , 2020). It was concerned with the assessment of patient's knowledge regarding disease process and factors that aggravate EVB. It included 24 multiple choice questions, there were 5 questions related to disease process as: (definition, symptoms, causes, treatment, and complication of the disease) and 19 questions related factors that aggravate EVB under 5 subscale questions as: (Caused factor, Aging, Medication, Food and Beverages, and Other factor).

Scoring system for knowledge items:

The total marks were summed; percentage was calculated for all patients and judged as the following:

- Correct answer =1
- Incorrect answer =0

The total score of knowledge was 24 points. Score of less than 60% (<15) question was unsatisfactory level and the score equal or more than 60% (15-24) question was satisfactory level.

Tool II: Illness perception questionnaire (IPQ): this tool was adapted from Redmen, (2003) it was used to assess patients' illness perception and consisted of three parts:

1- Identity (sign and symptoms) (14 items),

2- Causes of illness (18 items)

3- Patients' view of illness consists of 32 items under 6 subscales:

time line (5 items), consequence (6 items), control /cure (6 items), cyclic time line (4 items), illness coherence (5 items), emotional dimension (6 items).

Scoring system for Illness perception items:

The total marks were summed; percentage was calculated for all patients and judged as the following:

- Agree =3
- Neutral =2
- Disagree =1

The total score of Illness perception was 64 point. Score of less than 60% (<116) was low. The score between 60% to <75% (116- <144) was Moderate and the score equal or more than 75% (144-192) was High.

II -Operational Item:

Operational item included the preparatory phase ,validity ,reliability, pilot study and field work .

A- Preparatory phase:

It was included reviewing of past, current, national and international related literature and theoretical knowledge of various aspects of the study using books, articles, internet, periodicals and magazines to develop tools for data collection. during this phase , the investigator also visited also visited the selected place to get acquainted with the personal and the study setting.

B-Validity:

Revisions of the tools were done to measure the content validity of the tools and the necessary modifications were done accordingly. The stage developed by a jury of five experts of Medical Surgical Nursing, Faculty of Nursing Helwan University. Reviewed the developed instrument for clarity, relevance, comprehensiveness and no modification were done

Reliability:

Cronbach's Alpha was used to determine the internal reliability of the tools. Reliability of the tools was tested to determine the extent to which the questionnaire items are related to each other and the result was as the following Reliability in knowledge and Illness perception when Alpha Cronbach was >0.5 . The reliability was scaled as follows: <0-0.25 weak reliability, 0.25-0.75 moderate reliability, 0.75-<1strong reliability and 1 is optimum. The reliability for this questionnaire was 0.83 .

C-Pilot study:

It was carried out on 10% (15)of the patients under the study to test the applicability, clarity and the efficiency of the tool, no modification were done according to the result of pilot study. so all patients whose shared on pilot study were included in the studied subjects.

Field work:

Field work will include the following:

1. An approval was obtained from the study subjects individually and the scientific ethical committee of faculty of nursing at Helwan University using a written informed consent

obtained from each participant prior to data collection.

2. The purpose of the study was simply explained to the patients under the study prior to any data collection.
3. The investigator were available in endoscopy department at Fayoum general Hospital 3 days per week (Saturday, Monday and Thursday) from 9 am: 1 pm to collect data from patient within 3 months.
4. Data collection of the study was carried out in a period from beginning of September to the end of November 2022 from endoscopy unit at Fayoum General Hospital
5. The study tools were checked in and completed as the following:-

-Patients' structured interviewing questionnaire it filled by the investigator and consists of three parts, **first part (patient's socio-demographic characteristics)** took 5-10 minutes **Part II (patients' medical history)** took 10-15 minutes, **part III (assessment of patient's knowledge regarding disease process and factors that aggravate EVB)** took 20-30 minutes.

Illness perception questionnaire (IPQ)it filled by investigator and took 40 – 45 minutes.

III- Administrative Item:

Approval to carry out this study was obtained from the directors of the El Fayoum general Hospital in which study was conducted.

Ethical considerations:

An official permission to conduct the proposed study was obtained from the Scientific Research Ethics Committee, Faculty of nursing Helwan University. Participation in the study is voluntary and subjects were given complete full information about the study and their role before signing the informed consent. The ethical considerations was include explaining the purpose and nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it was not be accessed by any other party without taking permission of the participants. Ethics, values, culture and beliefs was respected.

IV-Statistical Item:

Statistical presentation and analysis of the present study was conducted, using the mean, standard Deviation, **chi-square test** was used to compare between groups in qualitative, **linear correlation coefficient** was used for detection of correlation between two quantitative variables in one group. By (IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp.).

Significant level: were >0.05 Non significant, <0.05* significant <0.001* High significant.

Results

Table (1): Frequency and percentage distribution of socio demographic characteristics for the studied patients (n=152).

Demographic characteristics	N=152	%
Age		
18 <30	11	7.2
30 <40	30	19.7
40 <50	62	40.8
50 or more	49	32.3
Mean±SD	37.14±6.52	
Gender		
Male	84	55.3
Female	68	44.7
Marital status		
Single	6	3.9
Married	107	70.4
Divorced	3	2.0
Widow	36	23.7
Level of education		
Read and write	27	17.8
Not read and write	34	22.4
Secondary Education	62	40.8
University Education	29	19
Place of residence		
Rural	84	55.3
Urban	68	44.7
Family Income		
Enough	88	57.9
Not enough	64	42.1
Occupation		
Not working	47	30.9
Employee	55	36.2
Worker	27	17.8
Pension	23	15.1

Table (1) shows the demographic characteristics of the studied patients as there were 40, 8 % of them had 40- <50 years of old. 44.7% of them were females and 55.3 % were males. According to marital status there were 70.4% of them were married. As regarding to level of education 40.8% of them had secondary education, in relation to place of residence there were 55, 3% of them from rural areas, as regarding to family income 57, 9% of them had enough family income and regarding to occupation 36.2% of them were employees.

Table (2): Frequency and percentage distribution of medical history of the studied patients (n=152):

Medical history	N=152	%
Past history		
Had bilharzia :		
Yes	44	28.9
No	108	71.1
Duration of having bilharzia		
Less than 5 years.	7	15.9
5-10 years	17	38.6
More than 10 years	20	45.5
Treated from bilharzia		
Yes	30	68.2
No	14	31.8
Method of treatment		

Medical history	N=152	%
Injections	5	11.4
Tablets	39	88.6
Cured from bilharzia		
Yes	27	61.4
No	17	38.6
Suffering from viral hepatitis		
Yes	112	73.7
No	40	26.3
Type		
Hepatitis B	34	30.4
Hepatitis C	78	69.6
Treated for viral hepatitis		
Yes	97	86.6
No	15	13.4
Cured from viral hepatitis		
Yes	49	43.8
No	63	56.2
Suffering from any of the following diseases :		
High blood pressure	96	41.1
Respiratory diseases	7	3
Heart diseases	42	17.9
Blood diseases (blood clots)	15	6.4
Kidney diseases	12	5.1
Diabetes	62	26.5
Previous surgeries :		
Yes	78	51.3
No	74	48.7
Previous admission to the hospital because of esophageal variceal bleeding :		
Yes	144	94.7
No	8	5.3
Smoking :		
Yes	60	39.5
No	92	60.5
Blood transfusion for hematemesis:		
Yes	93	61.2
No	59	38.8
Previous operation to inject esophageal varices :		
Yes	75	49.3
No	77	50.7
Previous esophageal varices ligation :		
Yes	53	34.9
No	99	65.1
Present history		
Complain that lead to admission to the hospital this time:		
Hematemesis	107	60.1
Nausea and abdominal pain	56	31.5
Dizziness and vertigo	5	2.8
Shortness of breath	10	5.6
Reasons that lead to admission to the hospital this time :		
Not taking medication	48	26.5
Excessive use of analgesic and aspirin	92	50.8
No compliance with my diet regimen	22	12.2
Other reasons to mention	19	10.5

Table 2 : show the patient medical history, according to past medical history there were 71.1% of them hadn't bilharzia, while 73. 7% of them suffered from viral hepatitis, as well as 69, 6 % had hepatitis C virus, 41.1 % of

them suffered from high blood pressure, 94.7% of them previously admitted to the hospital with esophageal variceal bleeding. In relation to the present medical history, 60.1 % complaining of hematemesis when admitted to hospital.

Figure (1): Percentage distribution of patients' total knowledge regarding esophageal variceal bleeding (n=152).

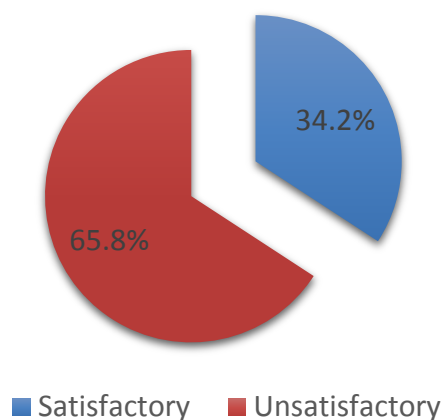


Figure (1): Represents that 65.8 % of the studied patients had unsatisfactory level of total knowledge regarding esophageal variceal bleeding.

Figure (2): Percentage distribution of the studied patients' total illness perception (n=152):

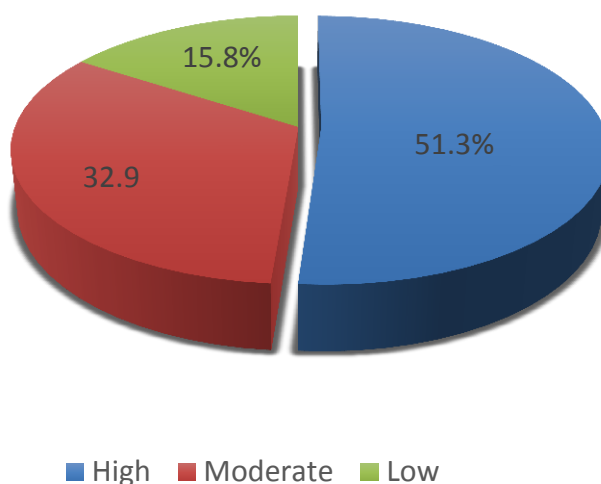


Figure (2): Illustrates that 51.3 % of the studied patients had higher` level of total illness perception, while 23.9% of them had moderate level which 15.8 of them had low level of total perception .

Table (3): Correlation between total knowledge and total perception among the studied patients (n=152):

	Total Knowledge score	
	R	P-value
Total Illness perception score	0.813	<0.001*

Table (3): indicated that there was a highly statistically significant Positive correlation between total knowledge and total perception with p-value <0.001*

Discussion

Regarding demographic characteristics of the studied patients, there were more than two fifths of the studied patients were in age group from 40< 50 years old with a mean±SD 37.14 ±52, From the investigator point of view, this finding may be due to incidence of EV increases with advanced age as a complication to chronic liver diseases (CLD). These result agreed with *Agarwal, et al. (2021)*, who found that, the mean ± standard deviation of age was 46.7 ± 12.6 of patients under study were between the age group 18< 50 years.

As regard marital status, nearly three-quarters of the studied patients were married. This may be due to more than two fifths of the studied patients were in age group from 40< 50 years. These findings consistent with, *Mahdy, et al., (2018)*. Who stated that ,three-quarters of the sample were married.

In relation to the studied patients' past medical history, the present study results revealed that, more than one quarter had bilharzia. From the investigator point of view, this finding may be due to there were more than half of the studied patient from rural areas that causing to increase their possibility to exposure to bilharzia. This finding agreed with *El-Fadl, et al. (2017)*, who clarified that, more than two fifth of the studied patients had bilharzia with reference to viral hepatitis.

The present study showed that nearly three-quarters of studied patients had viral hepatitis. From the investigator point of view, this finding may be due to the main causes of liver disease is viral, These result disagreed with the result of the study done by *Protopapas, et al., (2020)* in Greece, who found that about half of the studied patients had hepatitis.

Concerning with the present medical history, the present results revealed that about three fifth of the studied patients complaining of hematemesis in admission this time. From the investigator point of view, this may be because of hematemesis is most common and danger sign of esophageal varices, this finding disagreed with *Ahmed., et al. (2018)* who found that more than one third of studied patients complaining of hematemesis in admission this time.

Looking upon the total knowledge, the present results bring to light that, two third of the studied patients had unsatisfactory level of knowledge regarding esophageal varices. from investigator point of view, this due to insufficient resource of knowledge due to more than half of the studied patients from rural areas. These results are bound with the result of the study done by *Taha, et al., (2017)* who stated that two thirds of the studied \patients had unsatisfactory level of knowledge regarding esophageal varices.

Concerning the total illness perception, the result of the present study illustrated that more than half of the studied patients had a higher level of perception regarding to their disease. These result disagreed with the result of the study developed by *Ullah., et al. (2022)*. *Who* reported that the majority of the studied patients had low level of perception regarding their disease.

Regarding correlation between total knowledge score and Total perception score ,There was a highly statistically significant ,Positive correlation between total knowledge score and total perception score with p-value <0.001*. These results comparable to the result of the study done by *Ali, et al., (2020)*. in Ain sham university, *who showed that* there was a positive correlation between patients' total level of knowledge and their total perception

Conclusion

Based on the results of the present study, the following can be concluded:

The result of the present study indicated that nearly two third of the studied patients had unsatisfactory level of total knowledge regarding esophageal variceal bleeding. Approximately more than half of the studied patients had high level of total illness perception, while nearly one third of them had moderate level of total perception, one fifth of studied sample had low level of total perception. Also, there was a highly statistically significant Positive correlation between total knowledge score and total perception with p-value <0.001*.

Recommendations

Based upon findings of the current study, the following recommendations were suggested:

- Continuous education for the studied patients with EVB should be provided, because it is a fundamental part of their treatment.
- Regular endoscopic follow-ups for all patients at least six months to evaluate their health conditions and detect the complications early.
- Developing a simplified and comprehensive booklet including basic information about esophageal variceal bleeding as definition, causes, risk factors, complications and prevention.

Recommendations for further research

- :
- The study should be replicated on a large scale and in different hospital settings in order to generalize the benefits.

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