Original Research Article

Educational innovations in the approach of outpatients to improve health literacy: a prospective study

ABSTRACT

Limited health literacy is considered a risk factor for poor outcomes. Empowering patients with knowledge about their disease can improve health outcomes. To propose new approaches to improve patients' health literacy to the treatment for functional dyspepsia and gastritis. This is a prospective study with a pre- and post-educational intervention. The sample included 50 patients, 35 female patients (70%). In the post-intervention questionnaire, 82% of patients improved their clinical condition with the treatment, 98% of patients understood the videos and 74% of patients believe that the educational intervention could be used for other specialties. Patient education is an important strategy for a better understanding of their disease. Besides that, this study used educational tools through guidance texts and educational videos that can be used in clinical practice. This is an easily, accessible and inexpensive tool for health literacy.

Keywords: Dyspepsia. Gastritis. Health literacy. Learning. Patient education as topic.

Introduction

The success of the most treatment depends on the patient's adherence and confidence to what was proposed by the physician. Poor adherence to treatment is directly linked to negative effects or non-improvement of symptoms. Therefore, provide a better understanding of the clinical condition and information about the treatment could be a tool to improve patients' adherence. One way to get this approach could be to improve the physician-patient alliance through health education and explanations about the importance of the treatment during consultation. However, the time between the first consultation and the follow-up visit is usually long and may compromise the patients' prognosis by the lack of commitment to treatment.[1]

The engagement of the patients may be linked to the understanding of the disease and treatment goals, together with its prognosis It is not uncommon for the patient to forget to follow the recommendations for not having incentives or even for not having understood the instructions at the time of the consultation. It is important to consider that the self-care process is guided by cognitive aspects and clinical conditions, based on empirical knowledge and reflexivity, which guide this individual to decide what to do and how to act.[2]

The lack of engagement in treatment for any reason can bring harm to health and worsen the prognosis of the disease. Therefore, it is possible that a simple solution, such as greater care in explaining about the disease for patients, can improve patient engagement in treatment and, consequently, reduce the risks of poor health outcomes.[3,4]

In this context, the health literacy is the patient capacity of the obtain, process and understand the physician recommendations to make appropriate health decisions.[4] The studies observed the patients with limited health literacy has been associated with poor disease-specific knowledge, low adherence for treatment, poorer health, more hospitalization and consequently mortality.[4]

Limited health literacy is considered a risk factor for poor outcomes in gastrointestinal diseases as inflammatory bowel disease.[4] In this study, 40% of the patients (n = 99) had limited health literacy and reported a worse health status and symptoms of depression.[4] Empowering patients with knowledge about their disease can increase engagement in disease management and

improve health outcomes.[4,5] Besides that, a study observed that there are few researchers investigating adherence to drug treatment in chronic gastrointestinal diseases.[6] In addition, authors showed a low rate of adherence to prescribed treatment[6]. In this way, the World Health Organization identified that non-adherence to the proposed long-term treatments in the population was around 50%.[3] Practices that change patients' daily lives and the role of self-care are factors of great implication that could be related to limited health literacy and low adherence to the treatment.[4,7] Another significant factor that implies the adherence is the patient's inability to follow the treatment due to the difficulty of understanding the instructions given by the physician.[8] A review study highlighted that the trust and sensitivity of the health professional, aiming to establish an empathetic relationship, where it is possible to listen to patients and find, in a shared way, strategies that help their adaptation to the lifestyle required by the disease can be factors that promote adherence to treatment.[9]

The literature often reinforces the importance of education and consequent adherence to treatment as differentials in self-care and patient health outcomes.[10] Studies in which are implemented some instruments or programs for physician-patient interaction suggest greater patient satisfaction, understanding and confidence in their physician.[8] Facilitating access to information to promote patient understanding of the disease is a strategy to improve health care, such as text messages to instruct patients about self-preparation for specific tests,[11] preventive care[12] and care for diabetic patients.[13] In gastroenterology, as in most areas of health, the success of treatment depends on patient compliance. Therefore, daily SMS reminders have been used to improve adherence and treatment effectiveness in patients with functional dyspepsia.[14]

Gastrointestinal symptoms have a high prevalence among general population.[14,15] Gastritis was considered the fourth most frequent disease in the general population, accounting for 31% of gastrointestinal pathologies.[14] The inclusion of functional dyspepsia in the group of diseases considered chronic is based on the fact that two-thirds of people with functional gastrointestinal disorders have fluctuating and chronic symptoms.[15] Many individuals have no organic explanations for these symptoms, and they are diagnosed as having a

functional gastrointestinal disorder.[15] As it does not have organic or physiological signs, the term “functional” is used, which is not specific.[15] The diagnosis must be made according to the symptom, and therefore, the disease is often not given due importance and the diagnosis is not communicated by the physician, nor education is provided.[15]

Objective

This study aims to propose new approaches to improve patients’ health literacy to the treatment for functional dyspepsia and gastritis.

Methods

Type of study

This study is a prospective study pre- and post-educational intervention. Patients diagnosed with functional dyspepsia and gastritis were included in the study. All patients were informed about the study methods and signed an informed consent form before the start of the study. The stages of this study are explained in **Table 1**.

Ethical aspects

The study was approved on March 02, 2021 by the Universidade Municipal de São Caetano do Sul Ethics Committee, CAAE: 40695920.6.0000.5510. All participants were informed about the proposal and procedures of the study.

Study location and population

This study was carried out with 50 patients diagnosed with functional dyspepsia and gastritis who attended the Regional Health Specialties Outpatient Clinic. Patients were screened by the physician at the time of the first consultation at clinic. If patient had the diagnoses of dyspepsia or gastritis, the physician explained the study to the patient. If patient agreed to participate the study, the first questionnaire about the disease was given by the physician and the patient answered at the same time (available at the link: https://drive.google.com/file/d/17Tt4sELArr9YeAE2j_3kUlx0kUuafbTj/view?usp=sharing).

The physician explained and delivered three guidance texts to the patients at the first medical consultation (available at the link: https://drive.google.com/file/d/1rJnoJsO6E7dMMEVQGZ1iZfwP1UcViJNX/view?usp=sharing).

These guidance texts were prepared by the research team through scientific literature and clinical expertise of one of the authors of this study. Three educational videos about the disease were sent to patients, once a week over three weeks after the first consultation.

Finally, after this period, patient answered the second questionnaire (available at the link: https://drive.google.com/file/d/1oM788rocDDLO-4yATiNSzwcZ7945wqSO/view?usp=sharing).

Questionnaire were provided to patients and answered by them pre- and post-educational videos.

Eligibility criteria

Inclusion criteria: Patients treated at the outpatient clinic who had diagnoses of functional dyspepsia or gastritis (any type) with clinical history and outpatient follow-up for at least 2 months.

Exclusion criteria: patients who refused to answer the questionnaire or who had other associated gastroenterological pathologies.

Study phases

The recruitment was conducted from November 2019 to March 2020. In this period, 422 patients were treated at the gastroenterology outpatient clinic. From this sample, 213 patients were suspected of having diagnosis of dyspepsia. At this phase, diagnoses were made based on clinical examination. Then, subsidiary exams, as laboratory tests, upper GI endoscopy and total abdominal ultrasound were requested.

At phase 2, the study started from the first medical consultation (Consultation 1 – initial count of the time for the Delta T consultation - period between first consultation and the follow-up consultation). Guidance texts were delivered to the patient during the medical consultation and explained by the physician (available at the link:

https://drive.google.com/file/d/1rJnoJsO6E7dMMEVQGZ1iZfwP1UcViJNX/view?usp=sharing). After the consultation, the study was explained to all patients with the diagnosis of functional dyspepsia and gastritis confirmed by clinical tests. Patients that agreed to participate, sign the consent form, and answered a questionnaire with their sociodemographic data and questions about facilities and difficulties with the disease management (available at the link: https://drive.google.com/file/d/17Tt4sELArr9YeAE2j_3kUlx0kUuafbTj/view?usp=sharing). The questionnaire 1 was created by the authors for this study. The sociodemographic data and the questionnaire were carried out by a social worker that was as neutral as possible, in an appropriate room with no outside distractions. The proposed treatment on the guidance texts and educational videos for the diseases was based on guidelines.

Phase 3 consists in a period at minimum of 3 weeks in which the patient is absent from the clinic and performs the recommendations given by the physician at home. During this period, the educational videos were sent to the patient by mobile chat app, one per week, in the following order: the first video was about dietary guidelines; the second, in the second week, video about anti-stress guidelines; and the third, in the third week, about medication and exams. The videos had didactic explanations and accessible language to ensure a good understanding. All videos were presented by a person unknown to the patient, to avoid any discomfort or embarrassment. Care was taken to ensure that the presenter had a good diction and was empathetic and pleasant to the patient. Videos were produced by the university team (authors, video production, marketing and psychology). The educational videos are available on text format and *Youtube* (available at the link: https://drive.google.com/file/d/1rJnoJsO6E7dMMEVQGZ1iZfwP1UcViJNX/view?usp=sharing).

From Phase 2 to Phase 4 was the period counted for defining the “Delta T consultation”. After the 3-week period of sending the educational videos, patients waited for the follow-up consultation. At Phase 4, patients attended the follow-up consultation with the physician. In this phase patients, after the consultation, they answered to the post-educational videos questionnaire (available at the link: https://drive.google.com/file/d/1oM788rocDDLO-

4yATiNSzwcZ7945wqSO/view?usp=sharing). This questionnaire was also applied by the social worker. The questionnaire 2 was also created by the authors for this study. The Delta T consultation was established, and the study ended. **Chart 1** summarizes the phases of the study.

Statistical analysis

Data were tabulated using Microsoft Excel version 2018. Descriptive analysis was performed. Data were presented in absolute number, percentage, mean and standard deviation (SD).

Results

A total of 50 patients agreed to participate: 35 female (70%) and 15 male (30%). The mean age was 55.7 years (15.3 SD). The predominance (48%) of the education level was high school. All patients had a suspected diagnosis of dyspepsia, and most patients were diagnosed with gastritis after clinical examinations (62%). Delta T consultation was also evaluated, with a mean of 10.6 weeks (1.9 SD) (**Table 1**).

Table 1

Table 2 represents the answers to the pre-educational video questionnaire. The first question refers to what information patients would like to receive. The highest percentages were related to doubts about medication (26%), followed by the possibility of having a cure for their disease (22%). Information about nutrition (18%) and treatment (14%) were also cited.

In the second question, it can be observed that among the difficulties regarding adherence to treatment, the most cited were lack of time (26%), acquisition of expensive medicines (20%), lack of understanding of what the physician said (20%) and forgetfulness of taking medicine (18%). The third question encompassed the doubts about the treatment, 30% of the patients wait for the follow-up appointment to ask their physician; 28% asked to friends,

neighbors, or family members to solve their doubts and 28% looked up their doubts on the internet.

The fourth question is about the Delta T between the first consultation and the return. A higher percentage was found among patients who were not aware if they would be undergoing the appropriate treatment until the follow-up consultation (30%). Reports of anxiety was present in 18% of patients.

Table 2

Table 3 represents the responses to the post-videos' questionnaire. It was observed that a high percentage (82%) of patients reported feeling better or much better. The item most reported was dietary changes (44%). Most patients watched all the videos (72%), 52% reported following some guidelines and 46% of patients followed all guidelines. The understanding of the videos was satisfactory for 98% of the patients. Videos were important to clarify some doubts for 84% of patients. The feeling of proximity to the physician was reported by 82% of patients. Interest in the possibility of receiving materials (educational videos) in other specialties was considered by 74% of patients. In addition, 90% of patients would recommend this educational method to others (**Table 3**).

Table 3

Discussion

The objective of this study was to propose new approaches to improve patients' health literacy to the treatment for functional dyspepsia and gastritis. The sample constituted in 50 patients, 35 female patients (70%) and 15 male patients (30%). The mean age was 55.7 years (15.3 SD). The majority of patients (48%) have high school education. The greater number of women, the average age, as well as education level, are compatible with the disease prevalence in national data.[16] The Delta T consultation was calculated at 10.6 weeks and it is considered a too long time to wait for a follow-up consultation.[17] According to Resolution 1.958/2011 of the Federal Council of Medicine

(SP/Brazil), the physician should schedule a follow-up consultation[17] with a recommendation of a period of 30 days. However, some social and administrative issues could make this demand difficult.[17]

Regarding the first question, 22% of the patients expected that doubts about the possibility of cure have been answered, a point not addressed in the videos. The prognosis and the potential risks and benefits about the disease proved to be important and may be addressed in a future study.[18] The second question addresses about the difficulties in adherence to treatment, the explanations given are in line with the observations in a large evidence synthesis about drug treatment for chronic diseases.[19] We highlighted the responses related to low adherence to treatment: lack of time, expensive drugs that are not compatible with the budget of some patients, forgetting to take medication and lack of family support. The lack of time reported by patients may be associated with limited health literacy about the disease, which leads to a decrease in the patient's self-efficacy and commitment to treatment.[20] It should be noted that for 20% of the patients showed a lack of understanding of the guidelines given by the physician.[21] The lack of understanding by patients (20%) often puts off asking for help until the next appointment with the physician. In other words, for a considerable period the patient does not try another way to have access to certain important information to adjust their treatment. Combining the two answers, 56% of patients seek for a better understanding and information about their disease with friends, neighbors, and family (28%) besides the internet (28%). The lack of knowledge about the disease leads the patients to seek information from unreliable and biased sources.[1] Therefore, educational programs and materials with an evidence-based approach are critical to optimizing patient management of the disease.[1] The doubt if the patients are doing the correct treatment between the first consultation and the return was related for 30% of patients. This long waiting time and the limited health literacy in patients has been associated with depression, anxiety and discouragement, as observed in the fourth question.[1] Although not specifically explored in our study, patient education about their disease and symptom management plays a major role in treatment adherence and is directly linked to successful outcomes.[1,4,19]

The answers to the questions after the post-educational videos showed a greater understanding of the disease and its management. This information demonstrated that the videos were easy, accessible, and enlightening being an important method to demonstrate their effectiveness as an educational tool.[1]

The perception of greater proximity to the physician was reported by 82% of the patients and this was also a positive factor to reduce the gap between medical knowledge, knowledge of the disease and the patient's treatment. Some regional and cultural characteristics must be considered in patients' adherence to videos or adherence to treatment, as there may be significant differences.[5] Larger studies with similar population are necessary to allow comparisons. The United States Department of Health and Human Services (HHS) indicates the importance of patients understanding and processing medical information in basic health and that the education level is important for understanding.[22] Videos (74%), and texts and videos method (90%) were approved by the patients to disseminate information about their clinical condition.[22] The evidence-based materials to improve patient's health literacy incorporate science with personal values of consumers and patients.[18] It should use a plain and clear language, avoiding medical jargons, to facilitate the comprehension of information for patients with any education level.[1,18] Finally, this approach may include information that improve decision quality and patient's confidence, as interventions, diagnosis, prognosis, risks, benefits, probabilities of treatment failure or success and side-effects.[1,4]

The results obtained in this research corroborate with other studies.[23] In addition, the proposed treatment for functional dyspepsia and gastritis also supports ways of managing the situations related to other pathologies.[24,25,26] There are no scientific articles that used educational programs and materials with an evidence-based approach specifically for patients with gastritis and functional dyspepsia. However, studies in the gastroenterology field with patients with inflammatory bowel disease observed that these educational initiatives are important to empowering patients with knowledge to enhance health literacy, increase adherence to treatment, improve health outcomes and facilitate decision-making regarding their health condition.[1,4,5]

The weaknesses of this research are related to the small sample size. The sample recruited is not enough to extrapolate the data to general population. However, it is suggested that future referrals should be pointed, as updating the construction and validation of educational videos, according to guidelines observed in a recent recommendation.[27] Moreover, texts and videos about information of dietary changes had greater acceptance by the patients. It could be interesting the elaboration of a dietary questionnaire, in conjunction with a nutritionist, to be added to the product in future studies or even, at clinical practice. There is a study that demonstrates good clinical results with the inclusion of a diet questionnaire and the formal participation of a nutritionist in specific clinical interventions in a higher proportion of gastroenterological patients.[20]

Conclusion

Patient's health literacy about the disease plays an important role to improve self-efficacy, effective healthcare utilization, engagement to the treatment and facilitate complex decision-making process together with the medical team. It could be observed that the guidance texts and educational videos also encouraged a better physician-patient relationship and could contribute to better health outcomes. More research is needed in functional dyspepsia and gastritis to understand the impact of health literacy on health outcomes in this population and develop an effective educational method to implement in clinical practice.

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CHART 1 – Study Stages

PHASES	TIMELINE	EVENT	STATUS
PHASE 1	- 213 patients included (out of 422 treated) - Clinical examination; - Diagnostic tests requested (laboratory, UDE and total abdominal US)	INITIAL DIAGNOSIS: Dyspepsia t/c	Cases survey

PHASE	APPOINTMENT 1 - Explanation of the study to the patient; - Signed FCTC, GT; - Pre-EV questionnaire.	FINAL DIAGNOSIS: Functional dyspepsia / Gastritis	Initiation of treatment with medical recommendations and home guidance texts. Initial time count for Delta T consultation.
PHASE 3	Sending of EV to patients	- 1st Week: video 1 (Dietary Guidelines Feeding Tips); - 2nd Week: Video 2 (Anti-Stress Guidelines); - 3rd Week: video 3 (Medication and Examination Guidelines).	Viewing educational videos by patients.
PHASE 4	APPOINTMENT 2 - Patient follow-up	- Treatment feedback; - Response to the post EV questionnaire.	Research Completed: Final Time Count for Delta T Consultation

Dyspepsia t/c = Dyspepsia to clarify; UDE = Upper Digestive Endoscopy; US = Ultrasound; FCTC = Free and Clear Terms of Consent; GT = Guidance Texts; EV = Educational Videos

Table 1. Characterization of patients

Patients (N=50)		
Age (SD), in years	55.7	(15.3)
Gender (%)		
Female	35.0	(70.0)
Male	15.0	(30.0)
Education Level (%)		
Elementary school	21.0	(42.0)
High school	24.0	(48.0)
College education	5.0	(10.0)
Initial diagnosis-suspected (%)		
Dyspepsia t/c	50.0	(100.0)
Final diagnosis-confirmed (%)		
Gastritis	31.0	(62.0)
Dyspepsia	19.0	(38.0)

Delta T query (SD), in weeks	10.6	(1.9)

Categorical variables were expressed in number and percentage (%). Continuous data were expressed as mean and standard deviation (SD). Dyspepsia t/c = Suspicious dyspepsia; Delta T consultation = Period between the first consultation and the return.

Table 2. Pre-educational videos questionnaire

Patients (N=50)		
Question 1- Information I would like to receive (%)		
Doubts about medication	13.0	(26.0)
Possibility of healing	11.0	(22.0)
Doubts about food	9.0	(18.0)
Doubts regarding treatment information	7.0	(14.0)
Doubts about expenses	3.0	(6.0)
Doubts about physical activities	2.0	(4.0)
Indifferent	2.0	(4.0)
Doubts about exams	1.0	(2.0)
Treatment with a psychologist	1.0	(2.0)
Books and magazines	1.0	(2.0)
Question 2- Difficulty in adherence to treatment (%)		
Lack of time	13.0	(26.0)
Expensive medicine	10.0	(20.0)
Lack of understanding	10.0	(20.0)
Forget to take medicine	9.0	(18.0)
Get better and stop treatment	3.0	(6.0)
Lack of family support	3.0	(6.0)
Cigarette	1.0	(2.0)
No difficulties	1.0	(2.0)
Question 3- Questions about treatment (%)		
Ask to the physician on follow-up	15.0	(30.0)
Ask to friends, neighbors, or family members	14.0	(28.0)
I search on the Internet	14.0	(28.0)
I don’t know	4.0	(8.0)
I seek assistance at primary care	2.0	(4.0)
I read the drug information leaflet	1.0	(2.0)
Question 4- Delta T between consultations (%)		
Not knowing if you're doing it right	15.0	(30.0)
Get anxious about the test results	9.0	(18.0)
Difficulty in clarifying doubts	8.0	(16.0)
Discouragement about treatment	8.0	(16.0)
End of medication / Loss of prescription	4.0	(8.0)
Forgetting what was said	3.0	(6.0)
I don’t know	2.0	(4.0)

I don’t have problems	1.0	(2.0)

Categorical variables were expressed in number and percentage (%). Delta T consultation = Period between the first consultation and the return.

Table 3. Post-educational videos questionnaire

Patients (N=50)		
Question 1- Clinical improvement or worsening (%)		
Better	37.0	(74.0)
Much better	4.0	(8.0)
No change	4.0	(8.0)
A little better	3.0	(6.0)
Worse	2.0	(4.0)
Question 2- Reasons for improvement or worsening (%)		
I'm feeding myself better	22.0	(44.0)
I know it's not serious and I feel calmer	8.0	(16.0)
I'm treating myself better	6.0	(12.0)
I reduced the medication for symptoms	4.0	(8.0)
The pain has reduced	2.0	(4.0)
I'm more confident	2.0	(4.0)
I started physical activity	1.0	(2.0)
I understood what the physician said	1.0	(2.0)
I got worse because I didn't do what I should	2.0	(4.0)
I got worse because of anxiety	1.0	(2.0)
I got worse for lack of time	1.0	(2.0)
Question 3- Watched educational videos (%)		
I watched 3 videos	36.0	(72.0)
I watched 2 videos	8.0	(16.0)
I watched 1 video	6.0	(12.0)
Question 4- Adherence to educational videos (%)		
I follow some guidelines	26.0	(52.0)
I follow all the guidelines	23.0	(46.0)
I couldn't follow	1.0	(2.0)
Question 5- Understandings of educational videos (%)		
Yes	49.0	(98.0)
Doubts	1.0	(2.0)
Question 6- Doubts about the disease (%)		
I don’t have doubts	42.0	(84.0)
I don’t know	5.0	(10.0)
I have doubts	3.0	(6.0)
Question 7- Increased proximity to the physician (%)		
Yes	41.0	(82.0)
I don’t know	7.0	(14.0)

More or less	2.0	(4.0)
Question 8- Educational videos in other areas (%)		
Yes	37.0	(74.0)
I don’t know	13.0	(26.0)
Question 9- Indication of the method (%)		
Yes	45.0	(90.0)
I don’t know	5.0	(10.0)

Categorical variables were expressed in number and percentage (%).

Appendix

PRE-EDUCATIONAL VIDEOS QUESTIONNAIRE

What information would you like to receive to improve your understanding about your health problem and how to manage it?
What are your biggest difficulties that usually lead you to not fully adhere to the treatment recommended by your physician?
What do you do when you have doubts about your treatment?
How does it bother you when the time between your first consultation and your follow-up with the same physician is delayed (30 days, for example)?

POST-EDUCATIONAL VIDEOS QUESTIONNAIRE

1- Do you feel better or worse about your last appointment?
Why do you think it got better or worse?
Did you watch the videos? How many videos did you watch?
Were you able to follow the video's instructions? What did you follow and what did you not?
Did you understand the contents and guidelines of the videos?
Do you have any further questions related to your disease?
Have you felt closer to your physician through the videos?
Do you think that other specialties could guide through videos?
Would you recommend this method to other people?

GUIDANCE TEXT 1

NUTRITION TIPS

PERMITTED AND RECOMMENDED FOOD (FACILITATE DIGESTION):
Vegetables in general (preferably cooked);
Fruits: apple, papaya, pear, mango, etc.;
Lean meat, chicken and fish (baked, grilled or boiled);
Whole grains
Tea (chamomile, fennel, lemongrass);
Decaffeinated coffee.

AVOID:
Coffee and black tea;
Milk and yellow cheese;
Soft drinks;
Alcoholic beverages;
Acidic fruit juices (lemon, orange, pineapple);
Tomato sauce;
Sausages;
Fried food;
Spicy foods (with pepper).

EAT WITH MODERATION:
Rice, beans;
Boiled egg;
Pasta or floury foods;
White cheeses (ricotta, Minas);
Sweets, chocolates, goodies (candies) – **beware of diabetes!!**

OTHER USEFUL TIPS:
Eat a piece of fruit between meals (3 in 3 hours);
Avoid ingesting liquids during meals;
Avoid lying down right after eating.

Enjoy your meal!!

GUIDANCE TEXT 2

ANTI-STRESS TIPS
TAKE A TIME:
Relax. Try to establish priorities in your life, and the priority should always be your health!
FIND A BALANCE:
Nowadays, we must also look more closely at other areas of our lives, such as our diet and factors around it. We must prioritize a quiet environment and time to eat in peace, avoid noisy environments or eat while watching television, which generates stress. Getting adequate sleep also contributes to balance. Having a balanced body makes it easier to deal with stress.

BREATHE DEEPLY:
Try counting to 10 slowly. This helps in certain moments of anxiety that generate stress.
THINK POSITIVELY:
When we are under stress, we tend to think negatively. However, it is important to remove these types of thinking by imagining positive situations in which we will find it easier to find innovative solutions to problems.
ASK FOR HELP:
Beware, WE ARE NOT ALONE! There is always someone willing to help us. Ask for help whenever you need it.

Release the muscles (stretching exercises);
Practice meditation;
Dedicate yourself to manual work;
Whenever you can, take a nap;
Listen to music, dance!!

GUIDANCE TEXT3

DRUG DIRECTIONS AND EXAMS

The use of drugs prescribed by the physician usually happens, if necessary, after an accurate diagnosis has been established or according to the intensity of the symptoms.

MEDICATION TIPS:
Avoid drinking alcoholic beverages with medication;
Keep your medication in a safe place;
Always try to keep them in their own packaging and with the information leaflet;
Get used to taking your medications at the correct and prescribed times.

EXAMS TIPS:
Laboratory
Observe the need for fasting prior to the exam;
Attention to the use of medicines. Some medicines may modify the results, such as drugs to prevent clotting;
Avoid intense physical activities the day before the exams collection;
Avoid smoking.

Upper Digestive Endoscopy
Endoscopy is an exam capable of diagnosing various diseases by analyzing the mucosa of the esophagus, stomach, and duodenum. It is done through a flexible umbo (known as an endoscope) under sedation (anesthesia). The procedure is simple and takes a few minutes. Here are some TIPS:
Note the fasting time required for the exam;
Always take a companion with you, as you may be drowsy after the exam;
In some cases, physicians may ask you to stop any medication that can change blood clotting.

Total Abdominal Ultrasound

Important test to diagnose various diseases.
Observe the preparation guided in the exam appointment;
If you have previous exams, take it with you for possible comparisons

EDUCATIONAL VIDEOS

Educational videos were delivered to patients individually, one per week, via mobile using WhatsApp application:

1- **NUTRITION TIPS:**

First 01-minute video, showing basic food allowed and those that should be avoided on a daily basis by the patient.
Link: https://www.youtube.com/watch?v=h6EvT1YSHlw

ANTI-STRESS TIPS:

Second 01-minute video giving tips on de-stressing activities. Animated and pleasant video for the patient to enjoy and give due importance.
Link: https://www.youtube.com/watch?v=ZQi8_bsdJf0

MEDICATION GUIDELINES AND EXAMS:

Third 1.5-minute video reinforcing the exams requested in the protocol and explaining details about drug therapy.
Link: https://www.youtube.com/watch?v=9ujtMWHRU0U