

EFFECTS OF A DECISION SUPPORT SYSTEM DEVELOPED FOR SYMPTOM SELF-MANAGEMENT IN NON-HODGKIN LYMPHOMA PATIENTS: A RANDOMIZED CONTROLLED TRIAL PROTOCOL

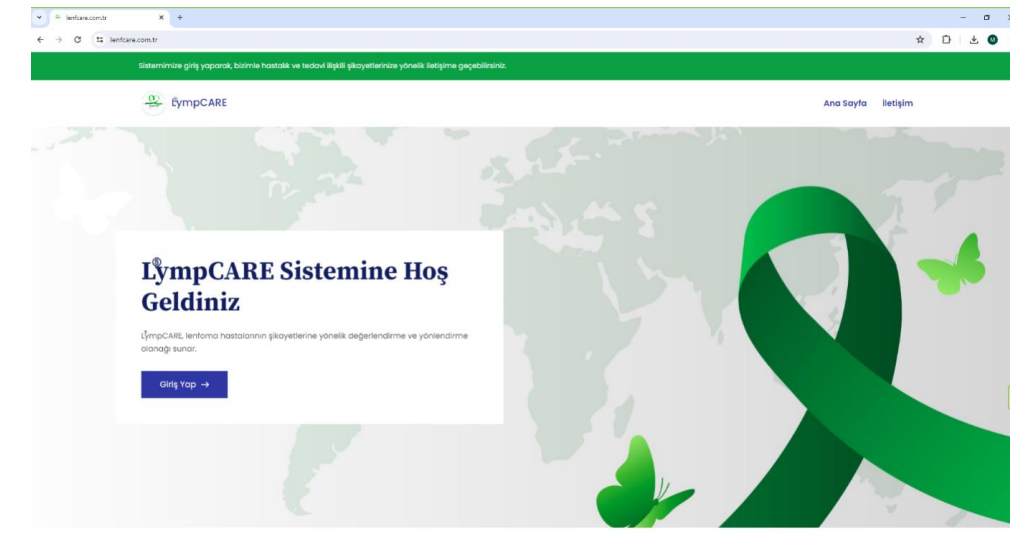
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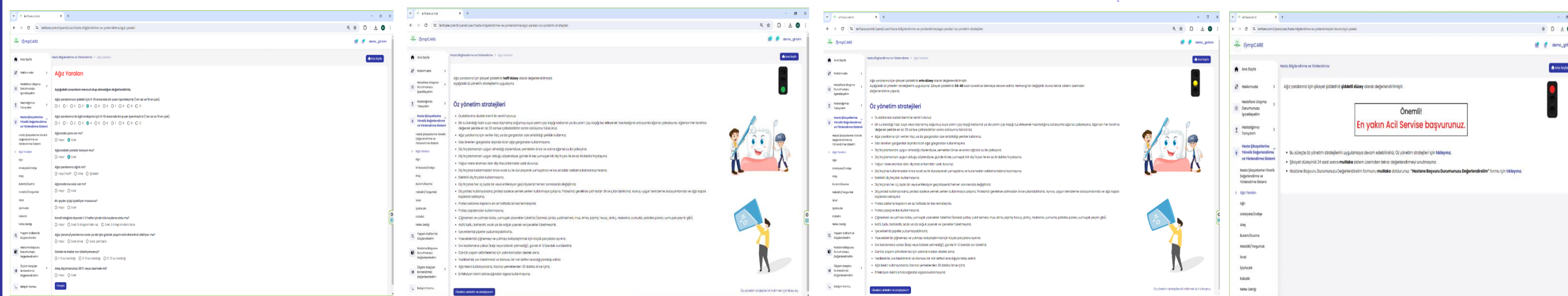
Introduction

It is important to improve symptom self-management in patients with Non-Hodgkin Lymphoma (NHL) to manage disease- and treatment-related symptoms. Since NHL patients usually experience disease- and treatment-related side effects after discharge from the hospital, it seems necessary to develop web-based decision support systems that can support symptom management at home and can be used by the patient. This study aimed to develop a decision support system for symptom self-management in NHL patients and to evaluate the effect of the developed system on symptom management, quality of life, and unplanned hospital admissions.



Methods

The study was planned in two phases: a methodological and randomized active controlled experimental study (ClinicalTrials.gov Number ID: NCT05443165). In the first phase, a mobile-friendly website was designed for NHL patients. A decision support system for symptom management, symptom self-management strategies, and algorithms (LymphCARE) was developed for patient use by utilizing the current literature, websites of national and international associations, existing training manuals, and current guidelines. Content has been prepared for 10 symptoms: mouth sores, pain, anxiety/anxiety, fever, nausea/vomiting, weakness/fatigue, diarrhea, loss of appetite, constipation, and shortness of breath. After preparing the content, 11 experts evaluated the quality of the content using the Lawshe Technique. We evaluated the readability of the content using the Atesman Readability Formula. Subsequently, we conducted a feasibility test with three patients to assess the usability of LymphCARE. Patients evaluated LymphCARE using the "System Usability Scale" and "LymphCARE Patient Self-Evaluation Form" tabs.



Decision support system for symptom management



Mild symptom severity



Moderate symptom severity



Severe symptom severity

Results

Decision support system algorithms specific to the symptoms and the severity of each symptom were prepared within the scope of the decision support system initiatives developed for symptom self-management. The frequency and severity of each symptom were evaluated by the patient using the visual analog scale, and the symptoms were scored and grouped as mild (green), moderate (yellow), or severe (red) with traffic light visuals. A decision support system was designed that included symptom-specific self-management strategies in each subgroup as mild, moderate, or severe according to symptom severity, and algorithms such as symptom monitoring at home, close monitoring of symptom severity, or emergency hospital admission according to symptom severity. Patients can access the contents at this website "<https://lenfcare.com.tr>." We created LymphCARE for a Turkish people, but people from other countries could access it automatically in English using the translation button. Expert opinion ([a] faculty members from the fields of nursing, [b] faculty members from the fields of hematology - oncology, [c] patients with NHL) was evaluated using the content validity index, and the results were found to be compatible (0.89) (Table 1). The readability level of the developed LymphCARE was high (84.25). LymphCARE was finalized by making revisions according to expert suggestions and pilot application suggestions. According to the findings obtained, the readability and usability levels of LymphCARE were evaluated as appropriate.

Table 1. Evaluation of the decision support system for symptom self-management and symptom self-management strategies integrated into the website

LymphCARE content	Evaluation of the scientific content of the mobile-friendly website	Evaluation of the systemic content of the mobile compatible website	Evaluation of the usability of the mobile compatible website
	[Experts a,b (n=12)]	[Experts a,b (n=11)]	[Experts a,b,c (n=11)]
	[CVI]	[CVI]	[CVI]
	0.86	0.87	0.93
Total CVI		0.89	

Conclusions

We developed a web-based symptom decision support system for NHL patients. We estimate that LymphCARE could help patients with NHL to enhance their symptom management, quality of life, and unplanned hospital admissions at their homes.

References

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