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A community-based approach to the prevention of pressure injuries:
A study supported by the European Wound Management Association Research Grant

Vildan Çakar, RN, MSc, PhD Student in Nursing, Research Assistant, Koç University, Graduate School of Health Sciences, Koç University Health Sciences Campus, Davutpasa Str. Topkapı, Istanbul, Turkey
Ayişe Karadağ, RN, ET/WOCN, PhD, Professor in Nursing, Advisor, Koç University, School of Nursing, Koç University Health Sciences Campus, Davutpasa Str. Topkapı, Istanbul, Turkey

Correspondence: vcakar18@ku.edu.tr · Conflicts of interest: None

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ABSTRACT

Pressure injuries (PIs) are important health problems all over the world because of their serious effects. Awareness of PIs and their effects has increased in recent years. Since patients' relatives are part of the care team, they have an important role to play in the prevention of PIs. The most crucial aspect of the prevention of PIs is the education of healthcare professionals, patients and patients' relatives and caregivers. This study aimed to educate caregivers on the prevention of PIs through the development of a digital game. With this purpose, we developed and used a technological education approach —a digital game— that employs gamification methods.

INTRODUCTION

A pressure injury (PI) is defined as localised damage to the skin and/or underlying tissues, usually over a bony prominence or related to a medical device and/or other devices, due to intense and/or prolonged pressure or pressure in combination with shear. This damage can present as intact skin or appear I the form an open wound. Soft tissue tolerance to pressure and shearing forces are affected by microclimate, perfusion, age, nutrition, acute or chronic health status, comorbidities, soft tissue conditions and a number of contributing or confounding factors associated with PIs, the most important of which is impaired mobility. Patients with limited mobility and those patients confined to bed are at a risk of developing PI.[1]

The prevalence of PI varies by country and clinical setting (acute care, long-term care, community health care, etc.).[1] The overall prevalence of PIs has been determined to be 15.0% in the United States[2,3], 10.8% in European countries[4], 26.0% in Canada[5] and 7.9% in Australia.[6] In a point prevalence study on acute care with the largest sample, in which patients from 12 centres from different provinces of Turkey were included (n=5,088), the overall prevalence of PIs was found to be 9.5%.[7] In acute care, a systematic review (n=42) by Li et al. (2020) reported that the pooled prevalence and incidence rates of PIs were 12.8% and 5.4% per 10,000 patient-days, respectively.8 In studies on home care conducted in Australia, Belgium and England, the prevalence of PIs was determined to be between 6.8 and 13.0%.[6,9,10,11] In a cross-sectional descriptive study that included patients (n=786) receiving services from the home care unit of a training and research hospital in Turkey, the rate of PIs was found to be quite high, 29.8%.[12]

PIs are considered a major public health problem due to their undesirable effects, such as increased

mortality and morbidity, increased healthcare costs, prolonged hospital stay and reduced quality of life for the patients and their families.[13,14,15] These negative effects have led to an increased awareness regarding the implementation of prevention strategies.[13,16] The evaluation of patients' risk of developing PI; assessment and proper care of the skin; measures to reduce the effects of pressure, friction and shear; regulation of nutrition; and continuing education practices are among the strategies for the prevention of PIs.[1,2,3]

Studies on the prevention of PIs can be difficult, especially due to the lack of access to resources and opportunities for education in home care.[16] In the home care process, patients' relatives often take on significant tasks as caregivers.[17,18] They play a supportive role in this process by being included in the care team, ensuring the coordination and continuity of care[17,19] and in the success of person-centred PI prevention strategies.[20] In this context, the education of healthcare professionals and patients' relatives constitute the most important stage in the implementation of PI prevention strategies and for ensuring compliance with these strategies.[1,16,20]

A wide variety of methods and approaches, such as classroom education, web-based education and distance education, are used in the education of healthcare professionals, especially nurses, for the prevention of PIs.[21,22] Today, along with technological advancements in all aspects of life, there have been innovations and developments in education methods applied in all fields of health. In this context, the concept of digital education has begun to be used and investigated.[23,24]

It is important to include patients' family members in all care processes to ensure the success of the disease management efforts and the improvement of health.[19] Within the scope of this practice, which constitutes the basis of the person-centred care philosophy[17,19], it is necessary to educate, strengthen and increase the health culture of any relatives who take care of the patient.[17] A significant contribution can be made to this process with the use of comprehensible, easily accessible and usable, scientific knowledge-based technological education approaches.[25] Although there are more innovative methods and studies used for the education of health professionals on PIs[21,22], the number of studies on the education of patients and their relatives is limited.[16]

It is important to educate patients' relatives, as they are members of the care team, about the prevention of PIs and to develop innovative technology-based approaches in these education efforts, since they play an important role in the care team. Our clinical experiences and observations indicate that encouraging and entertaining educational materials used in the education of patients' relatives is supportive in increasing their participation and compliance with educational activities. Within the scope of this study, we aimed to develop a digital medical game (DMG), which uses the gamification approach and is among the most-used technological education methods, for the education of patients' relatives on the prevention of PIs.

Study procedure

This doctoral project, supported by a research grant provided to young researchers by the European Wound Management Association (EWMA), is carried out in three stages (Figure 1). Ethical approvals and permissions for the study were obtained, and the pilot test stage for the DMG was initiated.

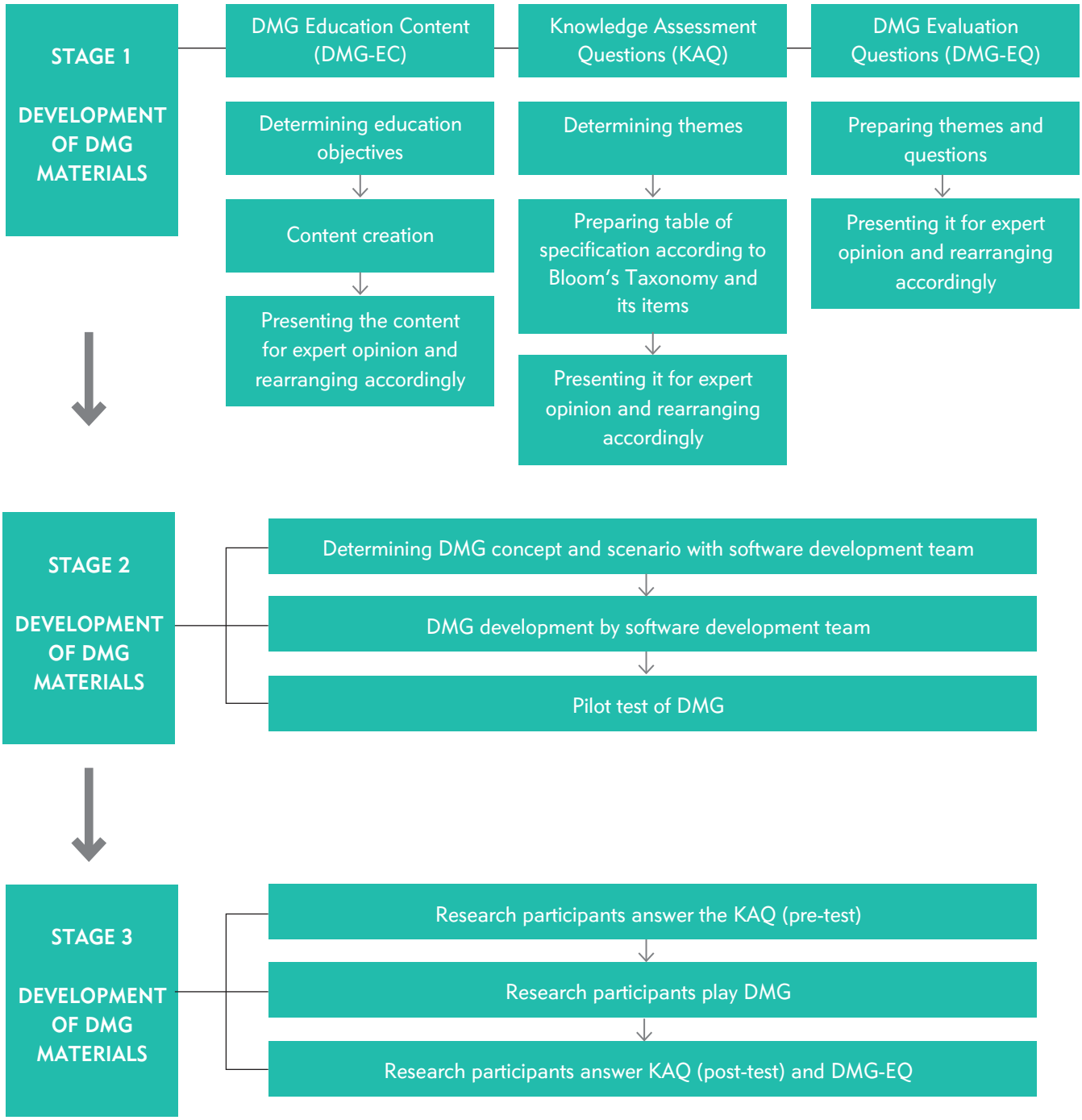
The original language of the game developed as part of this study was designed in Turkish, and English subtitles were added, with the idea of providing an opportunity for its use among a wider population.

After the completion of the DMG's pilot test, Stage 3 of the study (Implementation of the DMG) will be initiated. The study participants for inclusion in Stage 3 will consist of relatives of the patients receiving home care services and hospital care. Interviews are currently being conducted by the researcher to determine eligible participants from among a pool of volunteer patient relatives.

KEY MESSAGES

- Pressure injuries (PIs) are a major health problem all over the world.
- The education of patients' relatives and healthcare professionals is important for the prevention of PIs.
- It is necessary to develop innovative methods and approaches to the education of patients' relatives on the prevention of PIs.

Figure 1:
Study Flow Diagram



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