

Abstract

Purpose: To pilot test the effect of Web-based, pictograph-enhanced discharge instructions on older low-literate adults' comprehension, and recall, adherence to discharge instructions, and complication frequency and readmission to hospital or emergency department at 4 weeks and 8 weeks after discharge from hospital.

Background: Discharge instruction for hip replacement surgery consists of recommended homecare actions. These healthcare actions are difficult to be followed at home with current text-based format, because written text alone is not suitable for presenting lengthy, complex discharge instructions. To address this issue, the PI has developed paper-based, pictograph-enhanced discharge instructions and validated their appropriateness, accuracy, and relevance by 5 nurse experts. The objectives of this study are to integrate these paper-based instructions into a Web-based medium and to test the effects in low-literate older adults after hip replacement surgery. Our approach, based on human cognitive preference for picture-based, rather than text-based, information, is to use pictographs (simple line drawings showing explicit discharge care actions to be taken) in addition to simplified text. Pictographs can also show a step-by-step procedure and make an entire discharge action sequence easier to learn.

Methods: A posttest repeated-measures design will be used to compare Web-based pictograph-enhanced discharge instructions to usual text-based discharge instructions. Participants will be a convenience sample of 30 low-literate older adults under postsurgical hip-replacement care. Low-literacy text and pictographs will be integrated into Web-based instructions using a Web-development application as mock-up screens and uploaded to the server of the Heywood Hospital. One or two days before discharge, participants and their family caregivers will receive web-based discharge instructions in a 60-minute teaching session. The comparison group will receive text-only discharge instructions currently offered at the Hospital. At the end, participant will receive the URL of the Web site for use at home. At 4 and 8 weeks after hospital discharge, the PI will collect data in face-to-face interviews at participants' homes. Low health literacy will be measured by the S-TOFHLA. Comprehension and recall will be measured by a series of PI-developed questions corresponding to the content of the discharge instructions. Adherence to discharge instructions will be measured using the Discharge Instruction Questionnaire and pill counting. Frequency and type of complications and unscheduled admissions or visits to the hospital and ED will be measured by participants' self-reports. Repeated measures analysis of variance models will be developed to test the intervention effect (web-based, pictograph-enhanced discharge instructions vs. text-only instructions) across time (4 weeks vs. 8 weeks post-discharge).

Nursing relevance: This study is expected to provide knowledge and skills needed to develop effective strategies that improve discharge communication for low-literate older adults. Study findings will further shed light on healthcare education approach for immigrants and refugees speaking English as a second language.