Technology use for health education to caregivers: an integrative review of nursing literature

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The literature reports a growing number of elderly people and individuals with chronic health conditions whose family caregivers need to be instructed concerning the delivery of appropriate, safe, and quality care\textsuperscript{[1,2,3]}. 
Educational Technologies

Safe Care

Decision-making process

Communication

Reduces overload

Favors greater quality of life
OBJECTIVES

To identify the educational technologies that have been employed in health education as provided to caregivers.
METHOD:

✓ Integrative literature review.

✓ Databases searched: Web of Science, Bireme (Medline and Lilacs) and Scopus.

✓ Descriptors used: educational technology, health education and caregivers.
METHOD:

- Inclusion criteria were:
  - full-text papers published between 2001 and 2011 in English, Portuguese or Spanish
34 papers were found

7 papers were evaluated

3 (42.85%) 2005
5 (71.43%) English
100% Level of Evidence IV
IF = 0.42 e 2.24
**Table 1.** Content of papers concerning objectives, results and conclusions. Ribeirão Preto, SP, Brazil, 2011.

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<tr>
<th>PUBLICATIONS/ METHOD/IF</th>
<th>STUDY’S OBJECTIVE</th>
<th>RESULTS</th>
<th>CONCLUSION/ LEVEL OF EVIDENCE</th>
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<td><strong>MAGNUSSON, L.; HANSON, E.; NOLAN, M.</strong>&lt;br&gt;British Journal of Nursing, 2002.&lt;br&gt;IF: Not found Experience report</td>
<td>To describe how work is being conducted through the “ACTION Project”.</td>
<td>This project promoted communication among the hospital’s staff and with those working in the community and caregivers of elderly individuals. It favored care planning, which resulted in patients’ improved quality of life and also improved the quality of life of those involved.</td>
<td>The paper presented the philosophy of the “Action Project” and how it is intended to support elderly individuals and family caregivers in Sweden through the use of new education, information and communication technologies.&lt;br&gt;&lt;strong&gt;Level of Evidence = 4&lt;/strong&gt;</td>
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<td><strong>CHAMBERS, M.; CONNOR, S.L.</strong>&lt;br&gt;Journal of Advanced Nursing, 2002.&lt;br&gt;FI: 1.54&lt;br&gt;Descriptive and exploratory.</td>
<td>To evaluate the usability of multimedia software applications designed for family caregivers of elderly or impaired individuals</td>
<td>Most users found the software useful and informative regarding the relevance of care. The users/caregivers found the software’s terms and languages to be repetitive and the use of figures and drawings to be appropriate while audio and video material could have been improved.</td>
<td>The authors concluded that the software has potential to provide information and support family caregivers as long as it is refined.&lt;br&gt;&lt;strong&gt;Level of Evidence = 4&lt;/strong&gt;</td>
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<td>LAI, C.K.Y.; ARTHUR, D.G.; CHAW, W.W.H. International Journal of Older People Nursing, 2004. FI: 1.19 Reflective.</td>
<td>To show the use of the internet around the world from the perspective of subgroups and delineate some problems with groups of elderly individuals and caregivers.</td>
<td>Older people and their family caregivers have limited access to computers, which aggravates a lack of access to good health care.</td>
<td>It is suggested that access to health care with the use of computers will be a growing field in which elderly individuals and caregivers will be able to complement traditional care with telehealth. <strong>Level of Evidence = 4</strong></td>
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<td>GONÇALVES, L.H.T.; SCHIER, J. Text and Context Nursing, 2005. FI: 0.4221 Convergent-care study/Experience Report</td>
<td>To develop a socio-educational nursing plan to increase the understanding of self-care in elderly individuals and their families.</td>
<td>From discussion/therapeutic groups with elderly inpatients and their family members the construction of a socio-educational action plan resulted called “Grupo Aqui e Agora” [Here and Now Group], which refers to light care technology focused on health education applied to nursing.</td>
<td>The Group is possible and feasible in the hospital environment, able to increase self-care behavior while moving toward autonomy, independence and inter-dependence, which is necessary for a healthier life, especially for geriatric patients and their family caregivers. <strong>Level of Evidence = 4</strong></td>
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<td>MALASANOS, T.H.; PATEL, B.D.; KLEIN, J.; BURLINGAME, J.B.</td>
<td>To apply the “The Florida Initiative and Education Diabetes Project” (FITE) to diabetic patients and caregivers of diabetic patients, students and nursing professionals.</td>
<td>The authors have developed clinical telemedicine as an integrated system: web-based education, online communication, and remote blood glucose monitoring. 50% of nursing students and 100% of patients and caregivers completed an educational module of “FITE” on the website. All the patients, caregivers and nursing students who participated in the online education program expressed satisfaction with the use of technology and reported improved communication processes.</td>
<td>The “FITE” project improved communication between patients/caregivers living in remote areas and professionals, though the participation of caregivers was below what was expected. <strong>Level of Evidence = 4</strong></td>
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Fi: 1.274

Descriptive exploratory.
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| MOODY, L.E.; FAAN, B.C. Holistic Nursing Practice, 2005. | To discuss holistic care centered on patients and their caregivers through services available on the internet. | The use of health information via the web has helped patients and caregivers to control symptoms, improving quality of life. The efficacy of e-Health reduces costs of maintaining health, while improving safety and the quality of life of users (patients and caregivers). | Various states have implemented regional organizations of health information to develop strategic plans for the adoption of e-health and information technology systems. These organizations are at different levels of progress and are spread throughout the states, aiming to have totally digitalized agencies.  
**Level of Evidence = 4** |
| GRAF, J.N.; MONTAGNINO, B.A.; HUECKEL, R.; MCPERSON, M.L. Pediatric Pulmonology, 2008. | To describe an educational program for the discharge of children with tracheostomies and identify common obstacles faced by caregivers. | Caregivers took an average of 14 days to successfully complete the educational program focusing on care for tracheostomy patients. Discharge occurred an average of 6.5 days after the education program was concluded. Common obstacles to completing the educational program included social issues such as a lack of structure and/or linguistic barriers and complications arising from the child’s hospitalization and also the unavailability of a nurse at home. | The implementation of an educational program directed to caregivers aiming to prepare them for the discharge of children with tracheostomies can decrease the length of hospitalization and enable caregivers to become more secure in caring for these children at home.  
**Level of Evidence = 4** |
The results revealed the use of soft and hard technologies in health education provided to caregivers, focused on the therapeutic discussion of care and the delivery of telehealth services.
CONCLUSION
The conclusion is that research addressing the subject in the nursing field is still incipient and we note the need for further studies using and evaluating the use of hard educational technologies in the health education provided to caregivers.
References


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Paula C. Nogueira

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Thanks