A Systematic Review of Portable Electronic Technology for Health Education in Resource-limited Settings

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BACKGROUND

- Healthcare systems in resource-limited settings (RLS) are severely understaffed.
- Continuing medical education, while applicable.
- Portable electronic devices may be an effective method for delivering this education. Little is known on this topic.

OBJECTIVE

- To systematically review the literature describing how portable electronic technologies with off-line functionality are perceived and used to provide health education in RLS

METHODS

- A search of several bibliographic databases was performed on June 2, 2015.
- Three authors (LIF, YC, MSM) independently reviewed articles based on the following inclusion criteria:
  - Portable electronic device with educational resources that did not require constant internet connectivity
  - Setting: RLS
  - Design: Randomized controlled, cohort, or case studies
  - PRISMA-P Checklist was followed when applicable

RESULTS

- 6,790 manuscripts were identified and five studies met all inclusion criteria.
  - Included studies were from Botswana, Peru, and Kenya.
  - Common topics addressed include:
    - Development of healthcare worker training modules
    - Assessment of the perceptions and usability of portable electronic technology
    - Comparisons of technologies and/or mobile applications

DISCUSSION

- This review reveals portable electronic-based educational solutions are well-received in a variety of RLS.
  - Limited evaluation has been done for portable electronic educational materials that do not require constant internet connectivity.

CONCLUSIONS

- The available evidence suggests several important, promising findings that warrant further discussion.
- Future research should be directed at development of culturally adapted and relevant educational materials to be utilized with portable technology.

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