

Since this is a very extensive table, the format and content has not been edited by ActaDV.

Table SI. Summary of Findings Table for the Effects of DHE on knowledge, skill and satisfaction

DHE interventions compared with traditional learning intervention or no learning intervention

Population: Pre and post healthcare professionals

Intervention: DHE interventions

Comparison: Traditional learning intervention/no learning intervention

| Outcomes | Effect of interventions | No of participants (studies) | Quality of the evidence (GRADE) | Comments |
|--|---|-------------------------------------|--|--|
| Knowledge (measured with exam or questionnaire) | The effects of DHE interventions are inconclusive | 638 participants (9 RCTs) | ⊕⊖⊖⊖ very low ^{1,2,3} | Bredesen (2016) reported no significant difference in knowledge improvement between offline software-based learning and no intervention. Sena (2013) reported that offline computer-based intervention was significantly better than traditional learning intervention (PBL) in terms of knowledge improvement. Sasha (2008) reported no significant difference in knowledge improvement between online computer-based learning and traditional lecture intervention. Jie (2013) reported no significant difference in knowledge improvement between offline software-based learning and traditional lecture intervention (Real patient problem-based learning/PBL/Lecture-based learning). Sasha (2008) reported no significant difference in knowledge improvement between online computer-based learning and traditional lecture intervention. Soirefmann (2013) reported no significant difference in knowledge improvement between offline multimedia learning and traditional lecture intervention. Schopf (2012) reported no significant difference in knowledge improvement between online learning intervention and blank compared intervention. Veredas (2014) reported offline computer-based intervention was better than traditional lecture intervention (PBL) in terms of knowledge improvement. Viguier (2015) reported no significant difference in knowledge improvement between online learning intervention and blank compared intervention. Wahlgren (2006) reported no significant difference in knowledge improvement between blended learning intervention (traditional learning intervention and offline computer-based intervention) and traditional lecture intervention. |
| Skills (measured with | The effects of | 338 | ⊕ ⊕⊖⊖ | Aldridge (2010) reported that compared with offline computer-based learning, the |

written examination, DHE participants low^{1,2}
 surveys, checklist, interventions are (5 RCTs)
 global assessment, inconclusive
 student performances)

Satisfaction The effects of 380
 (measured with Likert DHE participants
 scale, questionnaire) interventions are (5 RCTs)
 inconclusive

⊕⊖⊖⊖
 very low^{1,2,3}

traditional paper-based learning intervention may improve patients' skill. Amri (2012) reported that compared with traditional paper-based learning, offline learning intervention may have little effect on skills enhancement. Sena (2013) reported that compared with offline computer-based learning, the traditional paper-based learning intervention may improve patients' skill. Sasha (2012) reported that compared with traditional lecture-based learning, online learning intervention may have little effect on skills enhancement. Jie (2013) reported that compared with traditional learning intervention (Real patient problem-based learning/ PBL/Lecture-based learning), offline learning intervention may have little effect on skills enhancement. Jie(2013) reported that compared with traditional learning intervention(Real patient problem-based learning/ PBL/Lecture-based learning), offline learning intervention may have little effect on learners' satisfaction. Schopf (2012) reported that compared with blank compared intervention, online learning intervention may have little effect on learners' satisfaction. Amri (2012), Soirefmann (2013) and Wahlgren (2006) reported high satisfaction scores but without comparison groups.

Attitude outcome No studies reported attitude outcome.

Outcomes related to patient care No studies reported outcomes related to patient care.

Adverse/unintended outcomes No studies reported adverse/unintended outcomes.

Economic evaluation No studies reported economic evaluation.

DHE-digital health education; PBL-patient base learning

GRADE Working Group grades of evidence

High quality: further research is very unlikely to change our confidence in the estimate of effect.

Moderate quality: further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Low quality: further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

Very low quality: we are very uncertain about the estimate.

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- 1 Downgraded by one level for study limitations: the risk of bias was unclear or high in most included studies.
- 2 Downgraded by one level for inconsistency: the heterogeneity between studies was high with lack of overlap among confidence intervals.
- 3 Downgraded by one level for indirectness: studies differed in terms of interventions, comparators and outcome measures used.