APPENDICES

Appendix I: Search strategy

CINAHL database

| S14 | S3 AND S6 AND S10 AND S13 |
|-----|--|
| S13 | S11 OR S12 |
| S12 | AB (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) OR TI (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) |
| S11 | (MH "Education+") OR (MH "Learning+") |
| S10 | S7 OR S8 OR S9 |
| S9 | TI (caregiver* OR carer* OR "care giver*" OR nurse* OR "care aide*" OR "personal support worker*" OR "medical staff*" OR "health care worker*" OR "healthcare worker*" OR "health care" OR "health employee*" OR "health* staff" OR "home care" OR "home health*" OR "nursing home") OR AB (caregiver* OR carer* OR "care giver*" OR nurse* OR "care aide*" OR "personal support worker*" OR "medical staff*" OR "health care worker*" OR "healthcare worker*" OR "health care" OR "health employee*" OR "health* staff" OR "home care" OR "home health*" OR "nursing home") |
| S8 | (MH "Health Personnel+") |
| S7 | (MH "Caregivers") |
| S6 | S4 OR S5 |
| S5 | AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) |
| S4 | (MH "Dementia+") |
| S3 | S1 OR S2 |
| S2 | AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) |
| S1 | (MH "Virtual Reality+") |

MEDLINE database

| S14 OR S15 OR S16 S16 AB (caregiver* OR carer* OR "care giver*" OR nurse* OR "care aide*" OR "personal support worker*" OR "medical staff*" OR "health care worker*" OR "health care worker*" OR "health care" OR "health employee*" OR "health* staff" OR "home care" OR "home health*" OR "nursing home") OR TI (caregiver* OR carer* OR "care giver*" OR nurse* OR "care aide*" OR "personal support worker*" OR "medical staff*" OR "health care worker*" OR "health care" OR "health care" OR "health care" OR "health employee*" OR "health* staff" OR "home care" OR "home health*" OR "nursing home") S15 (MH "Health Personnel+") S14 (MH "Caregiver Burden") S13 S7 OR S8 OR S9 OR S10 OR S11 OR S12 S12 AB (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) OR TI (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) OR TI (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) S11 (MH "Learning+") S10 (MH "Program Evaluation+") S2 (MH "Program Development") S3 (MH "Program Development") S4 (MH "Nursing Research+") S6 S4 OR S5 S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) | | | | | | | |
|--|-----|---|--|--|--|--|--|
| S16 AB (caregiver* OR carer* OR "care giver*" OR nurse* OR "care aide*" OR "personal support worker*" OR "medical staff*" OR "health care worker*" OR "healthcare worker*" OR "health care" OR "health employee*" OR "health's staff" OR "home care" OR "home health*" OR "nursing home") OR TI (caregiver* OR carer* OR "care giver*" OR nurse* OR "care aide*" OR "personal support worker*" OR "medical staff*" OR "health care worker*" OR "healthcare worker*" OR "medical staff*" OR "health care worker*" OR "health staff" OR "home care" OR "home health*" OR "nursing home") S15 (MH "Health Personnel+") S14 (MH "Caregiver Burden") S13 S7 OR S8 OR S9 OR S10 OR S11 OR S12 S12 AB (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) OR TI (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) S11 (MH "Learning+") S10 (MH "Education+") S8 (MH "Program Development") S7 (MH "Nursing Research+") S6 S4 OR S5 S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los* | S18 | S3 AND S6 AND S13 AND S17 | | | | | |
| OR "personal support worker*" OR "medical staff*" OR "health care worker*" OR "healthcare worker*" OR "health care" OR "health employee*" OR "health* staff" OR "home care" OR "home health*" OR "nursing home") OR TI (caregiver* OR carer* OR "care giver*" OR nurse* OR "care aide*" OR "personal support worker*" OR "medical staff*" OR "health care worker*" OR "health care worker*" OR "health care" OR "health employee*" OR "health* staff" OR "home care" OR "home health*" OR "nursing home") S15 (MH "Health Personnel+") S14 (MH "Caregiver Burden") S15 S7 OR S8 OR S9 OR S10 OR S11 OR S12 S12 AB (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) OR TI (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) OR TI (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) S11 (MH "Learning+") S10 (MH "Program Evaluation+") S2 (MH "Program Development") S3 (MH "Program Development") S4 (MH "Nursing Research+") S6 S4 OR S5 S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) S4 (MH "Dementia+") S3 S1 OR S2 S4 OR S5 | S17 | S14 OR S15 OR S16 | | | | | |
| S14 (MH "Caregiver Burden") S13 S7 OR S8 OR S9 OR S10 OR S11 OR S12 S12 AB (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) OR TI (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) S11 (MH "Learning+") S10 (MH "Education+") S9 (MH "Program Evaluation+") S8 (MH "Program Development") S7 (MH "Nursing Research+") S6 S4 OR S5 S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) S1 OR S2 S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S16 | OR "personal support worker*" OR "medical staff*" OR "health care worker*" OR "healthcare worker*" OR "health care" OR "health employee*" OR "health* staff" OR "home care" OR "home health*" OR "nursing home") OR TI (caregiver* OR carer* OR "care giver*" OR nurse* OR "care aide*" OR "personal support worker*" OR "medical staff*" OR "health care worker*" OR "healthcare worker*" OR "health care" OR "health employee*" OR "health* staff" OR "home care" OR | | | | | |
| S13 S7 OR S8 OR S9 OR S10 OR S11 OR S12 S12 AB (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) OR TI (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) S11 (MH "Learning+") S10 (MH "Education+") S9 (MH "Program Evaluation+") S8 (MH "Program Development") S7 (MH "Nursing Research+") S6 S4 OR S5 S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) S1 OR S2 S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S15 | , | | | | | |
| S12 AB (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) OR TI (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) S11 (MH "Learning+") S10 (MH "Education+") S9 (MH "Program Evaluation+") S8 (MH "Program Development") S7 (MH "Nursing Research+") S6 S4 OR S5 S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) S1 OR S2 S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S14 | (MH "Caregiver Burden") | | | | | |
| OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) OR TI (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) S11 (MH "Learning+") S10 (MH "Education+") S9 (MH "Program Evaluation+") S8 (MH "Program Development") S7 (MH "Nursing Research+") S6 S4 OR S5 S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) S4 (MH "Dementia+") S3 S1 OR S2 S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S13 | S7 OR S8 OR S9 OR S10 OR S11 OR S12 | | | | | |
| S11 (MH "Learning+") S10 (MH "Education+") S9 (MH "Program Evaluation+") S8 (MH "Program Development") S7 (MH "Nursing Research+") S6 S4 OR S5 S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) S4 (MH "Dementia+") S3 S1 OR S2 S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S12 | OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) OR TI (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR | | | | | |
| S9 (MH "Program Evaluation+") S8 (MH "Program Development") S7 (MH "Nursing Research+") S6 S4 OR S5 S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) Ios*) S4 (MH "Dementia+") S3 S1 OR S2 S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S11 | · | | | | | |
| S8 (MH "Program Development") S7 (MH "Nursing Research+") S6 S4 OR S5 S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) S4 (MH "Dementia+") S3 S1 OR S2 S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S10 | (MH "Education+") | | | | | |
| S7 (MH "Nursing Research+") S6 S4 OR S5 S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) S4 (MH "Dementia+") S3 S1 OR S2 S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S9 | (MH "Program Evaluation+") | | | | | |
| S6 S4 OR S5 S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) S4 (MH "Dementia+") S3 S1 OR S2 S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S8 | (MH "Program Development") | | | | | |
| S5 AB (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) S4 (MH "Dementia+") S3 S1 OR S2 S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S7 | (MH "Nursing Research+") | | | | | |
|) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) S4 (MH "Dementia+") S3 S1 OR S2 S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S6 | S4 OR S5 | | | | | |
| S3 S1 OR S2 S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S5 |) OR TI (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) | | | | | |
| S2 AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | S4 | (MH "Dementia+") | | | | | |
| | S3 | S1 OR S2 | | | | | |
| C1 (AALL "Virtual Doolity) | S2 | AB ("virtual realit*" OR vr) OR TI ("virtual realit*" OR vr) | | | | | |
| 51 (IVIT VITTUAL REALITY+) | S1 | (MH "Virtual Reality+") | | | | | |

EMBASE database

| 1 | (dementia or alzheimer* or cognit* impair* or (memor* adj2 los*)).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word] | | | | | | |
|----|---|--|--|--|--|--|--|
| 2 | | | | | | | |
| | exp dementia/ | | | | | | |
| 3 | 1 or 2 | | | | | | |
| 4 | exp virtual reality/ or exp virtual reality head mounted display/ | | | | | | |
| 5 | (virtual realit* or vr).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word] | | | | | | |
| 6 | 4 or 5 | | | | | | |
| 7 | exp education/ | | | | | | |
| 8 | exp program development/ or exp program effectiveness/ or exp program efficacy/ or exp program evaluation/ | | | | | | |
| 9 | exp course evaluation/ or exp health care quality/ or exp nursing education/ | | | | | | |
| 10 | exp learning/ | | | | | | |
| 11 | (Program* or curricul* or course* or educat* or train* or teach* or pedagog* or learn* or phenomenograph* or lesson* or evaluat* or haptic* or touch).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word] | | | | | | |
| 12 | 7 or 8 or 9 or 10 or 11 | | | | | | |
| 13 | exp caregiver burden/ or exp caregiver burnout/ or exp caregiver/ | | | | | | |
| 14 | exp health care personnel/ | | | | | | |
| 15 | (caregiver* or carer* or care giver* or nurse* or care aide* or personal support worker* or medical staff* or health care worker* or healthcare worker* or health care or health employee* or health* staff or home care or home health* or nursing home).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word] | | | | | | |
| 16 | 13 or 14 or 15 | | | | | | |
| 17 | 3 and 6 and 12 and 16 | | | | | | |
| | | | | | | | |

Scopus database

TITLE-ABS-KEY ((program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog*or AND learn*) AND {virtual reality} AND (dementia* OR alzheimer* OR {cognitive impairment} OR {memory loss}) AND (care* OR health*))

Web of Science

("virtual realit*" OR vr) AND (dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) AND (Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) AND (caregiver* OR carer* OR "care giver*" OR nurse* OR "care aide*" OR "personal support worker*" OR "medical staff*" OR "health care worker*" OR "health care" OR "health employee*" OR "health* staff" OR "home care" OR "home health*" OR "nursing home")

ProQuest database

noft("virtual realit*" OR vr) AND noft(dementia* OR alzheimer* OR "cognit* impair*" OR memor* N2 los*) AND noft(Program* OR curricul* OR course* OR educat* OR train* OR teach* OR pedagog* OR learn* OR phenomenograph* OR evaluat* OR haptic* OR touch) AND noft(caregiver* OR carer* OR "care giver*" OR nurse* OR "care aide*" OR "personal support worker*" OR "medical staff*" OR "health care worker*" OR "healthcare worker*" OR "health care" OR "health employee*" OR "health* staff" OR "home care" OR "home health*" OR "nursing home")

Appendix II: Data extraction instrument

| Articles (countries) | Participants (Sample size) | Study Designs | Barriers | Facilitators | Impacts | Findings |
|-------------------------|-------------------------------|---------------|----------|--------------|---------|----------|
| Author, year | | | | | | |
| Author, year | | | | | | |
| Author, year | | | | | | |
| Author, year | | | | | | |
| Author, year | | | | | | |
| | | | | | | |