**Supplemental Digital Content 4:** **Specific results regarding the effectiveness of PRP on "learning" (Kirkpatrick level 2) of communication skills**

| Study | Type of study | Comparison group | MESQRI Score | Outcome Measurement | Results |
|---|---|---|---|---|---|
| **KNOWLEDGE (Kirkpatrick level 2a)** | | | | | |
| Roman et al, 2011 | Uncontrolled study Pre-test/post-test design | None | 10.5 | Self-questionnaire without published validity data | Before< after |
| Cushing et al, 1995 | Uncontrolled study Pre and post tests | None | 10 | Questionnaire without published validity data | Before< after |
| Lau et al, 2001 | RCT cross over design | Observer group vs interpreter group | | Self-questionnaire with published validity data | Observer > interpreter (p=0.038, Cohen's d=0.318) |
| **SKILLS (Kirkpatrick level 2b)** | | | | | |
| Bosse et al, 2012 & 2015 | RCT | SimP group<br><br>Control group | 14 | Videotaped StandP Calgary-Cambridge Checklist assessed by tutors. Instrument with published validity data. | PRP group> control group (p=0.006, Cohen's d=1.48)<br><br>SimP group > control group (p=0.001, Cohen's d=0.63)<br><br>PRP group > SimP group (p=0.021, Cohen's d=0.71) |
| Gartmeier et al, 2014 | RCT | e-learning group<br><br>e learning + PRP group | 13 | Videotaped StandP 9 item-checklist assessed by tutors. Instrument with published validity data. | E learning or PRP > control<br><br>E-learning + PRP > e-learning or PRP |

| | | Control group | | | | |
|---|---|---|---|---|---|---|
| Kiosses et al, 2017 | RCT | Control group | 10 | | Self-questionnaire Jefferson Scale of Physician Empathy. Instrument with published validity data. | PRP > control after training (p<0.001, Cohen's d = 1.268) and at 6 month (p<0.001, Cohen's d=1.238) |
| Nikendei et al, 2007 | RCT | Control group | 14 | | Videotaped StandP Standardized checklist assessed by tutors Instrument with published validity data. | PRP> control (p<0.001, Cohen's d=NA) |
| Papadakis et al, 1997 | RCT | SimP group | 14 | | SimP session. Checklist assessed by SimPs. Instrument without published validity data | PRP = SimP |
| Tayem et al, 2016 | Non randomized controlled study | Control group | 11 | | SimP session. Checklist assessed by tutors. Instrument without published validity data | PRP>control (p<0.016, Cohen 's d = NA) |
| Windish | RCT | Control group | 13 | | SimP session. Checklist assessed by standP. Instrument with published validity data. | PRP=control |
| **ATTITUDE (Kirkpatrick level 2c)** | | | | | | |

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|---|---|---|---|---|---|
| Koponen et al, 2012 | RCT | SimP group<br>Theater group | 13 | Communication Skills Attitude Scale: instrument with published validity data | PRP=SimP=Theater |
| Koponen et al, 2014 | RCT | SimP group<br>Theater group | 12 | Communication Skills Attitude Scale: instrument with published validity data | PRP=SimP=Theater |
| **CONFIDENCE (Kirkpatrick level 2d)** | | | | | |
| Roman et al, 2011 | Uncontrolled study Pre-test/post-test design | None | 10.5 | Self-questionnaire without published validity data | Before< after |
| Cushing et al, 1995 | Uncontrolled study Pre and post tests | None | 10 | Questionnaire without published validity data | Before< after |
| Bosse et al, 2012 & 2015 | RCT | SimP group<br><br>Control group | 14 | Self-questionnaire without published validity data | Pre-test : NS between-group difference<br>Post-test :<br>- SimP > control group (p=0.007, Cohen's d 0.32)<br>- PRP group >control group (p= 0.021, Cohen's d 0.673).<br>- No difference between SimP and PRP group (p=0.704) |

MESQRI : Medical Education Research Quality Instrument; NS : not significant; PRP: Peer Role-Play; RCT : Randomized Clinical Trial; SimP: Simulated Patients; StandP : Standardized Patient