

Note: This is Online Appendix 1 of Mukurunge, E., Reid, M., Fichardt, A. & Nel, M., 2021, 'Interactive workshops as a learning and teaching method for primary healthcare nurses', *Health SA Gesondheid* 26(0), a1643. <https://doi.org/10.4102/hsag.v26i0.1643>.

ONLINE APPENDIX 1

TABLE 1-A1: Summary of the articles (n=20) that met the inclusion criteria.

ARTICLE TITLE	DESIGN USED	TYPES OF INTERACTIVE ACTIVITIES USED	ROLE PLAYERS	CONTENT COVERED	FEASIBILITY [ease of implementation; change in knowledge]	DURATION OF INTERACTION
1) Elliott, C., Creighton, S.M., Barker, M.J. & Liao, L.M., 2016, 'A brief interactive training for health care professionals working with people affected by "female genital mutilation": Initial pilot evaluation with psychosexual therapists', <i>Sexual and Relationship Therapy</i> , 31(1), 70–82.	The design used was not mentioned.	Small-group discussions Videos Slide shows Case studies	A consultant clinical psychologist and women's health specialist, together with an assistant psychologist, co-facilitated the training workshops 49 psychosexual therapists participated There were 12–16 participants per workshop	Female genital mutilation (types, associated physical and mental problems)	Knowledge: Knowledge of female genital mutilation increased by 52%, from 29% before the workshop to 81% after the workshop. Rating of participants: Excellent (68%) Good (38%) Since the workshop was held at a conference, in order to minimise performance anxiety and peer scrutiny, the pre- and post-questionnaires were anonymised and could not be matched. This could have reduced the power to detect significant effects.	90-minute workshops, which were repeated at four separate events during the two-day conference
2) Choi, Y. & Won, M., 2013, 'A pilot study on effects of a group program using recreational therapy to improve interpersonal relationships for undergraduate nursing students', <i>Archives of Psychiatric Nursing</i> , 27(1), 54–55.	Pretest-posttest single group design	Games Role playing Group discussions	The two researchers of the article co-facilitated the training workshops 19 nursing students were participants	Interpersonal relationships Trust and empathy	Interpersonal relationship score increased from 90.7% before the group programme, to 95.8%. There was ease in implementation since application of recreational therapy including games and activities related to communication and interpersonal relationships	The workshops lasted for 90 minutes. There were 3 sessions

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					created a pleasurable experience for the students. Rating of the workshop by participants: Very satisfied (73.7%) Satisfied (26.3%)	
3) Brown C.R., Johnson A.S. & Appling S.E., 2011, 'A taste of nursing research: an interactive program introducing evidence-based practice and research to clinical nurses', <i>Journal For Nurses In Staff Development</i> , 27(6), E1–5.	Quasi-experimental pretest-posttest design	Poster presentations Small-group discussions Putting into practice what had been learnt	The three authors of the article were the facilitators of the workshop 111 nurses participated	How to develop a research question Steps to be followed when developing a research study	The percentage of participants who would initiate a nursing research project increased by 8%, from 26% before to 34% after the intervention Participants did not rate the workshop There was successful implementation, as evidenced by research output of posters and presentations.	The programme was implemented in a day
4) Chiang H., Lin F. & Hwu Y. 2013, 'Disability assessment: the efficacy of multimedia interactive nurse education', <i>The Journal of Nursing Research</i> , 21(2), 83–93.	Quasi-experimental design	Multimedia interactive DVD Case study assessment	Three senior nurses (the authors of the article) facilitated the training 62 nurses as participants; 30 were in the experimental group and 32 were in the control group.	Methods of carrying out a disability assessment on patients	Knowledge of disability assessment of the experimental group improved from 93.9% before to 95.9% after the intervention. Rating by participants: All (100%) the participants rated the multi-media interactive DVD as a method that positively facilitated learning outcomes, and enhanced learning time, flexibility, autonomy and convenience. The ease of implementation was not discussed.	Actual time spent is not mentioned.
5) Mohamadkhani, S.E., Alipor, A. & Hasanzadeh, P.S. 2013, 'Effect of cognitive therapy training in groups	Quasi-experimental design	No activities are mentioned.	Three psychologists were	Cognitive therapy was conducted in	Mean health anxiety scores decreased, from 23.9% to	The workshops lasted for 90 minutes.

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on health anxiety among nursing students' <i>Journal of Jahrom</i> , 11(2) 52–60			the facilitators of the training. 30 nursing students	sessions, which covered: Familiarisation with ABC model, Relaxation training, Identification of superficial thoughts and processes, Conceptualisation of beliefs, and Behaviour change and planning to change own behaviour.	15.6% in the experimental group. Participants did not rate the workshop. The ease of implementation was not discussed.	12 sessions were facilitated.
6) Wu, C., Lin, Y., Yeh, M.C., Huang, L., Chen, S., Liao, S. & Lee, M. 2014, 'Effectiveness of interactive discussion group in suicide risk assessment among general nurses in Taiwan: a randomized controlled trial,' <i>Nurse Education</i> , 34(11), 1388–94.	Pretest-posttest experimental design	Two case scenarios Group discussions	Two nurses and two psychiatrists were the facilitators of the training. 216 nurses were participants.	Suicide risk assessment using the Chinese SAD PERSONS scale	The mean scores for the abilities of the nurses to identify and assess suicide risk increased from 8.3% before to 10.9% after the intervention. The participants did not rate the workshop. Implementation was a success.	The workshops lasted for 2½ hours. There were two sessions.
7) Schaubhut, R.M. & Gentry, J.A., 2010., 'Nursing preceptor workshops: Partnership and collaboration between academia and practice', <i>The Journal of Continuing Education in Nursing</i> , 41(4), 155–160.	The design was not described.	PowerPoint slides Video case studies Small-group discussions	Two clinical nurses were the facilitators of the workshops. 130 nurses were participants.	Clinical teaching strategies Adult learning theories Strategies for evaluating	No statistical evidence is outlined in the article. However, an increase in interest in pursuing a career in nurse education is reported. At the end of the workshop, there was knowledge enhancement on how to be an	The programme took four hours.

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				students in the clinical setting	effective preceptor; there was a positive change in skills and attitudes; and positive change in performance. Participants did not rate the workshop. The intervention was interactive, depending on the extent of each group's participation. There was adequate time for sharing experiences.	
8) Rosenkranz, S., Abbott, P., Reath, J., Gunasekera, H. & Hu, W., 2012, 'Promoting diagnostic accuracy in general practitioner management of otitis media in children: findings from a multimodal, interactive workshop on tympanometry and pneumatic otoscopy', <i>Quality in Primary Care</i> , 20(4), 275–285.	The design was not mentioned.	Online training resource Expert presentations and demonstrations Hands-on experience in tympanometry Videos Didactic presentations with exemplary videos Role playing with reflection	An ear, nose and throat surgeon, a paediatrician, and an audiologist were the workshop facilitators. 23 general practitioners were participants.	Information on otitis media in children; diagnosis of otitis media, best practice guidelines and evidence-based treatment of otitis media Pneumatic otoscopy skills Tympanometry skills	The mean scores for the confidence of the practitioners in using tympanometry were enhanced from 3.3% before to 5.0% after the intervention. Mean scores for the confidence of the practitioners in diagnosing otitis media with effusion were enhanced from 4.5% before to 4.9% after the intervention. Participants did not rate the workshop. Implementation: Owing to time limitations it was not possible to include an assessment of clinical skills in use of pneumatic otoscopy and tympanometry.	The workshop was three hours long. There was one session.
9) Zaider, T.I., Banerjee, S.C., Manna, R., Coyle, N., Pehrson, C., Hammonds, S., Krueger, C.A. & Bylund, C.L., 2016, 'Responding to	Design was not described.	Videos Role playing	Five of the article authors were the facilitators of the training.	Strategies to be used by nurses when partnering with families	Participants had increased confidence in dealing with families, evidenced by increased mean scores, from	One hour 45 minutes per group of participants

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challenging interactions with families: A training module for inpatient oncology nurses', <i>Families, Systems, & Health</i> , 34(3), 204–212.		Discussions	282 bedside nurses were participants.	under stressful circumstances	3.3% before to 3.9% after the intervention. Participant ratings: effectiveness of the group facilitator (87.9%) Implementation: The evaluation process, in which changes in confidence were assessed at a single time point, did not include direct observation of the skills transfer to the nurses' practice setting.	26 sessions were held.
10) AlReshidi, N.M., 2016, 'The impact of an interactive educational programme on children's nurses' knowledge, attitudes, beliefs and perceptions of children's pain, self-efficacy, and perceptions of barriers to optimal post-operative pain management in children', PhD thesis, University of Salford.	A non-equivalent groups pretest posttest design	Exercises Videos Self-check games	The researcher was the developer of the online programme 229 nurses were participants.	Postoperative paediatric pain management Paediatric nurses' perception of pain	The mean scores of knowledge and attitudes of the nurses towards children's pain increased from 20% before to 34.3% after the intervention. Participants did not rate the workshop. Implementation: Participants faced technical problems while surfing the electronic content of the DVD.	Time is not mentioned.
11) Huang, H., Zhang, H., Xie, Y., Wang, S., Cui, H., Lib, L., Shao, H. & Geng, Q., 2020, 'Effect of Balint group training on burnout and quality of work life among intensive care nurses: A randomized controlled trial', <i>Neurology, Psychiatry and Brain Research</i> , 35 (2020), 16–21.	A randomised controlled trial	Case presentations Group discussions	Senior Balint trainers 152 ICU nurses	Challenges in nurse-patient relationships	The intervention group had a higher score of quality of nursing work life of (141.93±13.61) than the control group (132.39±10.66). The burnout value for the intervention was much lower, with an average value of (58.33±7.38) lower than that of the control group, which had an average burnout value of (70.50±7.01).	There were eight training sessions. Each session was 1 hour 30 minutes long.

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					The researchers recommend a longer intervention time for a better result in future research.	
12) Noguchi-Watanabe, M., Maruyama-Sakurai, K., Yamamoto-Mitani, N., Matsumoto, Y., Yoshie, S., Iijima, K., Yamanaka T. & Akishita, M., 2019, 'Community-based program promotes interprofessional collaboration among home healthcare professionals: A non-randomized controlled study', <i>Geriatrics and Gerontology International</i> , 19(2019), 660–666.	A non-randomised controlled study	Small-group discussions Case scenarios	322 healthcare professionals (hospital/primary care physicians, hospital/home care nurses, pharmacists, social workers, care managers)	Community resource map The transitional care of patients using the case of a client who had been discharged from hospital	The interprofessional collaboration domains of “familiarity” and “meeting and talking” improved in the intervention group, compared with the control group (P = 0.011 and 0.036, respectively). The ease of implementation was not mentioned.	Two workshops, 2 hours long and 4 months apart
13) Joshi, P., Murry, L.L., Sharma, R., Mary, C., Sharma, K.K., Jena, T.K. & Lodha, R., 2020, 'Evaluation of an online interactive IMNCI training program in nursing students', <i>The Indian Journal of Pediatrics</i> , 4 November. https://doi.org/10.1007/s12098-020-03542-2	The design was not mentioned.	Videos and Group discussions Role play	The facilitator 72 third-year BSc Nursing students	Integrated management of neonatal and childhood illnesses	Knowledge scores improved after the training, from 14.67±4.07 to 24.32±2.54, with a p value of p<0.01	3 hours a day sessions for two weeks
14) Trimmer, W., Fuller, C., Kake, C. & Asbury, E., 2019, 'Collaborative primary mental health education for correctional nurses', <i>Journal of Correctional Health Care</i> , 25(1), 55–64.	The design was not mentioned.	Scenarios Group discussions	171 nurses	Mental health issues of prisoners	98% applied knowledge gained from the workshops to their practice. Participants had improved confidence and knowledge (values were not provided). The ease of implementation was not mentioned.	3-day initial workshop and a 1-day refresher course. (It was not mentioned if the workshop lasted the whole day.)

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15) Murry, L.L., Thomas, P., Razdan, G., Devi, Y.S., Joshi, P. & Sharma, K.K., 2019, Engaging nursing students with small group learning in midwifery education', <i>International Journal of Nursing Education</i> , 11(1), 55–59.	The design was not mentioned.	Group work Simulation and demonstrations	92 final-year undergraduate nursing students	Obstetric skills Management of sick newborn .	Most (96.7%) of the students did well, scoring above 75%. According to the researchers, implementation of small -group learning is feasible, and creates a positive learning experience for the students.	The simulation activities were carried out over 2 days.
16) Dsouza, R., Quinonez, R., Hubbell, S. & Brame, J., 2019, 'Promoting oral health in nursing education through interprofessional collaborative practice: A quasi-experimental survey study design', <i>Nurse Education Today</i> , 82 (2019), 93–98.	Quasi-experimental pre–post survey study design	Simulation	64 nursing students	Oral health	There was an increase in knowledge from pre to post, of $p=0.04$; $p<0.0001$ respectively. Confidence scores in performing oral screenings and counselling increased as follows: $p<0.0001$ and $p=0.006$ respectively. Dental referrals decreased with a p value of $p=0.718$. Willingness to implement oral health services during clinical visits increased, $p<0.0001$. Implementation was not easy, because faculty were equipped with limited resources and calibration for providing dental referrals. The setting did not afford many opportunities for providing specific preventive oral health services.	4 hour session

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17) Lau, C., Parry, H., Zhu, J., Yadegarfar, M. & Vigneswaran, N., 2019, 'Interactive teaching workshop for foundation year doctors at a district general hospital', <i>Future Healthcare Journal</i> , 6 (1), s147.	The design was not mentioned.	Group discussions	5 clinical education fellows facilitated the workshops. 23 foundation-year doctors in the first session and 20 foundation-year doctors in the second session	Teaching skills training	There was an increase in median confidence scores in the following teaching domains: Teaching while on call: 2 to 4 Teaching small groups: 3 to 5 Dealing with challenging learners: 2 to 4 Implementation was not easy, because the time constraints of a 2-hour session only allowed covering of a limited scope of Content was limited to key concepts.	Two 2-hour session workshops
18) Ibrahim, M.I., Zubair, I.U., Shafei, M.N., Ahmad, M.I. & Yaacob, N.M., 2020, 'Interactive low back pain intervention module based on the back school program: A cluster-randomized experimental study evaluating its effectiveness among nurses in public hospitals', <i>International Journal of Environmental Research and Public Health</i> , 2020(17), 1–13.	A cluster-randomised experimental study	Group discussions Exercise regime	Facilitators included a rehabilitation specialist, an occupational specialist, a public health specialist, and a physiotherapist. 284 nurses with lower back pain	Structure and function of the backbone, lower back pain and work-related back pain, methods of preventing lower back pain in nurses, exercise method to address lower back pain in nurses	Between-group comparison reveals that Oswestry Disability Scores (ODS) were significantly lower in the intervention group than in the control group at the end of the third (p=0.006) and sixth weeks (p<0.001). Within-group changes reveal a significant reduction in ODS in the intervention group, from baseline to the third (p<0.001) and sixth weeks (p<0.001) of the intervention.	The exercise programme was facilitated in three sessions, every alternate week over the course of the first six weeks. The duration of exercise per session was two hours.

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					Implementation was easy, since the intervention module was constructed to ensure that nurses could complete their exercises using simple, suitable, and sustainable techniques in a home setting with limited facilities.	
19) Ofei-Dodoo, S., Cleland-Leighton, A., Nilsen, K., Cloward, J.L. & Casey, E., 2020, 'Impact of a mindfulness-based, workplace group yoga intervention on burnout, self-care, and compassion in health care professionals', <i>Journal of Occupational and Environmental Medicine</i> , 62(8), 581–587.	Single-sample, non-experimental design	Group sessions	An experienced yoga instructor 34 participants, who included clinicians, medical trainees, and nonclinical staff members	Assessing burnout, depression, anxiety, stress, resilience, and compassion Mindfulness and yoga practice	Participants reported significant improvement in depression ($p < 0.01$), anxiety ($p < 0.01$), and stress ($p < 0.01$) after the intervention. There was ease in implementation, since the results reveal that it was a convenient, short workplace mindfulness-based yoga intervention that provided a collegial and time-efficient way to improve personal accomplishment, resilience, and compassion and reduce depression, anxiety, and stress in health care professionals.	1 hour of mindfulness-based yoga activity weekly for 8 weeks
20) Maatouk, I., Muller, A., Angerer, P., Schmook, R., Nikendei, C., Herbst, K., Gantner, M., Herzog, W. & Gundel, H., 2018, 'Healthy ageing at work – Efficacy of group interventions on the mental health of nurses aged 45 and older: Results	Randomised controlled trial	Small-group discussions	115 nurses aged 45 and above two trainers (a psychologist and/or a doctor trained in psychotherapy	Mental-health-related wellbeing and quality of life	Mental health quality of life improved after the intervention with a p value of 0.045 Irritation had a p value $p = 0.004$	Seven sessions, 2 hours a week, for a period of seven weeks After a six-week break, there was another booster session.

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of a randomised, controlled trial', <i>PLoS ONE</i> , 13(1), e0191000			acted as a group leader)		Emotional irritation had a p value of 0.04 The researchers believe that implementation was easy, since they recommend that the study be a blueprint for future occupational interventions addressing the consequences of demography	

