Activities

# Chapter 11: Research design

## Activity 11.1

Read the following paper:

Slade, P. West, H. Thomson, G.Lane, S. Spiby, H. Edwards, R.T. Charles, J.M. Garrett, C. Flanagan, B. Treadwell, M. Hayden, E. and Weeks, A. (2020) STRAWB2 (Stress and Wellbeing After Childbirth): a randomised controlled trial of targeted self‐help materials to prevent post‐traumatic stress disorder following childbirth, *British Journal of Obstetrics & Gynaecology*, 127(7): 886-896

For another example of an RCT using the post-test only design, see:

Gu, Y. Zou, Z. and Chen, X. (2017) The effects of vSIM for nursingTM as a teaching strategy on fundamentals of nursing education in undergraduates, *Clinical Simulation in Nursing,* 13(4): 194-197.

## Activity 11.2

Read the following paper:

[Conceição](https://www.tandfonline.com/author/Concei%C3%A7%C3%A3o%2C%2BCarla), C. [Pedro](https://www.tandfonline.com/author/Pedro%2C%2BJuliana), J. and [Martins](https://www.tandfonline.com/author/Martins%2C%2BMariana%2BV), M.V. (2017) Effectiveness of a video intervention on fertility knowledge among university students: a randomised pre-test/post-test study, [*The European Journal of Contraception & Reproductive Health Care,* 22(2): 107-113.](https://www.tandfonline.com/toc/iejc20/current)

For another example of an RCT using the pre-test, post-test design, see:

Bökberg, C. Behm, L. Wallerstedt, B. and Ahlström, G. (2019) Evaluation of person-centeredness in nursing homes after a palliative care intervention: pre- and post-test experimental design, *BMC Palliative Care*, 18(1). DOI: <http://dx.doi.org.ezproxy.bcu.ac.uk/10.1186/s12904-019-0431-8>

## Activity 11.3

Read the following paper:

[Dehghan](https://go-gale-com.ezproxy.bcu.ac.uk/ps/advancedSearch.do?method=doSearch&searchType=AdvancedSearchForm&userGroupName=uce&inputFieldNames%5b0%5d=AU&prodId=AONE&inputFieldValues%5b0%5d=%22Fateme+Dehghan%22), F. [Jalali](https://go-gale-com.ezproxy.bcu.ac.uk/ps/advancedSearch.do?method=doSearch&searchType=AdvancedSearchForm&userGroupName=uce&inputFieldNames%5b0%5d=AU&prodId=AONE&inputFieldValues%5b0%5d=%22Rostam+Jalali%22), R. and [Bashiri](https://go-gale-com.ezproxy.bcu.ac.uk/ps/advancedSearch.do?method=doSearch&searchType=AdvancedSearchForm&userGroupName=uce&inputFieldNames%5b0%5d=AU&prodId=AONE&inputFieldValues%5b0%5d=%22Hasan+Bashiri%22), H. (2019) The effect of virtual reality technology on preoperative anxiety in children: a Solomon four-group randomized clinical trial, [*Perioperative Medicine*](https://go-gale-com.ezproxy.bcu.ac.uk/ps/aboutJournal.do?contentModuleId=AONE&resultClickType=AboutThisPublication&actionString=DO_DISPLAY_ABOUT_PAGE&searchType=&docId=GALE%7C5YBL&userGroupName=uce&inPS=true&rcDocId=GALE%7CA590727712&prodId=AONE&pubDate=120190604) 8(1).

DOI: <http://dx.doi.org.ezproxy.bcu.ac.uk/10.1186/s13741-019-0116-0>

For another example of an RCT using the Solomon Four design, see:

Zang, Y. Zhao, Y. Yang, Q. Pan, Y. and Liu, T. (2011) A randomised trial on pubertal development and health in China, *Journal of Clinical Nursing,* 20(21-22): 3081–3091.

## Activity 11.4

Read the following paper:

Lind, M. Polonsky, W. Hirsch, I.B. Heise, T. Bolinder, J. Dahlqvist, S. Pehrsson, N-G. Peter Moström, P. (2016) Design and Methods of a Randomized Trial of Continuous Glucose Monitoring in Persons With Type 1 Diabetes With Impaired Glycemic Control Treated With Multiple Daily Insulin Injections (GOLD Study), *Journal of Diabetes Science and Technology,* 10(3): 754–761. https://doi.org/10.1177%2F1932296816642578

For another example of an RCT using the within-participants design, see:

Jabraeili, M. Eskandari, S. Bagher Hosseini, M. and Rahmani, P. (2018) The Effect of Body Position on Pain Due to Nasal Continuous Positive Airway Pressure (CPAP) in Premature Neonates: A Cross-Over Clinical Trial Study, *International Journal of Pediatrics*, 6(49): 6861–6871.

## Activity 11.5

Read the following paper:

Daigle, S. Talbot, F. and French, D.J. (2018) Mindfulness-based stress reduction training yields improvements in well-being and rates of perceived nursing errors among hospital nurses, *Journal of Advanced Nursing,* 74: 2427-2430.

For another example of an RCTs using the matched-pairs design, see:

Fritz, J. Walker, D.M. Cohen, S. Angeles, G. and Lamadrid-Figueroa, H. (2017) Can a simulation-based training program impact the use of evidence based routine practices at birth? Results of a hospital-based cluster randomized trial in Mexico, *PLoS ONE,* 12(3): e0172623. <https://doi.org/10.1371/journal.pone.0172623>

## Activity 11.6

Summarise the key strengths and weaknesses of the following experimental research designs:

* Between-participants: post-test only design
* Between-participants: pre-test, post-test design
* Between-participants design: Solomon Four design
* Within-participants design
* Matched pairs design

## Activity 11.7

The following paper provides an overview regarding RCTs including a discussion about other designs:

Bench, S. Day, T. and Metcalfe, A. (2013) Randomised controlled trials: an introduction for nurse researchers, *Nurse Researcher*, 20(5): 38–44.

## Activity 11.8

Read the following paper:

Stoll, K.H. Downe, S. Edmonds, J. Gross, M.M. Malott, A. McAra‐Couper, J. Sadler, M. and Thomson, G. (2020) A Survey of University Students’ Preferences for Midwifery Care and Community Birth Options in 8 High‐Income Countries, *Journal of Midwifery and Women’s Health*, 65(1): 131–141

For another example of a survey using the cross-sectional design, see:

Phelan, A. McCarthy, S and Adams, E. (2018) Examining missed care in community nursing: A cross-sectional survey design, *Journal of Advanced Nursing,* 74: 626–636.

## Activity 11.9

Read the following paper:

Ross, L. McSherry, W. Giske, T. van Leeuwen, R. Schep-Akkerman, A. Koslander, T, Hall, J. Østergaard Steenfeldt V. and Jarvis, P. (2018) Nursing and midwifery students' perceptions of spirituality, spiritual care, and spiritual care competency: A prospective, longitudinal, correlational European study, *Nurse Education Today*, 67: 64–71.

## Activity 11.10

For a paper/resources detailing large-scale cohort studies, see:

Joshi, H. and Fitzsimons, E. (2016) The UK Millennium Cohort Study: the making of a multipurpose resource for social science and policy in the UK. *Longitudinal and Life Course Studies*, 7(4): 409–430. [https://www.closer.ac.uk/study/hertfordshire-cohort-study/#](https://www.closer.ac.uk/study/hertfordshire-cohort-study/)

## Activity 11.11

Read the following paper:

Raurell-Torredàa, M. Llauradó-Serra, M. Lamoglia-Puig, M. Rifà-Ros, R. Díaz-Agea, J.L. García-Mayor, S. and Romero-Collado, A. (2020) Standardized language systems for the design of high-fidelity simulation scenarios: A Delphi study*, Nurse Education Today*, <https://doi.org/10.1016/j.nedt.2019.104319>

For another example of a Delphi survey, see:

Cadée, F. Nieuwenhuijze, M.J. Lagro-Janssen, A.L.M. and de Vries, R. (2018) From equity to power: Critical success factors for twinning between midwives, a Delphi study*, Journal of Advanced Nursing*, 74: 1573–1582.

## Activity 11.12

For consideration of the advantages and disadvantages of using clinical databases as a data source, see:

Loke, Y.K. (2014) Use of databases for clinical research, *Archives of Disease in Childhood*, 99(6): 587–589.

Wild, S. Fischbacher, S. and McKnight, J. (on behalf of the Scottish Diabetes Research Network Epidemiology Group) (2016) Using Large Diabetes Databases for Research, *Journal of Diabetes Science and Technology*, 10(5): 1073–1078. [https://doi.org/10.1177%2F1932296816645120](https://doi.org/10.1177/1932296816645120)

## Activity 11.13

Review the strengths and potential weaknesses of the non-experimental research design that we have identified in Table 11.1.

* How does this compare with your list of strengths and weaknesses?
* Is there anything you would add to our table or is there anything that you disagree with?