Learning Guide – Longitudinal Designs

Questions based on slides and deVaus. DeVaus provides a lot of detail about longitudinal designs.

1. What is the difference between aggregate and individual change?
2. If you are only interested in aggregate change over time, is a longitudinal design necessarily the best design? What other design could you use in this case?
3. What is the difference between a prospective and a retrospective design?
4. How does the multiple point prospective panel design differ from the simple prospective panel design? Why would you want multiple points?
5. Why does the “drop out” phenomenon pose a threat to internal and external validity in longitudinal designs?
6. What is replacement? How does replacement threaten internal validity?
7. What is the rotating panel design? How does the use of a rotating panel design help solve the drop out problem?
8. What is a cohort? The term cohort does not necessarily refer to age, although your text seems to imply that it does. Other examples could be students (the 2012 cohort of incoming freshmen) or athletes in the Olympics (the 2012 cohort of Olympic athletes).
9. What is a single cohort design? Why is it difficult to distinguish between historical and developmental effects with the single cohort design?
10. What is a multiple cohort design? Which threats to internal validity are reduced by using a multiple cohort design?
11. Describe the retrospective panel design. Why do people use retrospective designs?

Questions from Wagner et al.

1. Wagner et al. point out that one advantage of a longitudinal design is that “…the natural course of child psychopathology (i.e., onset, duration and termination), as well as the continuity and persistence of the condition, can be examined.” Give an example of a phenomenon of interest to you where it would be helpful to understand the natural course of the phenomenon – how it develops over an individual’s lifetime.
2. They also point out that individual risk and protective factors can be examined as they occur and/or change over time. Give an example of a phenomenon of interest to you where risk and protective factors could change over time.
3. Children with ED commonly experience complex, changing interactions with service providers and these life history events can affect both the disorder itself and the onset and persistence of other disorders or behavioral problems. Give an example of a phenomenon of interest to you where individuals are apt to interact with multiple institutions and agencies in ways that can affect the outcome of interest.
4. Wagner et al. describe five strengths of the longitudinal designs for the SEELS and the NTLS2 studies. What do the first four have in common with recommendations that we have discussed to improve quasi-experiments and cross-sectional designs?
5. Explain the sampling procedures used in the SEELS and NTLS2 studies in your own terms. What features of the strategy were critical in ensuring that the samples were representative of the theoretical population in terms of characteristics that can affect the outcome of the study?
6. Which of the specific prospective designs described by deVaus were used in these studies?