

---

CMED 305

---

# Practical Session: Selection of Study Design

---

---

**Nurah Alamro, MD. MPH. DrPH.**

Assistant Professor - Community Medicine Unit,  
Family & Community Medicine Department

[nmalamro@ksu.edu.sa](mailto:nmalamro@ksu.edu.sa)

1. Please be seated in your assigned group.

2. The session timeline:

- 01:00 – 01:15 PM: Orientation and session's expectations
- 01:15 – 01:45 PM: Discuss the assigned study design and answer questions
- 01:45 - 02:45 PM: Report to the whole group (each group will have ~ 5 mins)
- 02:45 – 03:00 PM: Closing comments

**01:15 – 01:45 PM: Discuss the assigned study to your group, answer the following questions, and report back the whole group:**

1. What is the type of your assigned study? Give reasons.
2. Is it feasible? (remember F in FINER)
3. State two advantages/ strengths and two disadvantages/limitations of the study design.
4. Construct the study question.
5. What is the measure of disease frequency/association that can be obtained from this study?

{S1 }

To evaluate the association between use of group of medicinal drugs (benzodiazepines) used for treating anxiety and /or insomnia in adults and incidence of dementia.

**➔ Prospective Cohort**

{S2}

To determine the risk factors for hip fractures in post menopausal women (e.g. osteoporosis, obesity, Hip Injury, and Physical inactivity)

**→ Case Control**

{S3}



What is the prevalence of hypertension in adults > 30 years of age living in Riyadh Central Region?

**→ Cross-Sectional**

{S4}

Investigating that caesarean-section delivery may reduce the risk of mother-to-child transmission of HIV infection in comparison with vaginal delivery.

**→ Experimental/clinical trial**

{S5}

Football coach has observed that recently that number of disabling injuries on the play ground has increased compared to the past durations. He is suspicious and wants to investigate what medicinal/nutritional supplements are being used by the players during past three months. He discusses this with sports doctor who examine all injuries occurring on the field. How can you help him design a study?

**→ Retrospective Cohort**

{S6}

In-charge of social organization wants to study emotional trauma in social workers who work with battered women. She has a validated scale/tool that can assess emotional trauma in workers. You are consulted; explain how will you design the study?

**→ Cross-Sectional**

{S7}



You are working in a TB center. You want to describe the characteristics and contact history of cases with drug resistant TB. How will you design the study?

**→ Case Series**

{S8}

Representative sample of residents were telephoned and asked how much they exercise each week and whether they currently have (have ever been diagnosed with) heart disease.

**→ Cross-Sectional**

{S9}

Occurrence of cancer was identified between April 1991 and July 2002 for 50,000 troops who served in the first Gulf War (ended April 1991) and 50,000 troops who served elsewhere during the same period.

**→ Cohort study**

{S10}

Subjects were children enrolled in a health maintenance organization. At 2 months, each child was randomly given one of two types of a new vaccine against rotavirus infection. Parents were called by a nurse two weeks later and asked whether the children had experienced any of a list of side-effects.

➔ **Experimental study**

{S11}



A population-based study determined whether there is a relationship between childhood asthma and environmental exposure to second hand smoke. A sample of the population was interviewed to gather information about asthma symptoms and some environmental exposures in 2003.

**→ Cross-Sectional**

# Thank you!

**Office Hours (by appointment via email):**

Mondays & Wednesdays

11 AM – 1 PM

College of Medicine West Building

Level 1 - Office 4011034

---

[nmalamro@ksu.edu.sa](mailto:nmalamro@ksu.edu.sa)