

THE CONTRIBUTION OF COHORT STUDIES IN BIOLOGICAL ANTHROPOLOGY, MEDICINE, EPIDEMIOLOGY AND SOCIAL SCIENCES

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The presentation begins with a brief overview of possible study designs of which cohort studies is one type of observational study.

Part I describes how a cohort study design was used to measure the impact of a 10-year project to move (“graduate”) 1 million Bangladeshis out of extreme poverty. The project involved different income generating activities (e.g. providing cattle, crop cultivation, small businesses and handicraft production) and worked with 29 non-government organisations across Bangladesh in both urban and rural settings. 11 surveys were carried out (7 annual) on the same 1700 households between 2010-2016 measuring income, expenditure, productive assets, morbidity, nutritional status, food security, food diversity and gender empowerment. Using a Repeated Measures Anova, significant within-subject improvements in all domains were found while male-headed households were more successful than female-headed households. Overall, 1,160,000 people were lifted out of extreme poverty. A second example of a cohort design with repeated measures was a Chilean study which revealed feeding fortified cow’s milk to young babies, rather than breastfeeding, led to increased overweight and obesity.

Part II briefly describes the history of cohort studies and the pros and cons of this study design. Three celebrated studies, the Framingham (USA) heart study which commenced in 1948, the Japan Atomic Bomb Survivor cohort (1950) and the British Doctors 1951 study on smoking and lung cancer all revealed the benefits to health of a cohort design.

Part III reviews an on-going Cambridge University led adult Bangladeshi cohort study examining non-communicable diseases in urban, slum and rural settings. It shows high prevalence at baseline of hypertension (23%) and type II diabetes (16%) with a further 8% undiagnosed. Only 25% of hypertensives are diagnosed, treated and controlled. 29% of slum residents are depressed compared with 15% and 8% in urban and slum, respectively. Multimorbidity (more than 2 conditions) increases with age and is greatest in the wealthiest quintile.

Part IV discusses birth cohorts, some large country cohorts, cohort consortia and opportunities and challenges to international collaboration in cohort studies.

Keywords: Cohort studies; Public health; Health inequalities; Epidemiology.

