

# Quiz: Instrumental variables / causal effects in randomised trials with non-compliance

27.07.21 19:09

Q1) The **intention-to-treat** (ITT) effect is:

→ causal effect of treatment assignment on the outcome

Q2) The potential treatment values of a complier is:

→  $A^0 = 0$ ,  $A^1 = 1$

Q3) Treatment assignment has no impact on treatment received for:

→ always-takers and never-takers

Q4) In IV analysis, what is meant by a "local" treatment effect?:

→ treatment effect among compliers only

Q5) The monotonicity assumption is necessary for estimation of:

→ complier average causal effect (CACE)

Q6) If we **DO NOT MAKE** the monotonicity assumption, somebody who was observed to have  $Z=1$  and  $A=0$  is:

→ either a never-taker or defier

Q7) If we **DO MAKE** the monotonicity assumption, somebody who was observed to have  $Z=1$  and  $A=0$  is:

→ is a never-taker

Q8) The assumption that the IV,  $Z$ , only affects the outcome,  $Y$ , through its effect on treatment,  $A$ , is called:

→ **exclusion criterion**

Q9) The first stage of **Two Stage Least Squares (2SLS)** is:

→ regression of treatment received ( $A$ ) on the instrumental variable (IV)  $Z$ .

Q10) The strength of an instrumental variable (IV) can be measured by:

→ the association between the IV ( $Z$ ) and the treatment ( $A$ ).

Q11) A weak instrument (IV) will tend to lead to estimates of causal effects that have:

→ large standard errors

Q12) Instrumental variable methods do not require:

→ the ignorability assumption.