

2. Transition from crawling to walking occurs over a period of weeks. Does the reported age at which babies first walk depend on the person doing the scoring?

Design a study to investigate this for one of the control groups.

2a. Choose one of the control groups and give a reason for your choice. [2]

- (1) 12 minute/day of unstructured exercise; - least requirements
- (2) no exercise and a weekly parental report; ← most requirements, most information
- (3) no exercise and a single parental report at the end of the study. few requirements  
some information

2b. Several scorers need to be hired. As well, a certain number of babies need to be assigned to each scorer. Increasing the number of scorers costs more than increasing the number of babies. Assuming a similar number of babies (approximately 24) in the follow up study, make an allocation of babies to a defined number of scorers. [3]

Number of scorers.	<u>  1  </u>	<u>      </u>	<u> 24 </u>
Number of babies/ scorers	<u> 24 </u>	<u>      </u>	<u>  1 </u>
Total babies	<u> 24 </u>	<u>      </u>	<u> 24 </u>

Describe how you chose this allocation. [2]

- 2 babies 12 scorers - largest sample, largest cost
- 8 babies 3 scorers - minimum sample, least cost

Complete the listing of variables table, for the follow-up study. [8]

<u>Name</u>	<u>Symbol</u>	<u>Resp/Explanatory</u>	<u>Type (NOIR)</u>	<u>Rand/Fixed</u>
<u>Age</u>	<u>A</u>	<u>Response</u>	<u>Ratio</u>	
<u>Scorer</u>	<u>Sc</u>	<u>Explanatory</u>	<u>Nominal</u>	<u>Either</u>

2c. Scorers: Random or fixed factor? \_\_\_\_\_

Justify your choice. [2]

- Random - infer to population of scorers
- Fixed - infer only to scorers in the study  
same scorers for long term study

2d. Write a GLM, using A for age, and your symbol for the explanatory variable.. [5]

$$A = \beta_0 + \beta_{Sc} Sc + \epsilon$$