

INTRODUCTION

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Friday, January 16, 2015

Content

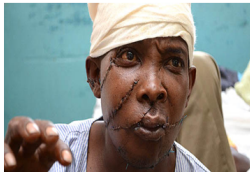
- Definition of statistics and its components
- Populations and samples
- Exposures and outcomes
- Variables
- Statistics

What is statistics?

Statistics is the science of Collecting, Summarising, Presenting and Interpreting data

Examples. . . a case study

- There is anecdotal evidence of a phenomena. . .



All stitched up: Simon Mwangi at the Nyeri Provincial General Hospital in February 2012.



Question

- Are women from Central Province battering their husbands/partners more than women from other provinces in Kenya?

Exposure & Outcomes

- The exposures and outcomes of interest are specific to study hypotheses
- Should always be clearly defined before the study starts
- Type of outcome determines the analysis that will be used.

Outcomes

- The outcome of a study is a broad term for any defined disease, state of health, health-related event or death.

Outcomes

- An outcome is the result of an experiment or other situation involving uncertainty.
- Its the focus of your attention – seeking to understand its occurrence and variation
- In some studies, there may be multiple outcomes.

In this case our outcomes is. . . .

In this case our outcomes is. . . .

- Husband/partner battering

Exposure

- The exposure of interest may be associated with either an increased or a decreased occurrence of disease or other specified health outcome,
- May relate to the environment, or inborn or inherited characteristics

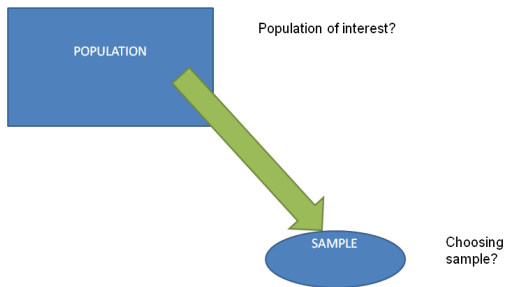
Exposure in this case is?

Exposure

- Residence = Central province ??
- Ethnicity = Kikuyu??

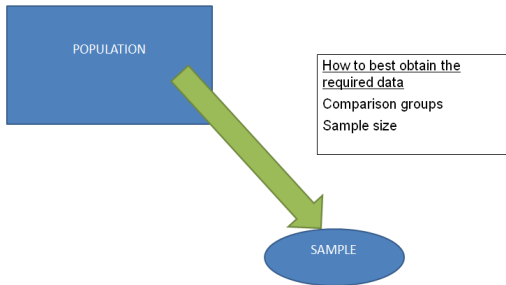
Spousal battering in Central Kenya

Spousal battering in Central Kenya



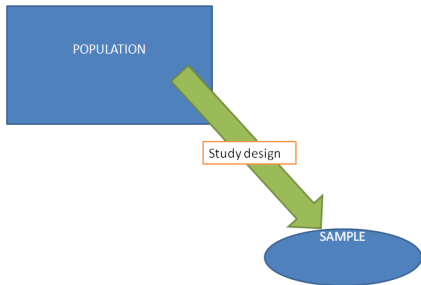
Choosing your sample

- Population of interest?
 - Partnered/married women in Kenya
- Choosing sample
 - Partnered/married women from central + other provinces
 - Why would you not choose married/partnered men?



Decide on study design

- Descriptive
- Cross sectional
- Analytical
- Case-control
- Cohort
- Experimental



Describe your sample

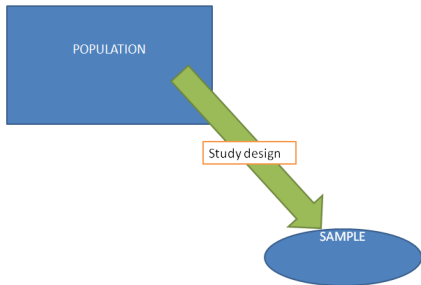
- Characteristic measured for each subject
- Values of the characteristic vary among subjects in a sample or a Population.
- These can be categorical or quantitative

Categorical variables

- Unordered categorical variables
 - Marital status
 - married, divorced etc
 - Residence
 - rural or urban
 - none is higher than the other
- Ordinal categorical variables
 - Wealth quantiles
 - High, medium, low
 - Employment
 - unemployed, casual laborer, etc

quantitative variable

- Takes numerical values, which differ in magnitude. Each value is greater than or lower than any other possible value
 - Discrete
 - Number of children: 0, 1, 2, 3, 4, ...
 - Continuous
 - Weight



- Allow us to use the sample to make inferences about the population from which it was derived.

Lucky for us someone has attempted to answer this question

Kenya



**Demographic and
Health Survey**

2008-09



remember our issue

- Are women from Central Province battering their husbands/partner more than women from other provinces in Kenya
- The purpose of a statistical analysis is to quantify the magnitude of the association between one or more exposure variables and the outcome variable

How?

- Nov 2008 to Feb 2009
- All 8 provinces
- 8,444 women 15-49 years old
- One-off questionnaire

Questionnaire

- Have you ever hit, slapped, kicked or done anything else to physically hurt your (last)husband/partner at times when he was not already beating or physically hurting you?
- 6,318 Kenyan women 15-49 years old participated

Kenya



**Demographic and
Health Survey**

2008-09



Table 16.13 Violence by women against their spouse

Percentage of ever-married women age 15-49 who have committed physical violence against their husband/partner when he was not already beating or physically hurting them ever and in the past 12 months, according to women's own experience of spousal violence and their own and husband's/partner's characteristics, Kenya 2008-09

Women's experience of spousal violence, women's and their husband's/partner's characteristic	Percentage who have committed physical violence against their current or most recent husband/partner		
	Ever	Number of women	In the past 12 months ¹ Number of women ¹
Woman's experience of spousal physical violence			
Ever	6.9	1,603	4.6
In the last 12 months	7.5	1,267	5.8
Not last 12 months/widow/missing	4.8	336	0.0
Never	0.7	2,733	0.4
Current age			
15-19	2.8	170	2.7
20-24	2.2	811	2.1
25-29	3.1	917	1.6
30-39	3.0	1,430	2.3
40-49	3.5	988	1.4
Employed last 12 months			
Employed for cash	3.4	2,194	2.4
Employed not for cash	2.3	767	2.0
Not employed	2.7	1,373	1.1
Number of living children			
0	2.0	252	1.5
1-2	3.0	1,994	2.1
3-4	2.3	1,373	1.1
5+	4.0	1,117	2.8
Residence			
Urban	3.4	1,022	1.7
Rural	2.8	3,314	2.0
Province			
Nairobi	4.1	320	1.7
Central	1.3	493	0.6
Coast	1.9	365	1.5
Eastern	3.3	702	1.4
Nyanza	2.3	774	2.0
Rift Valley	2.9	1,112	2.3
Western	5.2	458	3.7
North Eastern	5.2	110	2.1
Wealth quintile			
Lowest	4.6	784	3.3
Second	1.6	793	0.3
Middle	3.3	845	2.6
Fourth	1.4	849	1.3
Highest	3.8	1,064	2.1

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I'll make it clear in a mo..

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	Ever	Number of women	In the past 12 months ¹	Number of women ¹

Province

Nairobi	4.1	320	1.7	311
Central	1.3	495	0.6	467
Coast	1.9	365	1.5	348
Eastern	3.3	702	1.4	675
Nyanza	2.3	774	2.0	663
Rift Valley	2.9	1,112	2.3	1,052
Western	5.2	458	3.7	423
North Eastern	5.2	110	2.1	108

Conclusion

- Central province women are the least likely to batter their husbands than women from any other province.

Conclusion

- Central province women are the least likely women to batter their husbands than women from any other province.
- What is missing?

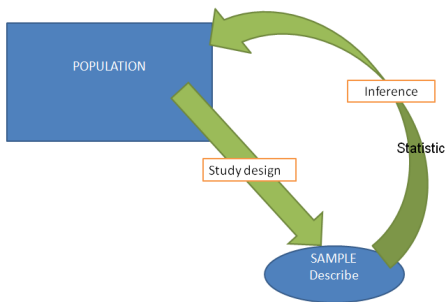
My take.....

My take

- Have you ever hit, slapped, kicked or done anything else to physically hurt your (last) husband/partner at times when he was not already beating or physically hurting you?

My take

- Test to compare proportions
 - which ones?
- If you have collected the wrong data – the best analysis will not help you. . . .



In conclusion

- MARRY A WOMAN FROM CENTRAL PROVINCE BUT DO NOT PROVOKE HER
- THANK YOU