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Vivarium Population Spenser: Fertility protocol

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1 Works for me dx.doi.org/10.17504/protocols.io.bn8bmhsn

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ABSTRACT

Description of the steps followed by Vivarium Population Spenser library when running the Fertility module.

EXTERNAL LINK

https://github.com/alan-turing-institute/vivarium_population_spenser

DOI

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PROTOCOL CITATION

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MATERIALS TEXT

The rates used in the Fertility component are found here:
https://github.com/alan-turing-institute/daedalus/blob/develop/persistent_data/Fertility2011_LEEDS1_2.csv

ABSTRACT

Description of the steps followed by Vivarium Population Spenser library when running the Fertility module.

1 Divide the annual fertility rates for that local authority by the number of time steps existing in a year.

2 For each time step:

2.1 Select all women in the sample that appear as "alive" and haven't had a child in at least one year.

2.2 For these selected women, get the fertility rate given their age, ethnicity and location and turn it into a probability.

2.3 Using random sampling and the fertility probability of the women, choose which individuals give birth in that time step. Update their information in the state table with the last time they gave birth.

2.4 If children were born in the previous step, add them to the state table and record who their mother is. Assign them the same ethnicity and location from their mother, assign their sex randomly.

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