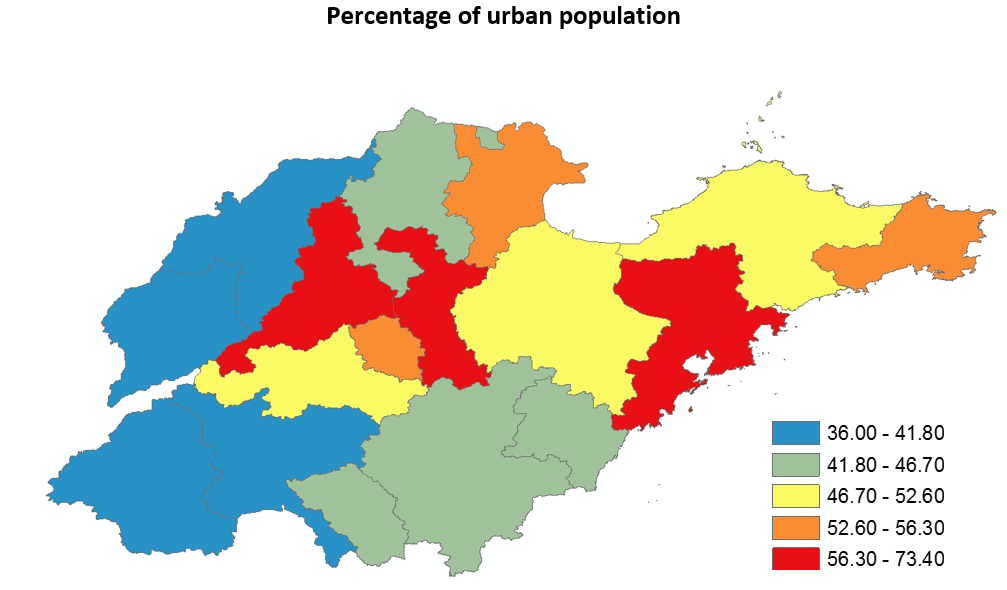
# **Supplementary information**

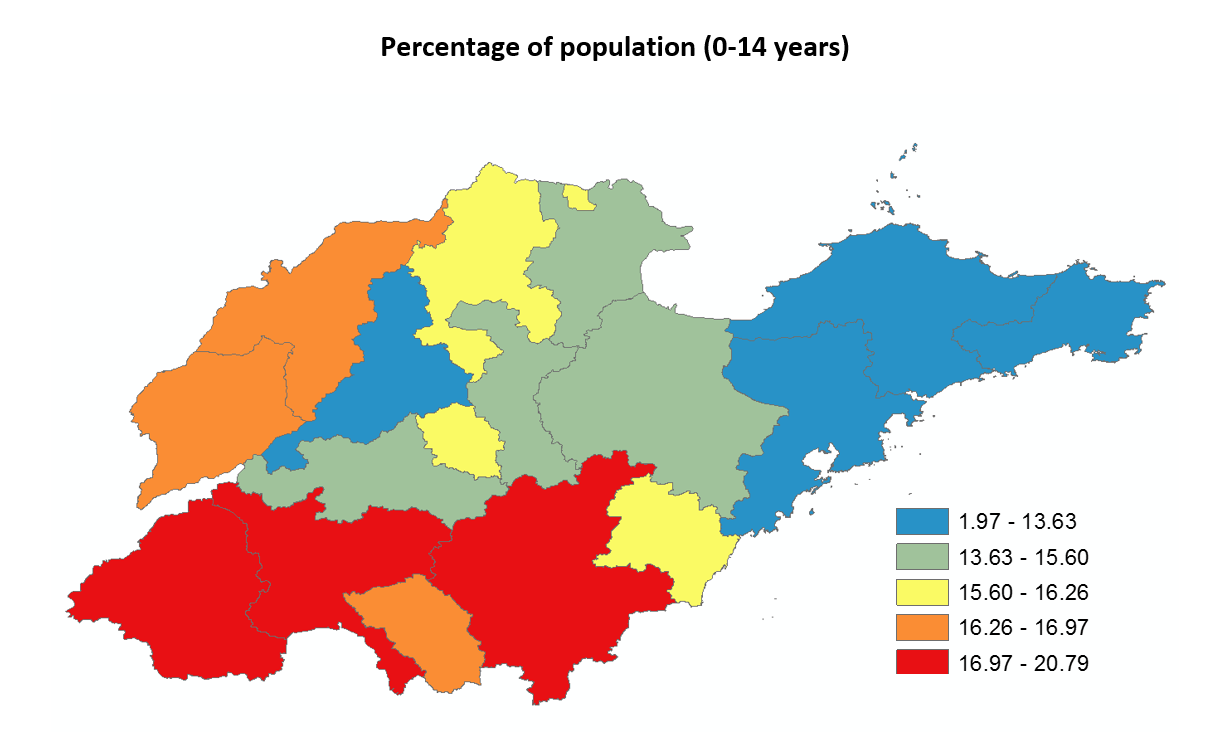
# **Association of sociodemographic factors and internet query data with pertussis infections in Shandong, China**

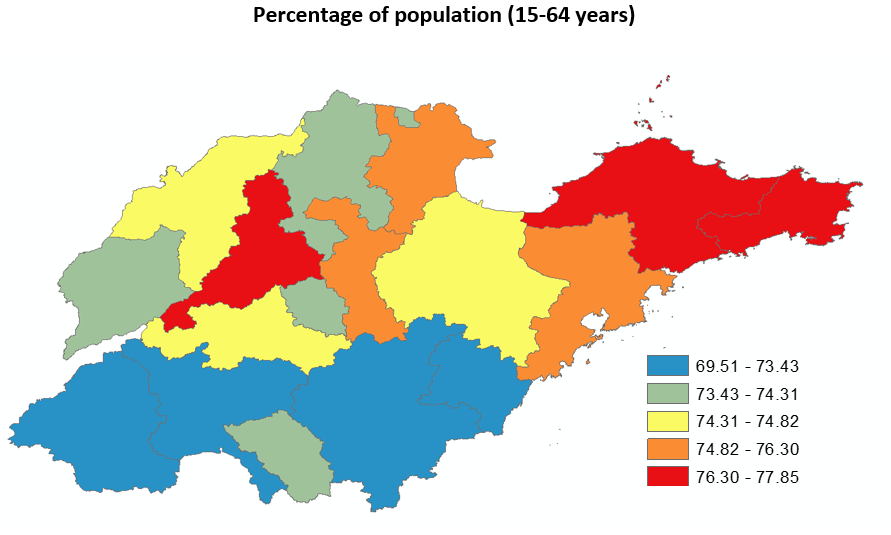
**Table S1. The search queries used in data analysis.**

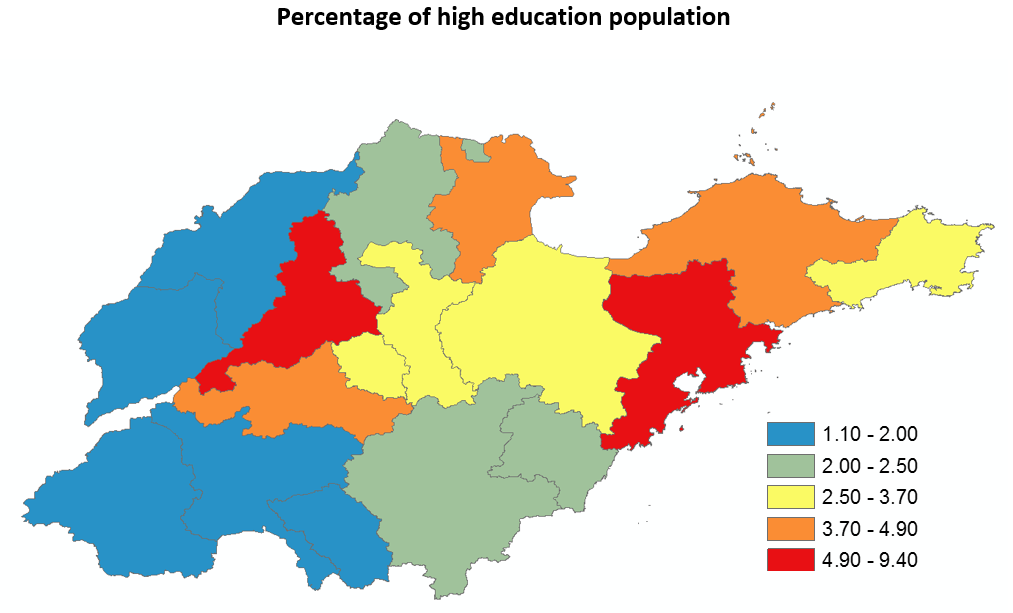
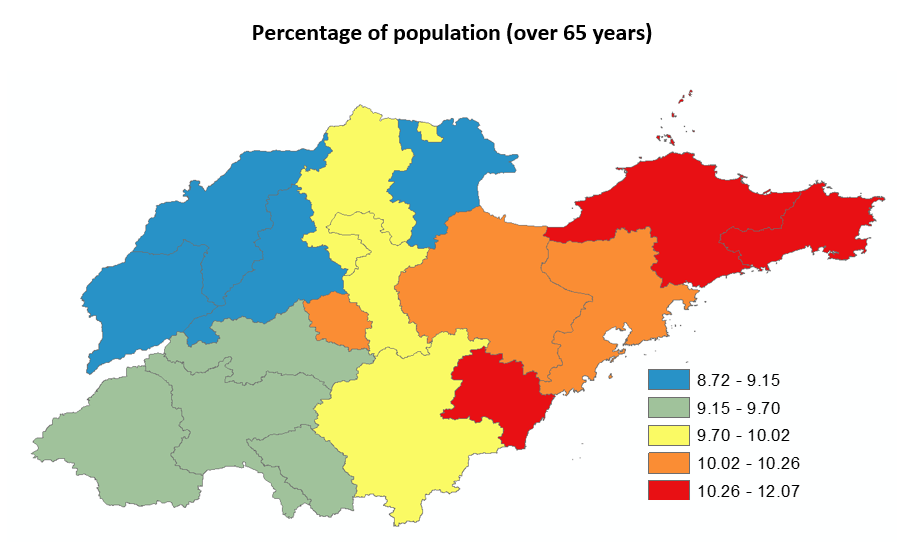
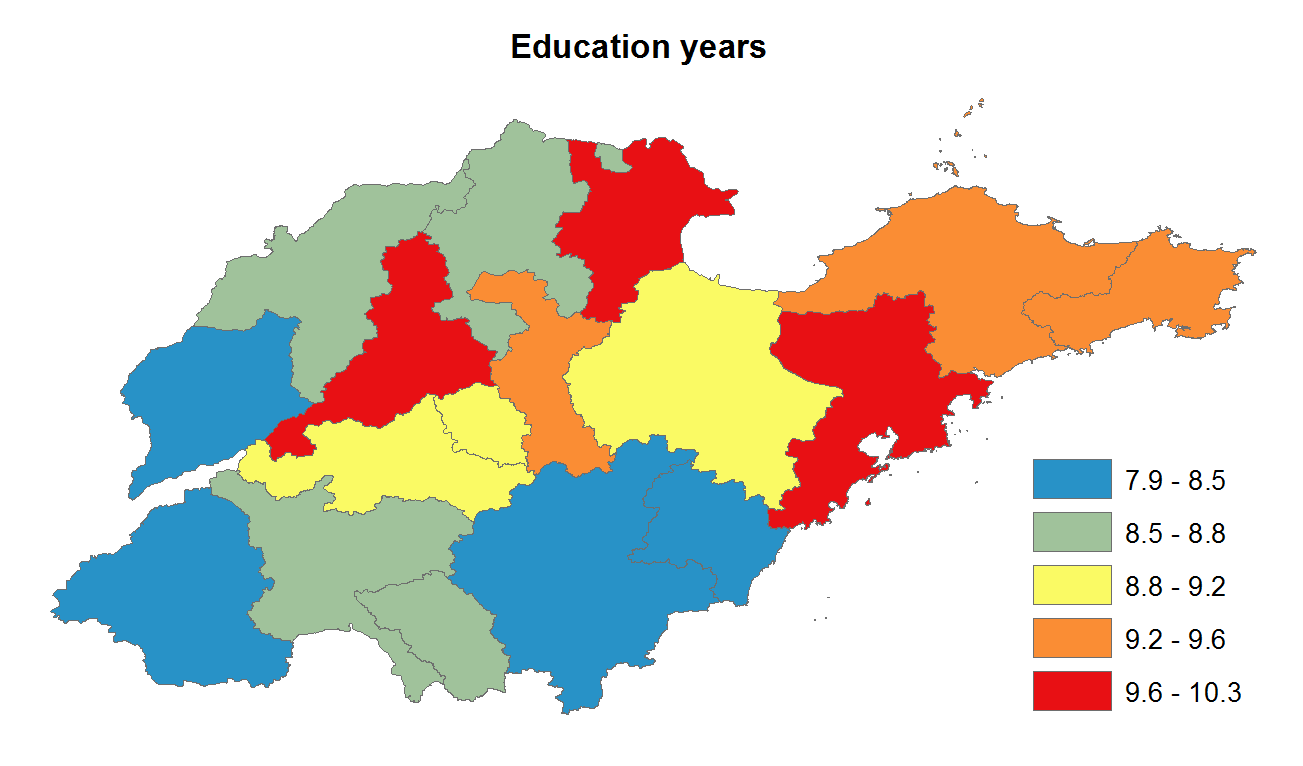
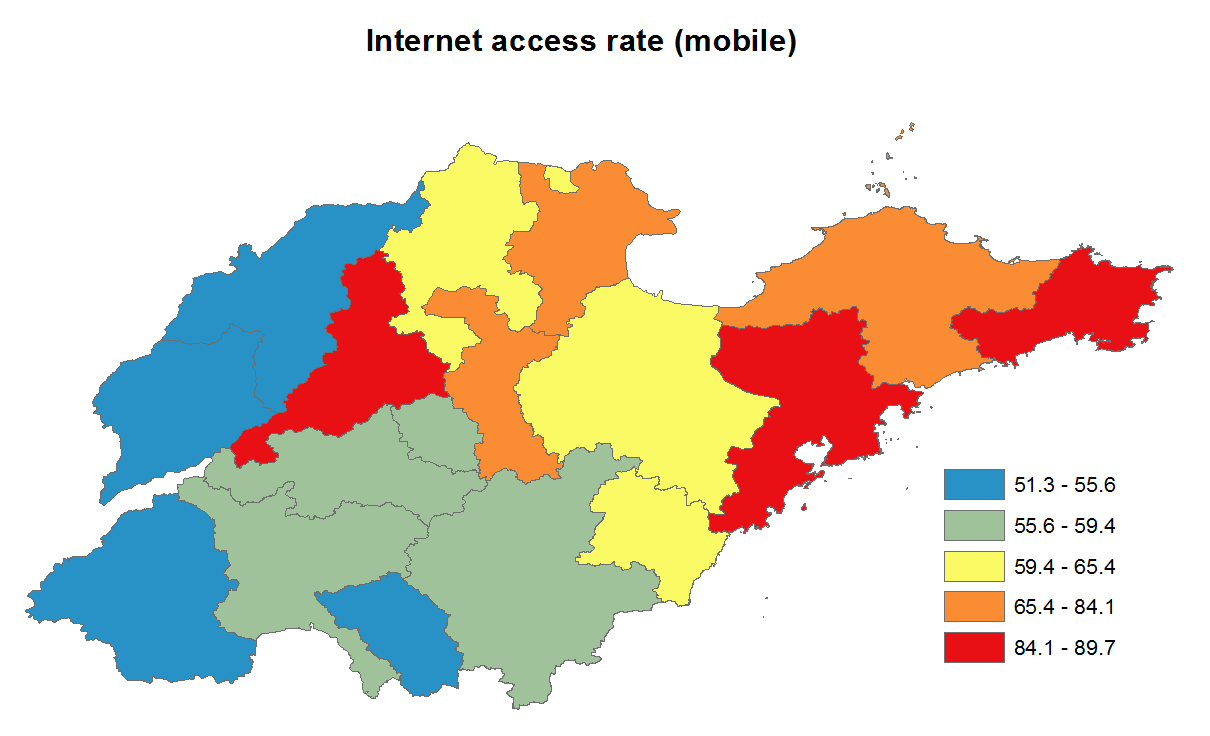
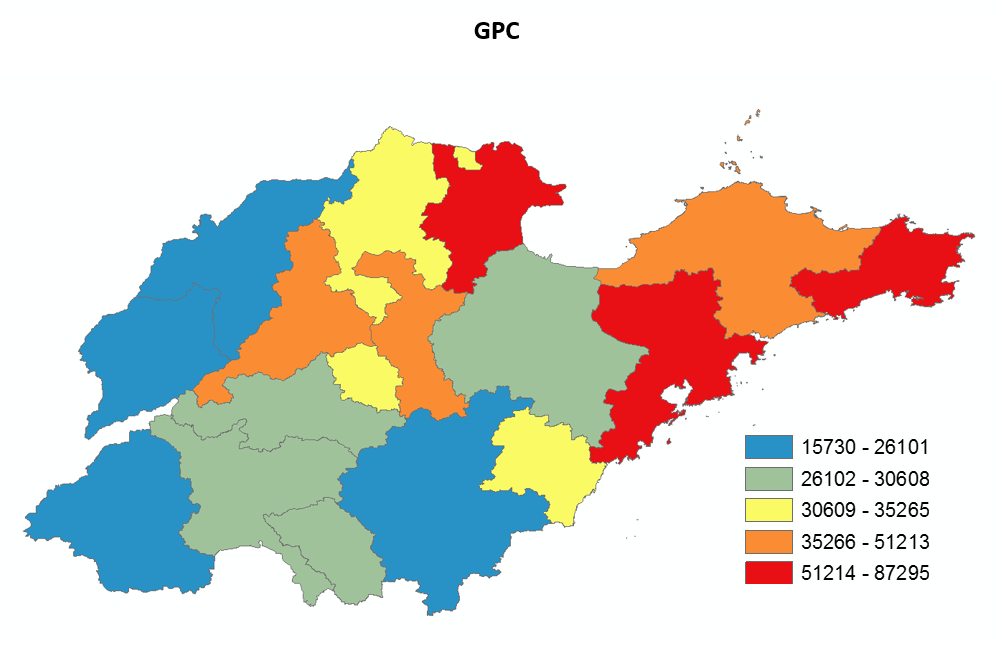
|  |  |
| --- | --- |
| Pertussis | Pertussis infections |
| Pertussis vaccine | Pertussis prevention |
| Pertussis treatments | Pertussis infection period |
| Pertussis symptoms | Pertussis mortality |
| Pertussis medications | Pertussis in children |

**Figure S1. City-specific percentage of urban population, GPC, percentage of highly educated population and** **percentages of population (0-14 years old, 15-64 years old and over 65 years old) in Shandong.**

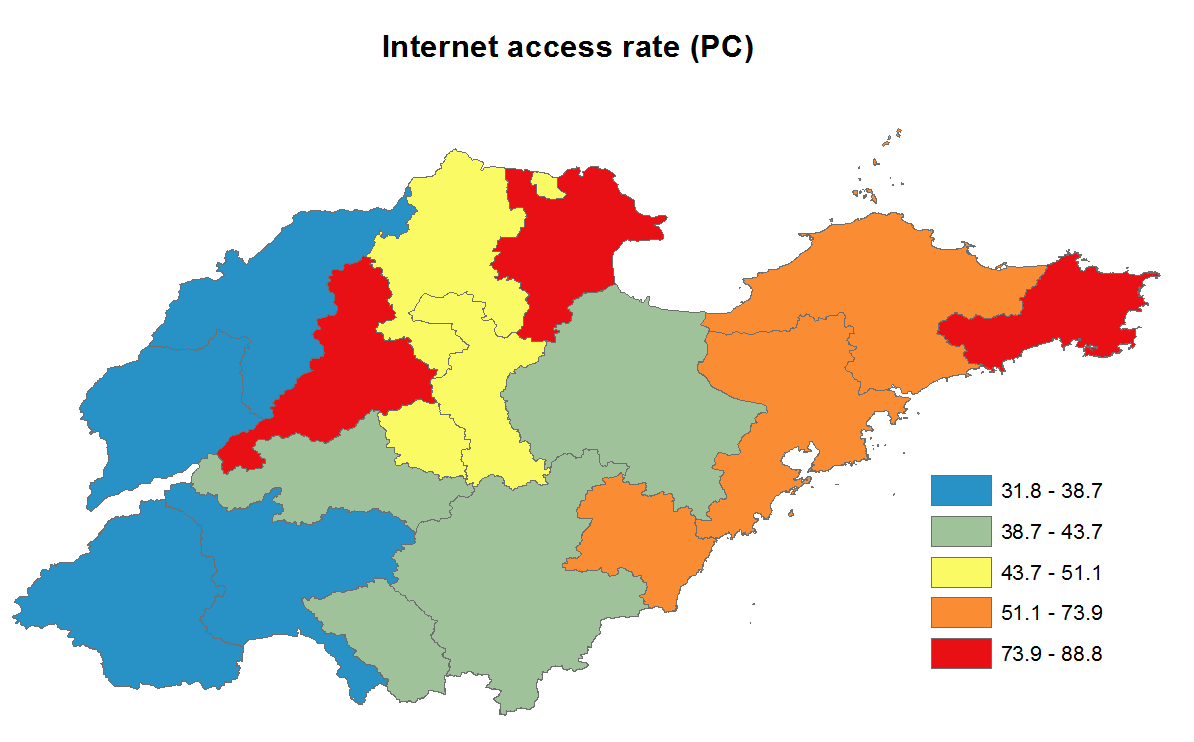






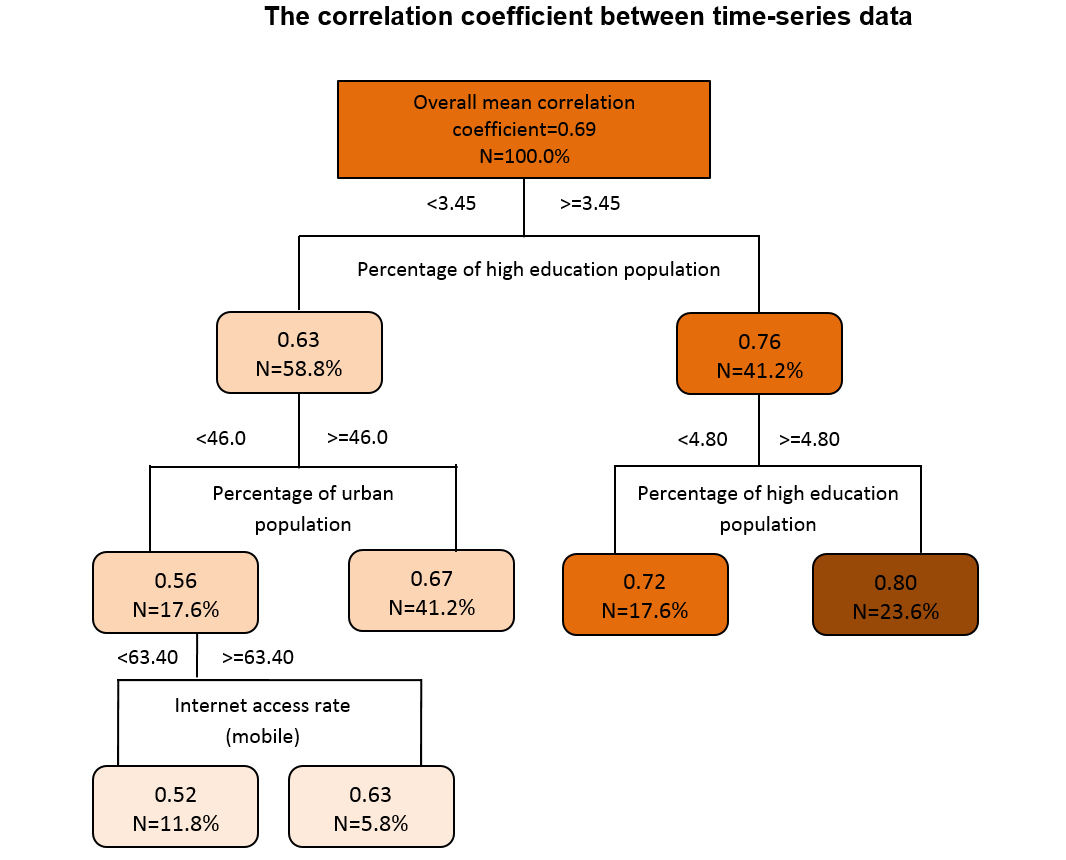
  

**Percentage of highly educated population**



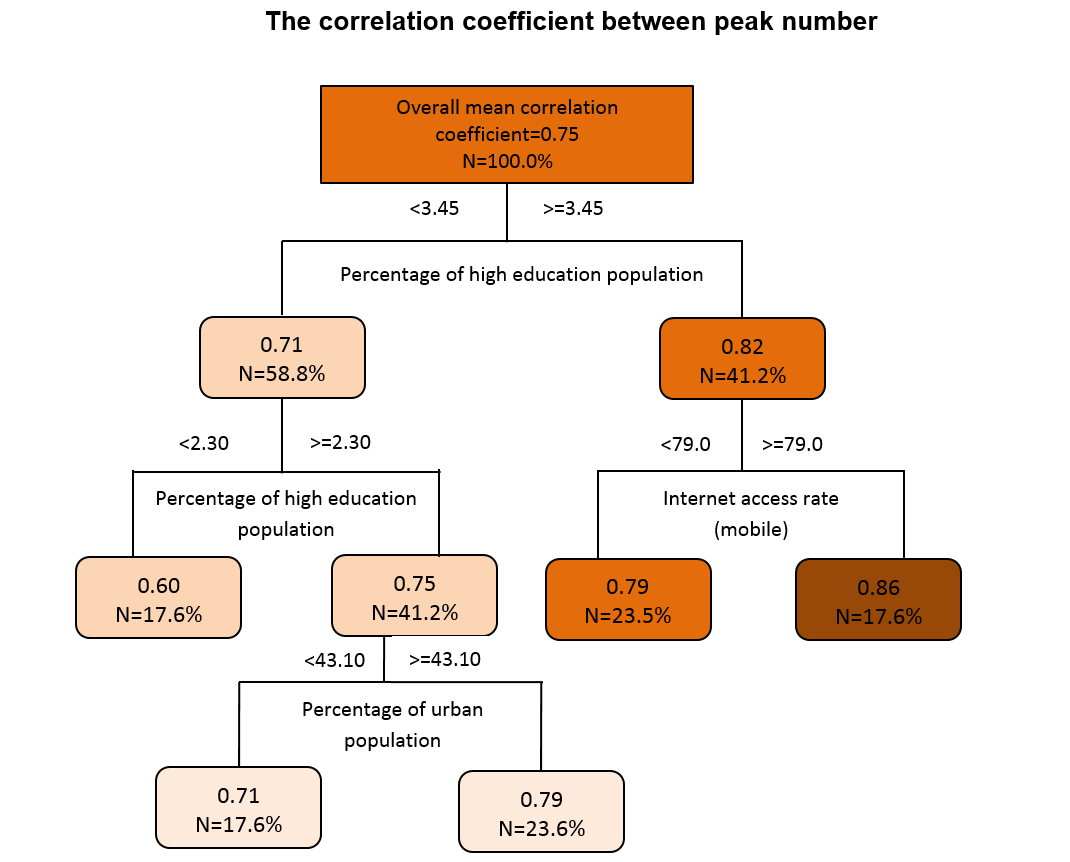
**Figure S2. The regression tree modelling the hierarchical relationship between the temporal risks (time-series data, peaking number and increasing intensity) of pertussis infections and internet query with sociodemographic factors in Shandong province between 2009 and 2017** (The regression trees showed the threshold values, mean correlation coefficient; N is the percentage of entire data in the cell (the number of cities))**.**

**A**



Percentage of highly educated population

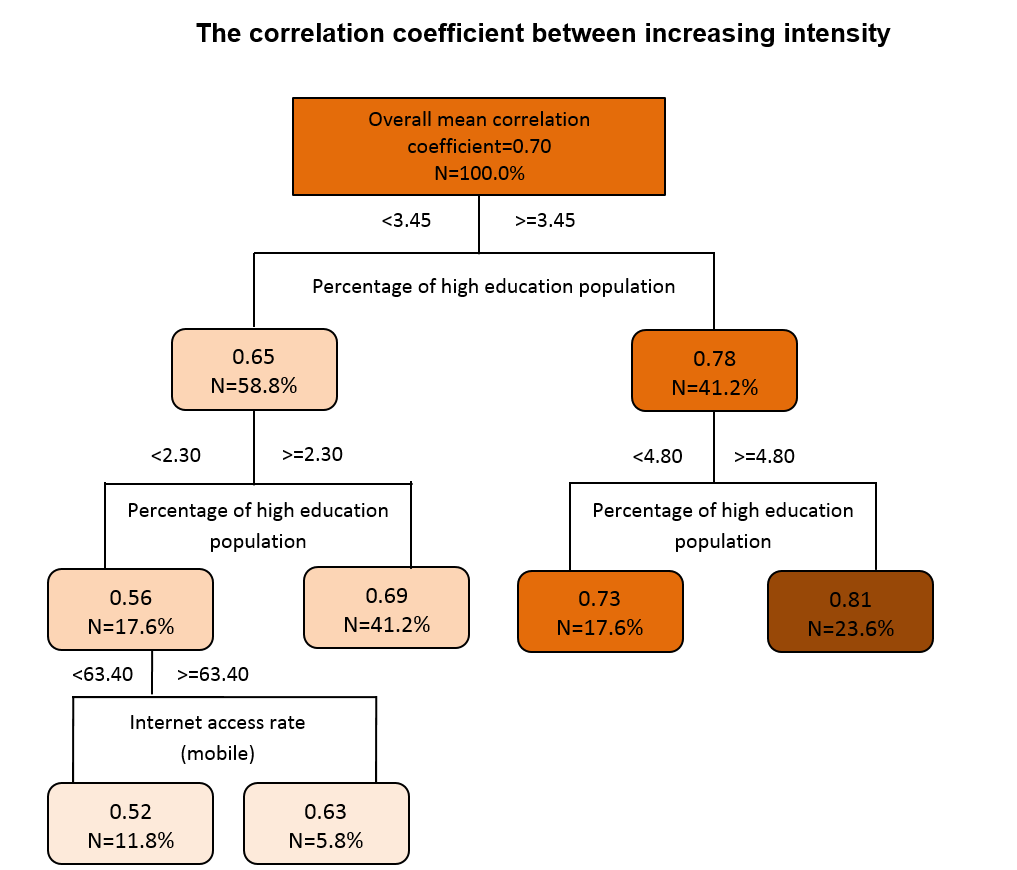
Percentage of highly educated population



Percentage of highly educated population

Percentage of highly educated population

**B**



Percentage of highly educated population

Percentage of highly educated population

Percentage of highly educated population

**C**