Appendix

Supplementary Table 1 Dependent and independent variables

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| variables | descriptions | definition | mean | min | max | std |
| Participation willingness of residents |  |  |  |  |  |  |
| *Participation willingness* | To what extent are you willing to participate the urban flood emergency response? | Categorical variable: {1,2,3,4,5} | 3.745 | 1 | 5 | 0.814 |
| ICT support |  |  |  |  |  |  |
| *Number of digital devices* | How many digital devices (mainly mobile phones) are you using? | Categorical variable: {1,2,3,4,5,6,7} | 2.078 | 0 | 7 | 0.969 |
| *Proficiency in the use of digital devices* | Is your usage of digital devices of high quality? (Including the duration of usage of digital devices, the stability of network signals, and skill proficiency.) | Continuous variable: [0,1] | 0.708 | 0 | 1 | 0.164 |
| *Usefulness of digital devices* | To what extent does digital device support you to participate in urban floods? (Including 6 aspects, such as supporting you in your effort to obtain flood-related information and guidance, etc.) | Continuous variable: [0,1] | 0.745 | 0 | 1 | 0.188 |
| Individual capabilities |  |  |  |  |  |  |
| *Leadership* | To what extent do you volunteer to play a leadership and coordination role in urban floods? | Categorical variable: {1,2,3,4,5} | 2.231 | 1 | 5 | 1.084 |
| *Helping others* | To what extent do you volunteer to participate in urban floods to help others and the community? (Such as assisting the community in evacuating people, providing disaster relief materials and so on.) | Categorical variable: {1,2,3,4,5} | 2.588 | 1 | 5 | 1.092 |
| Neighborly relationships |  |  |  |  |  |  |
| *Information sharing* | Community information sharing efficiency and communication efficiency (Such as frequency and accuracy of flood-related information updates). | Categorical variable: {1,2,3,4,5} | 3.369 | 1 | 5 | 0.926 |
| *Strength of connection* | The level of community organization and strength of connection (Such as the use of community public spaces) | Categorical variable: {1,2,3,4,5} | 3.292 | 1 | 5 | 0.970 |
| *Mutual aid* | The level of mutual aid and support among community residents (Such as exchanging food and materials) | Categorical variable: {1,2,3,4,5} | 3.733 | 1 | 5 | 0.873 |
| *Mutual trust* | The level of mutual trust and cooperation among community residents | Categorical variable: {1,2,3,4,5} | 3.793 | 1 | 5 | 0.858 |
| Government support |  |  |  |  |  |  |
| *Monitoring capability* | How do you evaluate the government's ability to monitor and assess floods? (Such as monitoring real-time precipitation) | Categorical variable: {1,2,3,4,5} | 2.890 | 1 | 5 | 0.941 |
| *Organizing capability* | How do you evaluate the government's disaster relief coordination and organization ability? (Such as organizing evacuation) | Categorical variable: {1,2,3,4,5} | 3.226 | 1 | 5 | 0.991 |
| Socio-demographic attributes |  |  |  |  |  |  |
| *Gender* | Gender (1=male) | Categorical variable: {0,1} | 0.454 | 0 | 1 | 0.520 |
| *Age* | Age (1=year 0–18; 2=year18–30; 3=year 30–40; 4=year 40–50; 5=year 50–60; 6=larger than year 60) | Categorical variable: {1,2,3,4,5,6} | 2.628 | 1 | 6 | 1.127 |
| *Income* | Income (1= 0–1000; 2=1000–2000; 3=2000–5000; 4=5000–10,000; 5= >10,000) | Categorical variable: {1,2,3,4,5} | 2.859 | 1 | 5 | 1.410 |
| *Education* | Education (1=middle school or below; 2=high school; 3=college; 4=master or above) | Categorical variable: {1,2,3,4} | 2.566 | 1 | 4 | 0.843 |
| *Profession* | Occupations (1=occupations related to emergency response) | Categorical variable: {0,1} | 0.074 | 0 | 1 | 0.262 |
| *Elderly* | Elderly (1=elderly individuals at home) | Categorical variable: {0,1} | 0.852 | 0 | 1 | 0.355 |
| *Children* | Children (1=children individuals at home) | Categorical variable: {0,1} | 0.673 | 0 | 1 | 0.469 |