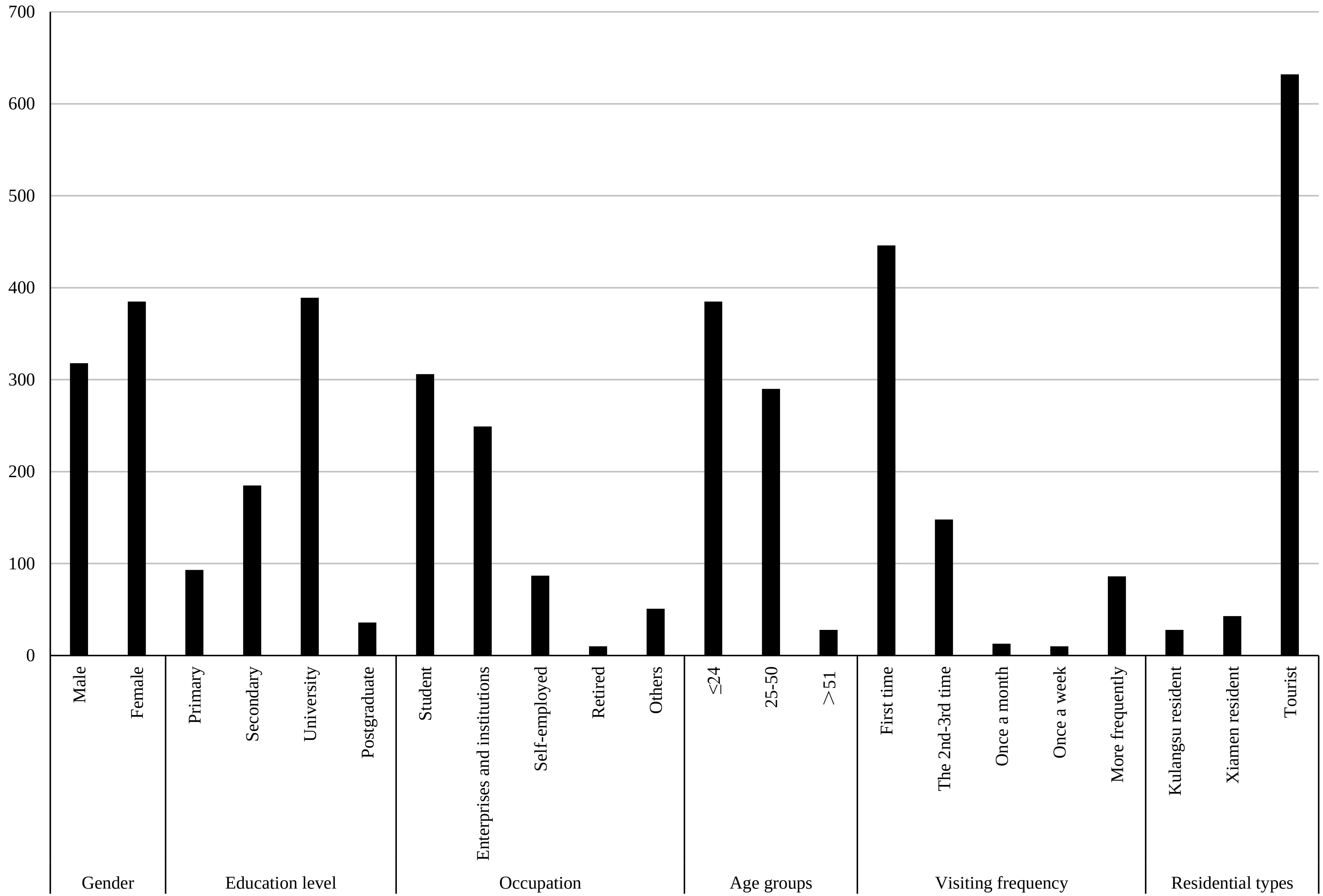

Figure S1 Social/demographical/behavioral information of the interviewees

Table S1 Calculated landscape spatial indices at class and landscape levels

Landscape Index	Code	Comments	Formula Class metrics	Landscape metrics
Class Area	CA	Class area is a measure of landscape composition. Specifically, how much of the landscape is comprised of a particular patch type.	$CA=\sum_{j=1}^{n} a_{ij}\left(\frac{1}{10000}\right)$	/
Edge Density	ED	Edge density reports edge length on a per unit area basis that facilitates comparison among landscapes of varying size.	$ED=\frac{\sum_{k=1}^{m} e_{ik}}{A}\cdot(10000)$	/
Patch Density	PD	Patch density has the same basic utility as number of patches as an index, except that it expresses number of patches on a per unit area basis that facilitates comparisons among landscapes of varying size.	$PD=\frac{n_i}{A}\cdot(10000)\cdot(100)$	$PD=\frac{N}{A}\cdot(10000)\cdot(100)$
Effective Mesh Size	MESH	Mesh is based on the cumulative patch area distribution and is interpreted as the size of the patches when the landscape is subdivided into S patches, where S is the value of the splitting index.	$MESH=\frac{\sum_{i=1}^{m}\sum_{j=1}^{n} a_{ij}^{2}}{A}\cdot\left(\frac{1}{10000}\right)$	$MESH=\frac{\sum_{i=1}^{m}\sum_{j=1}^{n} a_{ij}^{2}}{A}$
Interspersion and Juxtaposition Index	IJI	Interspersion and juxtaposition index reflects the dispersion and juxtaposition between patches.	$IJI=\frac{-\sum_{k=1}^{m}\left[\left(\frac{e_{ik}}{\sum_{k=1}^{m} e_{ik}}\right)\cdot\ln\left(\frac{e_{ik}}{\sum_{k=1}^{m} e_{ik}}\right)\right]}{\ln(m-1)}\cdot(100)$	$IJI=\frac{-\sum_{i=1}^{m}\sum_{k=i+1}^{m}\left[\left(\frac{e_{ik}}{E}\right)\cdot\ln\left(\frac{e_{ik}}{E}\right)\right]}{\ln(0.5[m(m-1)])}\cdot(100)$
Splitting Index	SPLIT	Split is based on the cumulative patch area distribution and is interpreted as the effective mesh number, or number of patches with a constant patch size when the landscape is subdivided into S	$SPLIT=\frac{A^2}{\sum_{i=1}^{m}\sum_{j=1}^{n} a_{ij}^{2}}$	$SPLIT=\frac{A^2}{\sum_{i=1}^{m}\sum_{j=1}^{n} a_{ij}^{2}}$

Landscape Index	Code	Comments	Formula Class metrics	Landscape metrics
		patches, where S is the value of the splitting index.		
Landscape Shape Index	LSI	Landscape shape index provides a standardized measure of total edge or edge density that adjusts for the size of the landscape.	/	$LSI = \frac{0.25E}{\sqrt{A}}$
Shannon's Diversity Index	SHDI	Shannon's diversity index is a popular measure of diversity in community ecology, applied here to landscapes. It reflects the uneven distribution of patch types in the landscape.	/	$SIDI = 1 - \sum_{i=1}^{m} P_i^2$
Patch Cohesion Index	COHESION	Patch cohesion index measures the physical connectedness of the corresponding patch type.	/	$COHESION = \left[1 - \frac{\sum_{i=1}^{n} P_{ij}}{\sum_{j=1}^{n} P_{ij}\sqrt{a_{ij}}}\right] \cdot \left[1 - \frac{1}{\sqrt{Z}}\right]^{-1} \cdot (100)$

Table S2 Results of multicollinearity diagnosis for pleasantness and eventfulness at each sampling period (The same results for pleasantness and eventfulness)

Sampling period	Independent variable		Multicollinearity diagnostics	
	Category	Indicator	Tolerance	VIF
P1	Perceived sound source	SDD_BS	0.482	2.073
		SDD_GS	0.556	1.797
		SDD_HS	0.278	3.602
		SDD_MS	0.297	3.372
	Landscape satisfaction	SNL	0.323	3.093
		SHB	0.285	3.508
		SVA	0.236	4.243
	Green space feature	NDVI	0.301	3.322
	Landscape pattern	CM_GS_PD	0.244	4.106
		CM_GS_IJI	0.276	3.625

Sampling period	Independent variable		Multicollinearity diagnostics	
	Category	Indicator	Tolerance	VIF
		CM_GS_SPLIT	0.69	1.449
		LM_PD	0.29	3.445
		LM_IJI	0.203	4.934
P2	Perceived sound source	SDD_BS	0.298	3.361
		SDD_GS	0.289	3.466
		SDD_HS	0.303	3.298
		SDD_MS	0.201	4.979
	Landscape satisfaction	SNL	0.395	2.529
		SLD	0.37	2.704
		SHB	0.225	4.437
		SSF	0.253	3.955
		SVA	0.402	2.487
	Green space feature	DtGS	0.23	4.343
		NDVI	0.403	2.479
	Landscape pattern	CM_GS_IJI	0.224	4.461
		CM_GS_SPLIT	0.656	1.525
		LM_PD	0.268	3.735
		LM_LSI	0.238	4.209
P3	Perceived sound source	SDD_BS	0.585	1.709
		SDD_GS	0.334	2.992
		SDD_HS	0.533	1.876
		SDD_MS	0.525	1.905
	Landscape satisfaction	SNL	0.219	4.563
		SLD	0.238	4.201
		SHB	0.428	2.339
		SVA	0.289	3.464
	Green space feature	DtGS	0.254	3.931
		NDVI	0.416	2.402
	Landscape pattern	CM_GS_PD	0.225	4.437

Sampling period	Independent variable		Multicollinearity diagnostics	
	Category	Indicator	Tolerance	VIF
		CM_GS_IJI	0.282	3.54
		CM_GS_SPLIT	0.541	1.847
		LM_PD	0.209	4.78
		LM_IJI	0.216	4.632
Total	Perceived sound source	SDD_BS	0.579	1.728
		SDD_GS	0.588	1.702
		SDD_HS	0.469	2.132
		SDD_MS	0.443	2.257
	Landscape satisfaction	SNL	0.435	2.299
		SLD	0.256	3.903
		SHB	0.559	1.787
		SSF	0.342	2.924
		SVA	0.213	4.697
	Green space feature	DtGS	0.254	3.941
		NDVI	0.379	2.638
	Landscape pattern	CM_GS_PD	0.271	3.693
		CM_GS_IJI	0.297	3.364
		CM_GS_SPLIT	0.692	1.444
		LM_PD	0.304	3.294
		LM_IJI	0.216	4.639

Detailed concepts and definition in statistical analysis

Accuracy test indicators (R^2 and AIC): R^2 captures the percentage of variance of the dependent variable, indicating the explanatory ability of independent variables for the dependent variable [1]. AIC (Akaike Information Criterion) is an essential indicator for selecting the statistical models. The smaller the value of AIC means the better goodness of fit of the model and the more accurate model [2].

Global spatial regression model: The ordinary least squares (OLS) estimation model was used in the present study. OLS model assumes that the coefficients or parameters are constant with respect to location, i.e., the spatial stability of the regression relationship [3]. Therefore, the model estimates the values of the dependent variable for the entire study area and produces only single values, such as the mean, standard deviation and a measure of the spatial autocorrelation of the data set [4].

Local spatial regression model: The geographically weighted regression (GWR) model was employed in the study, which is an extension of OLS. It can simulate the local effects of spatial variables to reflect relatively realistic spatial features [5]. Therefore, it is able to generate corresponding regression estimates at different locations in the study area.

References

1. Srivastava, A.K.; Srivastava, V.K.; Ullah, A. The coefficient of determination and its adjusted version in linear regression models. *Econometric reviews* **1995**, *14*, 229–240.
2. Hu, S. Akaike information criterion. *Center for Research in Scientific Computation* **2007**, *93*.
3. Dismuke, C.; Lindrooth, R. Ordinary least squares. *Methods and Designs for Outcomes Research* **2006**, *93*, 93–104.
4. Nazeer, M.; Bilal, M. Evaluation of ordinary least square (OLS) and geographically weighted regression (GWR) for water quality monitoring: A case study for the estimation of salinity. *Journal of Ocean University of China* **2018**, *17*, 305–310.
5. Mennis, J. Mapping the results of geographically weighted regression. *The Cartographic Journal* **2006**, *43*, 171–179.