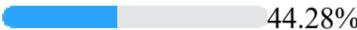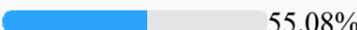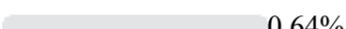# Questionnaire about the indoor environment and Thermal Comfort for traditional historic stilt house, a Case of Dong Minority Dwelling during summer

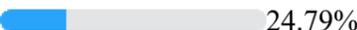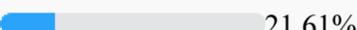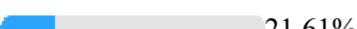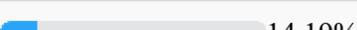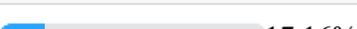Thank you very much for your participation. The following questionnaire is about the building performance survey, which is conducted by Guanxi Key Laboratory of New Energy and Building Energy Saving Guilin University of Technology. Your feedback is very valuable for us to evaluate and improve the building performance.

The survey is completely anonymous, we assure you your personal information will be kept strictly confidential. Thank you again for your cooperation.
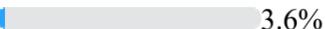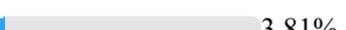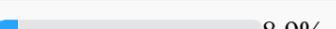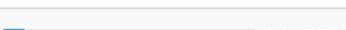
1.Gender： [Single choice questions]

Option	Subtotal	Proportion
Male	209	44.28%
Female	260	55.08%
Invalid	3	0.64%
Total questionnaires	472	

2.Age： [Single choice questions]

Option	Subtotal	Proportion
Less than 30	117	24.79%
31~40	102	21.61%
41~50	102	21.61%
51~60	67	14.19%
Over 60	81	17.16%
Invalid	3	0.64%
Total questionnaires	472	

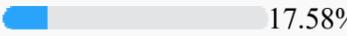3.Your current dress：
Top, Bottom, Skirt, Shoes and socks[Multiple choice questions]

Option	Subtotal	Proportion
Long-sleeved T-shirt	17	3.6%
Short-sleeved T-shirt	335	70.97%
Long-sleeved shirt	18	3.81%
Short-sleeved shirt	42	8.9%
Suit pants	49	10.38%
Jean	52	11.02%
Pants	259	54.87%
Slim skirt	38	8.05%
Dress	53	11.23%
Anklet	14	2.97%
Stocking	7	1.48%
Leather shoes/sports shoes	56	11.86%
Sandal/slipper	337	71.4%
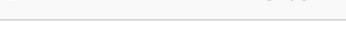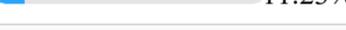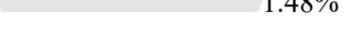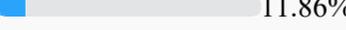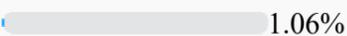
Invalid	5		1.06%
Total questionnaires	472		

4.Hong long have you been living in this building： [Single choice questions]

Option	Subtotal	Proportion	
Less than 1 year	20		4.24%
1-3years	83		17.58%
4-6years	72		15.25%
Over 6years	292		61.86%
Invalid	5		1.06%
Total questionnaires	472		
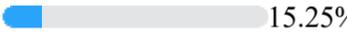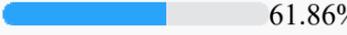
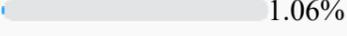5.How much time do you usually spend at home in a week： [Single choice questions]

Option	Subtotal	Proportion	
Less than 40 hours	27		5.72%
40-55 hours	42		8.9%
55-70 hours	81		17.16%
Over 70 hours	317		67.16%
Invalid	5		1.06%
Total questionnaires	472		
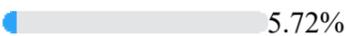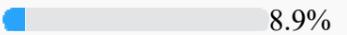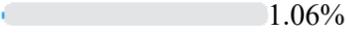
6. The type of house you live in： [Single choice questions]

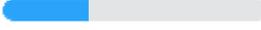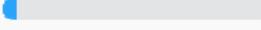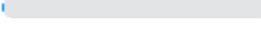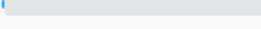| Option	Subtotal	Proportion	
Traditional Historic Stilt House in North Guangxi （Pile-Dwelling）	134		28.39%
Traditional Historic Semi-Stilt House in North Guangxi	172		36.44%
Reinforced Concrete Building	163		34.53%
Invalid	3		0.64%
Total questionnaires	472		
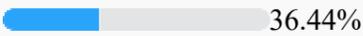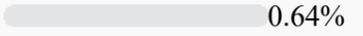
7. Do you think it is necessary for the house to be raised on stilts [Scale questions]
Average score：0.71

Option	Subtotal	Proportion	
There must be	117		24.79%
It is better for	157		33.26%
No idea	144		30.51%
It is not necessary to	40		8.47%
There must be no	9		1.91%
Invalid	5		1.06%
Total questionnaires	472		
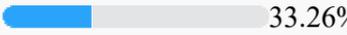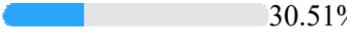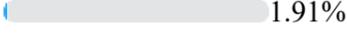
8. Do you think it is necessary for the house of the entrance corridor？ [Scale questions]

Average score：0.75

Option	Subtotal	Proportion
There must be	108	22.88%
It is better for	171	36.23%
No idea	156	33.05%
It is not necessary to	26	5.51%
There must be no	6	1.27%
Invalid	5	1.06%
Total questionnaires	472	
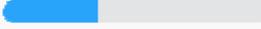
9. Do you think it is necessary for the house of the fire pool?   [Scale questions]

Average score：0.39

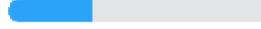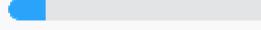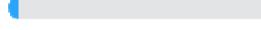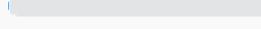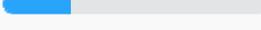| Option	Subtotal	Proportion
There must be	72	15.25%
It is better for	149	31.57%
No idea	154	32.63%
It is not necessary to	71	15.04%
There must be no	21	4.45%
Invalid	5	1.06%
Total questionnaires	472	
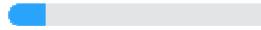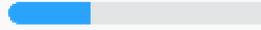
10. How many bedrooms are there?   [Single choice questions]

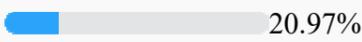| Option	Subtotal	Proportion
1	20	4.24%
2	36	7.63%
3	68	14.41%
4	124	26.27%
5	64	13.56%
6	38	8.05%
Over 6	115	24.36%
Invalid	7	1.48%
Total questionnaires	472	
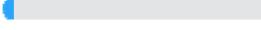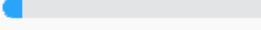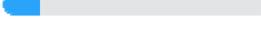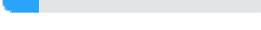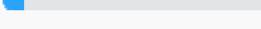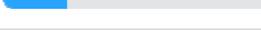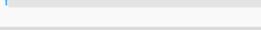
11. What's the orientation and number of windows in your house：   [Multiple choice questions]

The title \ options	None	East	South	West	North	Invalid
Number and orientation	6(1.27%)	203(43.01%)	325(68.86%)	191(40.47%)	131(27.75%)	8(1.69%)

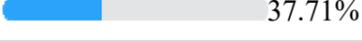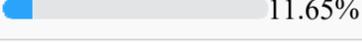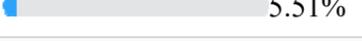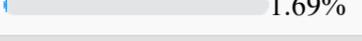12. Do you think the individual control of the environment, including indoor air quality, thermal, lighting and acoustic environment, is important for you：   [Scale questions]

Average score：0.75

Option	Subtotal	Proportion
No, it is not important	7	1.48%
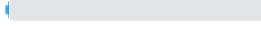
No idea	99		20.97%
Yes, it is important	350		74.15%
Invalid	16		3.39%
Total questionnaires	472		

13. What was your activity status during the first 30 minutes of filling out the questionnaire?　　[Single choice questions]

Option	Subtotal	Proportion	
Lying	10		2.12%
Site	195		41.31%
Occasionally walk	178		37.71%
Standing	55		11.65%
Strenuous exercise	26		5.51%
Invalid	8		1.69%
Total questionnaires	472		
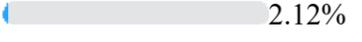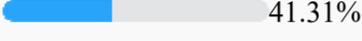
14. Physical parameters when filling in the questionnaire：
0.1 meters in height　　[Matrix text questions]
15. Physical parameters when filling in the questionnaire：
0.6 meters in height　　[Matrix text questions]
16. Physical parameters when filling in the questionnaire：
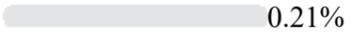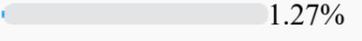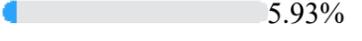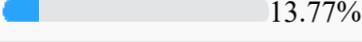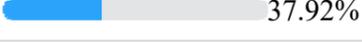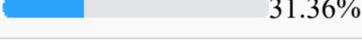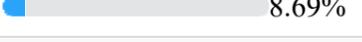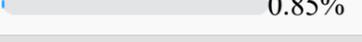1.1 meters in height　　[Matrix text questions]

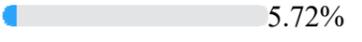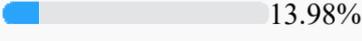17. How satisfied are you with the overall indoor thermal environment in terms of temperature, humidity, wind speed etc.?　　[Scale questions]
Average score：1.19

Option	Subtotal	Proportion	
Very dissatisfied	1		0.21%
2	6		1.27%
3	28		5.93%
4	65		13.77%
5	179		37.92%
6	148		31.36%
Very satisfied	41		8.69%
Invalid	4		0.85%
Total questionnaires	472		

18. How satisfied are you with the indoor air quality in terms of freshness, cleanliness, odor etc.?　　[Scale questions]
Average score：1.18
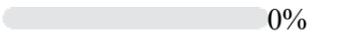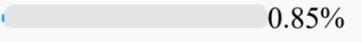
Option	Subtotal	Proportion	
Very dissatisfied	0		0%
2	4		0.85%
3	27		5.72%
4	66		13.98%
5	202		42.8%
6	123		26.06%
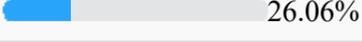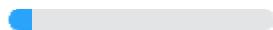
Very satisfied	46		9.75%
Invalid	4		0.85%
Total questionnaires	472		

19. How satisfied are you with the current light environment in terms of glare prevention, brightness etc?   [Scale questions]
Average score：0.95

Option	Subtotal	Proportion	
Very dissatisfied	4		0.85%
2	10		2.12%
3	59		12.5%
4	58		12.29%
5	180		38.14%
6	116		24.58%
Very satisfied	42		8.9%
Invalid	3		0.64%
Total questionnaires	472		

20. How satisfied are you with the acoustic environment in terms of noise, privacy of conversation etc.?   [Scale questions]
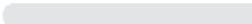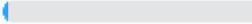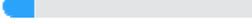**Average score：0.53**

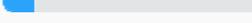| Option	Subtotal	Proportion	
Very dissatisfied	4		0.85%
2	38		8.05%
3	85		18.01%
4	73		15.47%
5	138		29.24%
6	100		21.19%
Very satisfied	28		5.93%
Invalid	6		1.27%
Total questionnaires	472		

21. How satisfied are you with the overall indoor environment by overall consideration of indoor thermal environment, the indoor air quality, the light environment, the acoustic environment in winter?   [Scale questions]
Average score：1.13

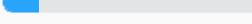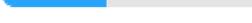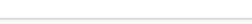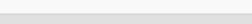| Option	Subtotal	Proportion	
Very dissatisfied	0		0%
2	7		1.48%
3	27		5.72%
4	72		15.25%
5	188		39.83%
6	140		29.66%
Very satisfied	35		7.42%
Invalid	3		0.64%
Total questionnaires	472		

22. How satisfied are you by only considering the current thermal comfort (summer)?   [Scale questions]
Average score：0.9

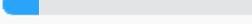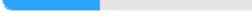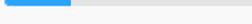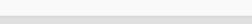| Option	Subtotal	Proportion
Very dissatisfied	2	0.42%
2	13	2.75%
3	59	12.5%
4	57	12.08%
5	200	42.37%
6	105	22.25%
Very satisfied	34	7.2%
Invalid	2	0.42%
Total questionnaires	472	
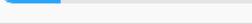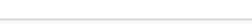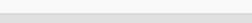
23. How satisfied are you by only consideration of the air quality?   [Scale questions]
Average score：1.12
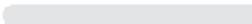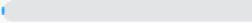
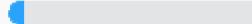| Option	Subtotal	Proportion
Very dissatisfied	1	0.21%
2	6	1.27%
3	36	7.63%
4	66	13.98%
5	189	40.04%
6	115	24.36%
Very satisfied	51	10.81%
Invalid	8	1.69%
Total questionnaires	472	
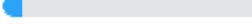
24. How satisfied are you by only consideration of the light environment (glare prevention, brightness) of the room?   [Scale questions]
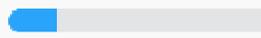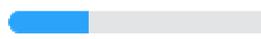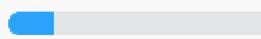**Average score：0.89**
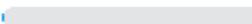
Option	Subtotal	Proportion
Very dissatisfied	6	1.27%
2	8	1.69%
3	59	12.5%
4	65	13.77%
5	175	37.08%
6	123	26.06%
Very satisfied	29	6.14%
Invalid	7	1.48%
Total questionnaires	472	
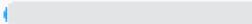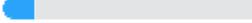
25. How satisfied are you with the acoustic environment only?   [Scale questions]
Average score：0.44
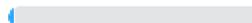
Option	Subtotal	Proportion
Very dissatisfied	10	2.12%
2	30	6.36%

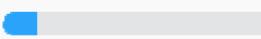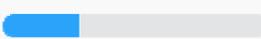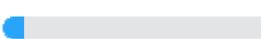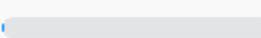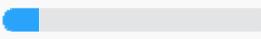|			
3	85		18.01%
4	89		18.86%
5	146		30.93%
6	86		18.22%
Very satisfied	21		4.45%
Invalid	5		1.06%
Total questionnaires	472		
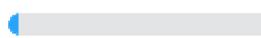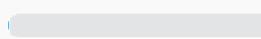
26. How satisfied are you with the current living environment by consideration of space and structural safety?   [Scale questions]
Average score：1.22
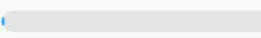
Option	Subtotal	Proportion	
Very dissatisfied	0		0%
2	4		0.85%
3	18		3.81%
4	62		13.14%
5	209		44.28%
6	137		29.03%
Very satisfied	38		8.05%
Invalid	4		0.85%
Total questionnaires	472		
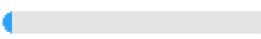
27. How satisfied are you with the indoor thermal environment for a whole year?   [Scale questions]
Average score：0.85
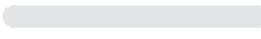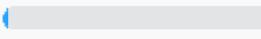
Option	Subtotal	Proportion	
Very dissatisfied	2		0.42%
2	13		2.75%
3	60		12.71%
4	66		13.98%
5	183		38.77%
6	119		25.21%
Very satisfied	23		4.87%
Invalid	6		1.27%
Total questionnaires	472		
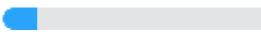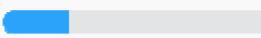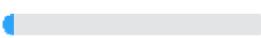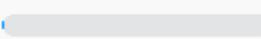
28. How satisfied are you with the ventilation of your house?   [Scale questions]
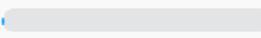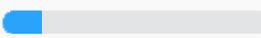**Average score：1.15**

Option	Subtotal	Proportion	
Very dissatisfied	0		0%
2	5		1.06%
3	30		6.36%
4	72		15.25%
5	193		40.89%
6	117		24.79%
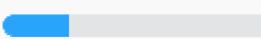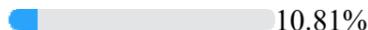
Very satisfied	51		10.81%
Invalid	4		0.85%
Total questionnaires	472		
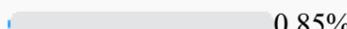
29. How satisfied are you with the illumination of your dwelling?　　[Scale questions]
Average score： 0.85

Option	Subtotal	Proportion	
Very dissatisfied	7		1.48%
2	10		2.12%
3	64		13.56%
4	62		13.14%
5	173		36.65%
6	125		26.48%
Very satisfied	27		5.72%
Invalid	4		0.85%
Total questionnaires	472		
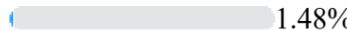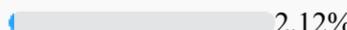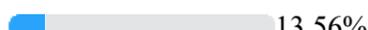
30. How satisfied are you with sound insulation of your dwelling?　　[Scale questions]
Average score： 0.51

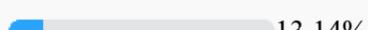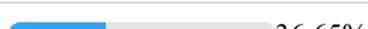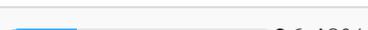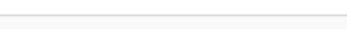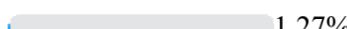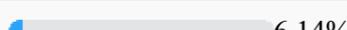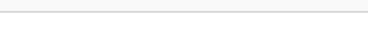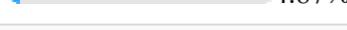| Option	Subtotal	Proportion	
Very dissatisfied	6		1.27%
2	29		6.14%
3	87		18.43%
4	84		17.8%
5	142		30.08%
6	94		19.92%
Very satisfied	23		4.87%
Invalid	7		1.48%
Total questionnaires	472		

31. How satisfied are you with the overall living environment of your village (air quality, facility convenience, neighborhood relationship)?　　[Scale questions]
Average score： 1.14
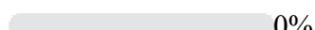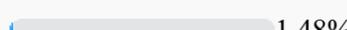
Option	Subtotal	Proportion	
Very dissatisfied	0		0%
2	7		1.48%
3	19		4.03%
4	80		16.95%
5	187		39.62%
6	144		30.51%
Very satisfied	29		6.14%
Invalid	6		1.27%
Total questionnaires	472		
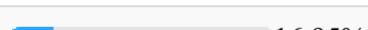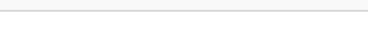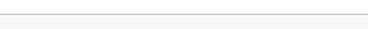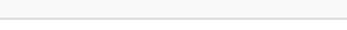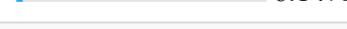
32. In terms of thermal comfort, how do you feel now?   [Scale questions]
Average score：0.82

Option	Subtotal	Proportion
Cold	0	0%
Cool	8	1.69%
Slightly cool	14	2.97%
Neutral	151	31.99%
Slightly warm	192	40.68%
Warm	89	18.86%
Hot	15	3.18%
Invalid	3	0.64%
Total questionnaires	472	

33. Do you think the current indoor thermal environment is acceptable：   [Scale questions]
Average score：1.03

Option	Subtotal	Proportion
Clearly unacceptable	1	0.21%
2	4	0.85%
3	31	6.57%
4	94	19.92%
5	192	40.68%
6	103	21.82%
Clearly acceptable	41	8.69%
Invalid	6	1.27%
Total questionnaires	472	

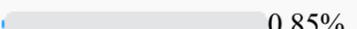34. You want the indoor temperature to become now   [Scale questions]
Average score：0.73

Option	Subtotal	Proportion
Warm more	2	0.42%
Remain the same	123	26.06%
Cool more	341	72.25%
Invalid	6	1.27%
Total questionnaires	472	

35. Your comfort evaluation of indoor thermal environment (taking temperature, humidity, wind sensation into consideration)   [Scale questions]
Average score：0.76

Option	Subtotal	Proportion
Be hard to bear	6	1.27%
Very uncomfortable	24	5.08%
Uncomfortable	118	25%
A little uncomfortable	249	52.75%
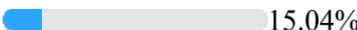
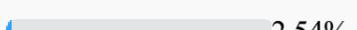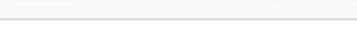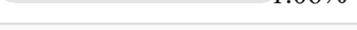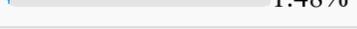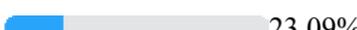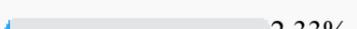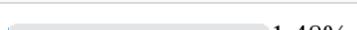|			
Comfortable	71		15.04%
Invalid	4		0.85%
Total questionnaires	468		

36. What measures are you using now to improve your comfort level: [Multiple choice questions]

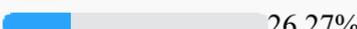| Option	Subtotal	Proportion	
Shade from the sun (avoid too much sun)	30		6.36%
Windows that can be switched on and off	272		57.63%
Room temperature controller	5		1.06%
Electric heater	12		2.54%
Humidifier	10		2.12%
Air conditioner	181		38.35%
Fan	411		87.08%
Increase or decrease in clothes	123		26.06%
The above are no	5		1.06%
Others：	7		1.48%
Invalid	6		1.27%
Total questionnaires	472		
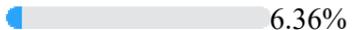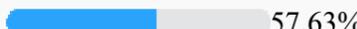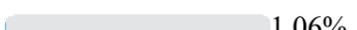
37. Your assessment of the wind in the room: [Scale questions]
Average score：1.06

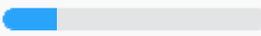| Option	Subtotal	Proportion	
There is no wind	102		21.61%
There is a slight wind sensation	243		51.48%
There is a distinct wind sensation	109		23.09%
There is a strong wind feeling	11		2.33%
Invalid	7		1.48%
Total questionnaires	465		
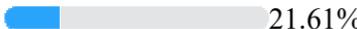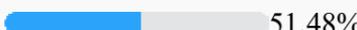
38. Your assessment of the intensity of odors in the room: [Scale questions]
Average score：-0.57

Option	Subtotal	Proportion	
No odor	274		58.05%
Slight odor	124		26.27%
Medium odor	54		11.44%
A strong odor	9		1.91%
An unbearable odor	1		0.21%
Invalid	10		2.12%
Total questionnaires	462		
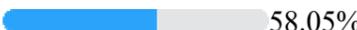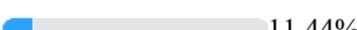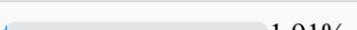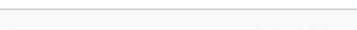
39. Your assessment of the light environment (brightness):   [Scale questions]
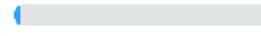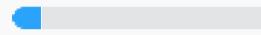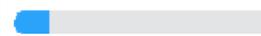**Average score：0.08**

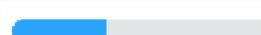| Option	Subtotal	Proportion
Too dark	11	2.33%
Slightly dark	99	20.97%
Neutral	201	42.58%
Slightly bright	150	31.78%
Too bright	4	0.85%
Invalid	7	1.48%
Total questionnaires	465	
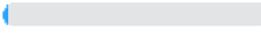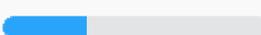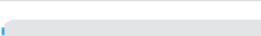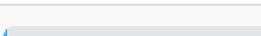
40. Regarding the indoor environment you are in, the environmental factors that you feel most affect your satisfaction, satisfaction and dissatisfaction are respectively： [Multiple choice questions]
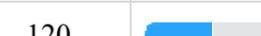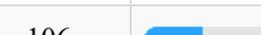
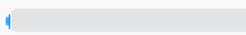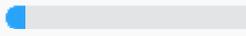| The title \ options	Temperature	Humidity	Wind speed	Acoustic	Light	air quality	Others	Invalid
Most impact on overall satisfaction	279(59.11%)	166(35.17%)	157(33.26%)	184(38.98%)	240(50.85%)	215(45.55%)	19(4.03%)	79(16.74%)
The most satisfied	224(47.46%)	162(34.32%)	138(29.24%)	124(26.27%)	217(45.97%)	208(44.07%)	5(1.06%)	14(2.97%)
The most unsatisfied	98(20.76%)	84(17.8%)	77(16.31%)	203(43.01%)	118(25%)	57(12.08%)	33(6.99%)	32(6.78%)

41. Please mark your daily timetable in the form below.   [Matrix text questions]

42. If you have a fan, a heater, an air conditioner, how to use it in summer and winter? If no, please skip this question.
How would you open it?   [Multiple choice questions]

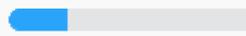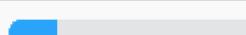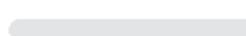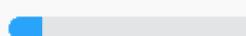| Option	Subtotal	Proportion
Never opening	15	3.18%
Always opening	50	10.59%
When entering the room	68	14.41%
When feeling hot/cold	373	79.03%
When there is a guest	168	35.59%
When going to bed	118	25%
At certain time	2	0.42%
Others	1	0.21%
Invalid	25	5.3%
Total questionnaires	472	
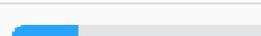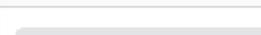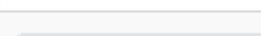
43. If you have a fan, a heater, an air conditioner, how to use it in summer and winter? If no, please skip this question.
How would you close it?   [Multiple choice questions]

Option	Subtotal	Proportion
Never closing	7	1.48%
When leaving the room	93	19.7%
When leaving home	140	29.66%
When feeling hot/cold	353	74.79%
Before sleeping	120	25.42%
After getting up	106	22.46%
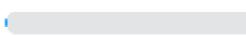
At certain time	4		0.85%
After opening for ___ hours	7		1.48%
Others	0		0%
Invalid	36		7.63%
Total questionnaires	472		

44. How do you operate electric cooling and heating equipment (fan, air conditioner, oil heater, electric heater, heater)? If no, please skip this question.
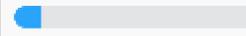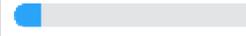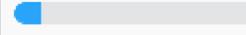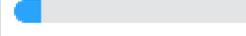[Multiple choice questions]

Option	Subtotal	Proportion	
Never opening	27		5.72%
Turn it on when entering the room and turn it off when leaving the room	109		23.09%
Turn it on when feeling hot/cold，turn it off when leaving the room	360		76.27%
Turn it on when you wake up and turn it off when you're dressed	89		18.86%
Others	2		0.42%
Invalid	60		12.71%
Total questionnaires	472		
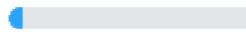
45. Can windows of your building (living room/bedroom1, 2, 3) be opened?
If yes, please answer this question-how do you open or close it in winter; if no, please skip this question.

How would you open it? [Multiple choice questions]

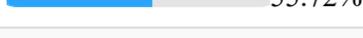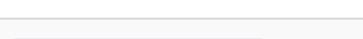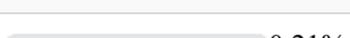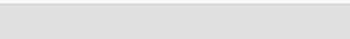| Option	Subtotal	Proportion	
Never opening	40		8.47%
Always opening	50		10.59%
When leaving home	52		11.02%
After getting up	51		10.81%
When entering the room	51		10.81%
When AC off	91		19.28%
When feeling hot	248		52.54%
When smelly or stuffy indoor	325		68.86%
When sunny or warm outdoor	253		53.6%
At certain time	2		0.42%
Others	2		0.42%
Invalid	18		3.81%
Total questionnaires	472		
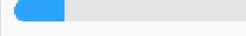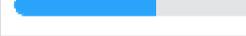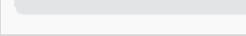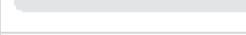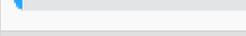
46. Can windows of your building (living room/bedroom1, 2, 3) be opened?
If yes, please answer this question-how do you open or close it in summer; if no, please skip this question.

How would you open it?
[Multiple choice questions]
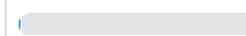
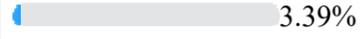| Option	Subtotal	Proportion	
Never opening	4		0.85%
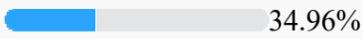
Always opening	165		34.96%
When leaving home	39		8.26%
After getting up	48		10.17%
When entering the room	65		13.77%
When AC off	90		19.07%
When feeling hot	263		55.72%
When smelly or stuffy indoor	275		58.26%
When sunny or warm outdoor	174		36.86%
At certain time	1		0.21%
Others	1		0.21%
Invalid	16		3.39%
Total questionnaires	472		
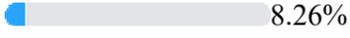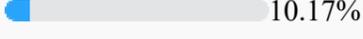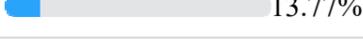
47. Can windows of your building (living room/bedroom1, 2, 3) be opened?
   If yes, please answer this question-how do you open or close it in winter; if no, please skip this question.

How would you close it?
[Multiple choice questions]

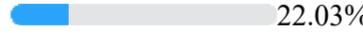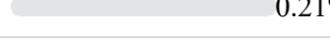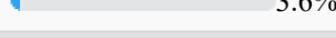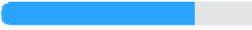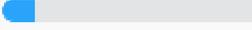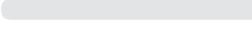| Option	Subtotal	Proportion	
Never closing	16		3.39%
When leaving home	103		21.82%
Before sleeping	114		24.15%
When entering the room	86		18.22%
When AC on	164		34.75%
When feeling cold	288		61.02%
Bad outdoor environment（wind/rain/dust weather/noisy）	292		61.86%
At certain time	0		0%
After opening for　hours	3		0.64%
Others	1		0.21%
Invalid	16		3.39%
Total questionnaires	472		
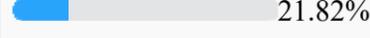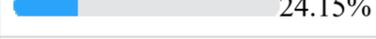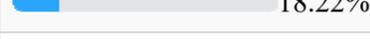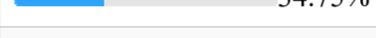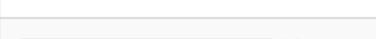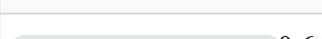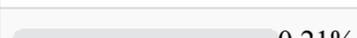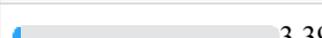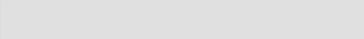
48. When will you turning on lighting devices in living room and bedroom?

[Multiple choice questions]

Option	Subtotal	Proportion	
Turning on once entering the room	104		22.03%
When it's too dark	419		88.77%
Others	1		0.21%
Invalid	17		3.6%
Total questionnaires	472		

49. When will you turning off lighting devices in living room and bedroom?

Option	Subtotal	Proportion
When leaving room	259	54.87%
Before sleeping	349	73.94%
When bright during daytime	354	75%
When watching TV or a movie	61	12.92%
Others	2	0.42%
Invalid	13	2.75%
Total questionnaires	472	
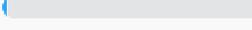
End of this survey, thanks for your participation.