Appendices

Appendix A. Survey Instrument

I. What	t is your age?
2. What	t is your gender?
•	Male
•	Female
•	Other
•	Prefer not to tell
3. What	t is your highest educational level?
•	Less than high school
•	High school or GED
•	Some college or associate degree
•	Bachelor's degree
•	Master's degree
	Professional or doctorate
	many people, including you, do you have in your household? t is your zip code?
6 What	t is your current housing status?
o. wiiai ●	Renting an apartment
	Renting a house
•	Owning an apartment
•	Owning a house
•	Renting/Owning a mobile home
•	Homeless
•	Other (Please specify)
7. What	t is your annual household income?
•	Less than \$25,000
•	\$25,000 - \$49,999
•	\$50,000 - \$74,999
•	\$75,000 - \$99,999
•	100,000 - &149,999

- 8. What is your current employment status?
 - Full-time job
 - Part-time job
 - Self-employment

\$150,000 or more Prefer not to say

• No employment

Appendix for Xie, M., & Chen, L. (2024). *Social Vulnerability of Refugees to Climate Disasters in the Texas Panhandle*. (Natural Hazards Center Public Health Disaster Research Report Series, Report 43). Natural Hazards Center, University of Colorado Boulder. https://hazards.colorado.edu/public-health-disaster-research/social-vulnerability-of-refugees-to-climate-disasters-in-the-texas-panhandle

9. What is your country of origin (i.e., which country are you from)?		
10. On a scale of 1 to 10, 1 indicates not being able to speak English and 10 inc proficiency. How many points do you rate yourself on English proficiency?		level of English
 11. Which languages do you speak fluently? Place a check next to all that apply Arabic Burmese English French Hindi Mandarin Portuguese Spanish Swahili Other (Please write in) Prefer not to say 12. How many years and months have you been in the U.S.? 13. Are you or have you previously been involved in the following groups? 	y.	
	Yes	No
Business civic groups like Kiwanis or Rotary		
Religious organizations		
Charity or volunteer organizations		
Ethnic or racial organizations		

8 4		
Religious organizations		
Charity or volunteer organizations		
Ethnic or racial organizations		
Neighborhood associations		
PTA or other school-related organizations		
Political clubs or organizations		
Social clubs such as card playing, music, hobbies, book clubs, and so forth;		
Youth groups like scouts or children's sports		
	•	•

To what extent do you agree with the following statements?

To what extent do you agree with t				NT1/	C1! - 1-41	M - 1 1	C4 1
	Strongly	Moderately	Slightly	Neutral/	Slightly	Moderately	Strongly
14.7	disagree	disagree	disagree	don't know	agree	agree	agree
14. In my neighborhood the							
buildings and homes are well							
maintained							
15. There are interesting things to							
do in my neighborhood							
16. There is a lot of noise in my							
neighborhood							
17. My neighborhood offers							
many opportunities to be							
physically active							
18. There are stores within							
walking distance of my home							
19. In my neighborhood, the							
streets and sidewalks are in good							
condition							
20. I feel safe walking in my							
neighborhood during the evening							
21. My neighborhood is safe from							
crime							
22. Violence is a problem in my							
neighborhood							
23. It is easy to purchase fresh							
fruits and vegetables in my							
neighborhood							
24. There is a large selection of							
fresh fruits and vegetables							
available in my neighborhood							
25. The fresh produce in my							
neighborhood is of high quality							
26. People around here are							
willing to help their neighbors							
27. This is a close-knit or unified							
neighborhood							
28. People in this neighborhood							
can be trusted							
can be trusted						1	

Note: In the following sections of this questionnaire, "climate-related disaster" mainly refers to any events that caused by unusually severe weather or climate conditions and generate devastating impacts on communities and households, such as floods, wildfires, tornadoes, hurricanes, ice storm, thunderstorm, drought, heat waves, extreme cold, cyclones, tsunami, and high winds.

Below are some of the impacts of climate-related disasters. Have they affected you or people that you know? Please select all that apply for each row.

	Affected me	Affected people that I know	Not affected in anyway	Don't know
29. Destructive flood (caused property damage)				
30. Health impacts from heat waves (dehydration, heat stroke, etc.)				
31. Health impacts from cold temperatures (frost bite, etc.)				
32. Disease caused by ticks or mosquitos (Lyme, West Nile,				
Zika, etc.)				
33. Damaging winds (caused property damage or injuries)				
34. Destructive droughts				
35. An event not listed (please describe)				

Have there been less, about the same, or more of each of the following in your community since you moved there?

	Less	About the	More	Don't know
	Less	same	1,1016	Bon villion
36. Heavy rain				
37. Floods				
38. Tornados				
39. Droughts				
40. Heat waves				
41. Extremely cold temperatures				
42. Severe wind				
43. Wildfires				
44. Ticks				
45. Mosquitoes				

46. In the past year, what information have you read, seen, or heard about how to get better prepared for a climate-related disaster? (Select all that apply.)

- Sign up for alerts and warnings
- Make a Plan
- Save for a rainy day
- Practice emergency drills or habits
- Test family communication plan
- Safeguard documents
- Plan with neighbors
- Assemble or update supplies
- Get involved in your community
- Make your home safer
- Know evacuation routes
- Document and insure property
- None of the above
- Don't know
- Prefer not to answer

47. Within the past 6 months, how actively have you **looked for** information about the health risks caused by climate-related disasters from the following sources?

	Not at all	Occasionally	Sometimes	A lot
TV				
Radio				
Newspaper				
Social media (e.g., Twitter, Snapchat)				
Online search engines (e.g., Google)				
Families				
Churches				
Refugee serving organization				
Case workers				
Governments' websites (e.g., Amarillo Department of				
Public Health)				
Other: please specify				

48. Within the past 6 months, how actively have you **paid attention to** information about the health risks caused by climate-related disasters from the following sources?

	Not at all	Occasionally	Sometimes	A lot
TV				
Radio				
Newspaper				
Social media (e.g., Twitter, Snapchat)				
Online search engines (e.g., Google)				
Families				
Churches				
Refugee serving organization				
Case workers				
Governments' websites (e.g., Amarillo Department of Public Health)				
Other: please specify		•		•

49. Over the next few decades, how do you think that the number or severity of the following will change in your community?

	Will	Will stay about the	Will	Don't know
	decrease	same	increase	
Destructive floods				
Dangerous heat waves				
Dangerously cold temperatures				
Diseases caused by ticks or mosquitoes				
(Lyme, Zika, West Nile, etc.)				
Destructive droughts				
Damaging winds or tornadoes				
Other: please specify				

50. Thinking about preparing yourself for a climate-related disaster, which of the following best represents your degree of preparedness?

- I am NOT prepared, and I do not intend to prepare in the next year
- I am NOT prepared, but I intend to start preparing in the next year
- I am NOT prepared, but I intend to get prepared in the next six months
- I have been prepared for LESS than a year
- I have been prepared for MORE than a year and I continue preparing
- Don't know
- Prefer not to answer

To what extent do you agree with the following statements?

, ,	Strongly	Moderately	Slightly	Neutral/	Slightly	Moderately	Strongly
	disagree	disagree	disagree	don't know	agree	agree	agree
51. I believe that the health							
risks caused by climate-related							
disasters are severe.							
52. I believe that the health							
risks caused by climate-related							
disasters are serious.							
53. I believe that the health							
risks caused by climate-related							
disasters are significant.							
54. I am at risk for being							
affected by the health risks							
caused by climate-related							
disasters.							
55. It is likely that I will be							
affected by the health risks							
caused by climate-related							
disasters.							
56. It is possible that I will be							
affected by the health risks							
caused by climate-related							
disasters.							

To what extent do you agree with the following statements?

	Strongly	Moderately	Slightly	Neutral/	Slightly	Moderately	Strongly
	disagree	disagree	disagree	don't know	agree	agree	agree
57. Simple things that I do at							
home can reduce the risks that							
extreme weather events (e.g.,							
flood, severe storm, drought, heat							
wave, etc.) pose to my household.							
58. Humans can do little to							
prepare for the impact of future							
extreme weather events.							
59. Government policy and							
programs can reduce the risks							
that future extreme weather							
events pose to my community.							
60. Advances in science and	•		_				
technology will solve almost							
every problem humans face.							

To what extent do you agree with the following statements?

	Strongly	Moderately	Slightly	Neutral/	Slightly	Moderately	Strongly
	disagree	disagree	disagree	don't know	agree	agree	agree
61. I am able to sign up for							
Amarillo Weather and Health							
Alerts to prevent the health risks							
caused by climate-related							
disasters.							
62. It is easy to sign up for							
Amarillo Weather and Health							
Alerts to prevent the health risks							
caused by climate-related							
disasters.							
63. I can sign up for Amarillo							
Weather and Health Alerts to							
prevent the health risks caused by							
climate-related disasters.							

Appendix B. Statistical Tables

Table B1. Demographic Characteristics of Survey Respondents

Characteristic	n	M	SD	Min	Max
Age (years)	176	37.97	12.98	18	78
English proficiency (On a scale of 1-10)	158	3.88	3.08	0	10
Time of stay in the United States (months)	164	76.19	101.07	0.13	720
Household size	175	4.16	1.99	1	10
Gender (n = 177)	n	%			
Male	83	46.9			
Female	92	52.0			
Education (n = 161)	n	%			
Less than high school	37	20.9			
High school or GED	43	24.3			
Some college or associate degree	50	28.2			
Bachelor's degree	22	12.4			
Master's degree	5	2.8			
Professional or doctorate	4	2.3			
Annual Household Income (n = 130)	n	%			
Less than \$25,000	45	25.4			
\$25,000- \$49,999	36	20.3			
\$50,000- \$74,999	21	11.9			
\$75,000- \$99,999	7	4.0			
\$100,000- \$149,999	0	0			
\$150,000 or more	0	0			
Prefer not to say	21	11.9			
Housing Status (n = 174)	n	%			
Renting an apartment	67	37.9			
Renting a house	41	23.2			
Owning an apartment	1	0.6			
Owning a house	47	26.6			
Renting/owning a mobile home	3	1.7			
Homeless	2	1.1			
Other	13	7.5			
Employment Status (n = 168)	n	%			
Full-time employment	52	31.0			
Part-time employment	19	11.3			
Self-employment	2	1.2			
No employment	95	56.5			
Country or Area of Origin (n = 169)	n	%			
Cuba	92	54.4			

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Myanmar	51	30.2	
Thailand	5	3.0	
Mexico	3	1.8	
Afghanistan	2	1.2	
Congo	5	3.0	
Uganda	3	1.8	
Rwanda	2	1.2	
Kenya	3	1.8	
Nigeria	1	0.6	
Somalia	1	0.6	
Africa	1	0.6	

Note. M = mean. SD = standard deviation. Percentage refers to valid percentage.

Table B2. Variable Correlations

	1.	2.	3.	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Age	_																		
2. Gender	.34	-																	
3. Education	06	05	-																
4. Household size	.05	.08	18*	-															
5. Housing status	.10	.06	09	.23**	-														
6. Income	05	03	.12	.02	.16	-													
7. Employment	14	.10	.29**	12	05	.08	-												
8. Neighborhood characteristics	.13	.13	.04	21*	19*	01	.02	-											
9. Social and community context	.05	.25**	05	17*	.12	.04	06	.54**	-										
10. English proficiency	28**	07	.15	.16*	01	06	16*	.05	.06	-									
11. Time of stay in the U.S.	.06	03	23**	.30**	.17*	11	48**	25**	01	.43**	-								
12. Group involvement	.01	01	.14	.05	.22**	.12	13	18	17*	.22*	.40**	-							
13. Information seeking	07	.05	.40	.11	.03	.09	09	05	.05	.11	.15	.22**	-						
14. Information scanning	07	.04	04	.07	.06	.09	06	.09	.10	.11	.08	.21**	.83**	=					
15. Perceived risk severity	.11	17*	.25**	.02	01	02	.01	.18*	04	.10	03	.04	.06	.05	-				
16. Perceived risk susceptibility	.18*	16*	.00	.10	.11	13	02	.07	.09	.02	.01	.03	.16*	.15	.54**	-			
17. Response efficacy	.10	14	.06	.09	.07	.02	01	.21*	.12	.08	04	01	02	.01	.40**	.31**	-		
18. Self-efficacy	.01	03	.10	.07	.03	.10	.24**	.13	.23**	.02	13	.04	.15	.17*	.30**	.28**	.44**	-	
19. Disaster preparedness	10	.09	00	18*	08	.12	.21*	.17	.13	04	.16	04	.19*	.27**	.02	04	.13	.01	

Table B3. Summary of Hierarchical Linear Regression Analysis for Variables Predicting Perceived Susceptibility to the Health Risks Caused by Climate-related Disasters

		Mod	el 1	Model 2				Model	. 3		Mod	el 4		Model 5	
Variable	В	β	t	В	β	t	В	β	t	В	β	t	В	β	t
Age	.03	.28	2.67**	.04	.33	3.16**	.04	.33	2.89**	.04	.35	3.21**	.04	.37	3.46***
Gender	02	33	-3.20**	-1.04	34	-3.33**	-1.03	34	-3.30**	10	34	-3.48***	-	38	-3.78***
Time in the U.S.	00	03	-0.27	00	10	-0.84	.00	.10	0.75	00	04	-0.34	1.15	13	-0.96
Income				15	19	-1.84	15	19	-1.79	27	34	-3.07**	27	34	-3.16**
Employment status				22	20	1.76	.22	20	1.66	.20	.18	1.64	.19	.18	1.64
Education							.01	.01	0.07	.02	.01	0.10	09	08	-0.62
English proficiency							00	01	-0.41	.04	.07	0.56	.02	.05	0.39
Neighborhood characteristics										29	17	1.65	24	14	-1.16
Housing status										.29	.34	2.85**	.23	.27	2.18^{*}
Household size										03	03	-0.31	.00	.00	0.03
Social and community													04	03	-0.29
context Group Involvement													.32	.29	2.57*
\mathbb{R}^2	.18			.24			.24			.38			.43		
Adjusted R ²	.15			.19			.17			.28			.33		
R ² change	.18			.06			.00			.14			.06	for all a sile.	
F for change in R ²	5.55*			2.96***			0.00^{*}			4.94**	P		3.40	r-r-r'	

^{*} p < .05. ** p < .01. *** p < .001.

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