A Comparison of the Experiences of Harris County, Texas Residents During Hurricanes Rita and Ike

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Survey

Hurricane Rita 2005

September 29 – October 3, 2005

Random digit dial sample of 405 Harris County adults

Error rate: +/- 4.8%

Hurricane Ike 2008

September 23 – October 24, 2008

Random digit dial sample of 1,203 Harris County adults

Error rate: +/- 2.5%

Research Questions

- What was the response of Harris County residents to hurricanes Rita and Ike? Who evacuated, when did they evacuate and who stayed?

- What factors shaped, influenced and determined Harris County residents' response to hurricanes Rita and Ike?

- What actions did Harris County residents take in preparation for Hurricane Ike?

- What will Harris County residents do in the future when faced with a category 4 hurricane?

	Live *outside* evacuation area		Live *inside* evacuation area	
	Rita	**Ike**	**Rita**	**Ike**
Evacuated	36%	19%	63%	39%
Attempted to evacuate	4%	1%	6%	2%
Stayed	60%	79%	31%	60%

Evacuation Experiences

	Real		Shadow	
	Rita	**Ike**	**Rita**	**Ike**
Day left				
3 days before landfall or earlier	34%	9%	30%	11%
2 days before	58%	52%	59%	34%
the day before	8%	35%	10%	44%
the day of or after	0%	2%	1%	9%
# vehicles				
same vehicle	46%	65%	62%	79%
several vehicles	53%	33%	32%	18%

Evacuation Experiences and Perceived Risks

	Real		Shadow		Stayed Correctly		Stayed Incorrectly		Total	
	Rita	Ike	Rita	Ike	Rita	Ike	Rita	Ike	Rita	Ike
Flood										
No or low risk	33%	50%	48%	51%	77%	74%	60%	76%	57%	68%
Some risk	24%	20%	30%	21%	16%	18%	20%	18%	22%	18%
High risk	43%	30%	22%	28%	7%	9%	20%	6%	22%	13%
Surge										
No or low risk	33%	59%	69%	65%	86%	86%	59%	85%	57%	81%
Some risk	28%	16%	23%	16%	9%	10%	21%	9%	22%	18%
High risk	39%	25%	7%	18%	5%	4%	20%	6%	22%	13%
Wind										
No or low risk	22%	23%	46%	35%	65%	47%	44%	26%	46%	43%
Some risk	37%	39%	33%	34%	26%	37%	34%	31%	32%	36%
High risk	41%	37%	21%	29%	9%	15%	22%	26%	22%	20%
Injury										
No or low risk	38%	69%	54%	74%	79%	89%	74%	93%	62%	86%
Some risk	28%	21%	36%	15%	17%	9%	13%	5%	24%	36%
High risk	35%	9%	11%	11%	3%	2%	13%	2%	15%	20%

Sources of Information

	Real		Shadow		Stayed Correctly		Stayed Incorrectly		Total	
	Rita	**Ike**	**Rita**	**Ike**	**Rita**	**Ike**	**Rita**	**Ike**	**Rita**	**Ike**
Friends/neighbors										
A great deal	23%	18%	8%	27%	4%	24%	1%	24%	4%	23%
Somewhat	50%	38%	38%	29%	27%	31%	10%	31%	27%	31%
A little	25%	11%	49%	15%	52%	16%	56%	16%	52%	16%
Not at all	3%	32%	5%	28%	17%	28%	32%	28%	17%	38%
Reliance on media										
Completely influenced decision	60%	46%	50%	44%	37%	32%	41%	36%	47%	35%
Relied on media & other information sources	29%	36%	39%	37%	36%	36%	22%	39%	33%	37%
Did not influence decision	11%	16%	11%	17%	27%	30%	37%	33%	20%	27%

Preparing for Ike

	Real Ike	Shadow Ike	Stayed Correctly Ike	Stayed Incorrectly Ike	Total Ike
Fill vehicle with gas					
Yes	97%	88%	87%	86%	88%
No	3%	12%	13%	14%	12%
Get batteries					
Yes	78%	73%	76%	78%	76%
No	22%	27%	23%	22%	24%
Buy additional food					
Yes	81%	75%	84%	85%	82%
No	19%	26%	16%	15%	18%
Buy bottled water					
Yes	84%	84%	87%	89%	87%
No	16%	16%	13%	11%	13%

Preparing for Ike

	Real Ike	Shadow Ike	Stayed Correctly Ike	Stayed Incorrectly Ike	Total Ike
Buy a generator					
Yes	16%	13%	12%	14%	12%
No	84%	87%	88%	86%	88%
Secure the outside of the home					
Yes	89%	71%	79%	87%	79%
No	11%	29%	21%	13%	21%
Trim trees					
Yes	12%	20%	22%	24%	21%
No	88%	80%	77%	76%	78%
Coordinate plans with others					
Yes	88%	76%	62%	72%	67%
No	12%	24%	37%	28%	33%

Logit Estimates for Evacuation Behavior: *Outside* Evacuation Area

A. Outside Evacuation Zone	Rita		Ike	
Variable	Coeff.	Std. Err.	Coeff.	Std. Err.
Perceived surge risk	-.024	.318	**.175**	**.096**
Perceived flood risk	.227	.244	**.368**	**.090**
Perceived wind risk	**.549**	**.204**	.075	.096
Kids	.024	.308	.112	.198
Age	**-.206**	**.110**	.076	.068
Anglo	.223	.316	-.010	.171
Media influence	**-.525**	**.191**	**-.460**	**.109**
Neighbors	**-1.100**	**.208**	.028	.075
Aware of evacuation zone	**-1.388**	**.374**	**-1.68**	**.230**
Constant	4.148	1.038	-.947	.530
Pseudo R-square	.228		.193	
% cases correctly predicted	75%		82%	
LR	125.5		954.0	
N	318		1,098	

Bold coefficients P <.01

Logit Estimates for Evacuation Behavior: *Inside* Evacuation Area

B. Inside Evacuation Zone	Rita		Ike	
Variable	Coeff.	Std. Err.	Coeff.	Std. Err.
Perceived surge risk	**.488**	**.304**	.284	.193
Perceived flood risk	-.209	.304	**.448**	**.177**
Perceived wind risk	.302	.291	-.024	.190
Kids	.266	.416	-.002	.390
Age	-.105	.144	.189	.140
Anglo	.257	.451	.150	.360
Media influence	**-.795**	**.246**	**-.722**	**.230**
Neighbors	**-.960**	**.257**	.012	.156
Aware of evacuation zone	**.987**	**.434**	**1.8**	**.400**
Constant	3.056	1.136	-1.8	1.0
Pseudo R-square	.283		.351	
% cases correctly predicted	84%		74%	
LR	69.9		22.0	
N	223		211	
Bold coefficients P <.01				

Rita Survey

If a category 4 hurricane threatened Houston would you evacuate Houston, try and find a safe place to stay in Houston other than your home or, remain in your home?

Ike Survey

Hurricane Ike was a category 2 hurricane. If a category 4 hurricane threatened Houston would you evacuate Houston, try and find a safe place to stay in Houston other than your home or, remain in your home?

If a Category 4 Hurricane Threatened Houston

	Real		Shadow		Stayed Correctly		Stayed Incorrectly		Total	
	Rita	Ike	Rita	Ike	Rita	Ike	Rita	Ike	Rita	Ike
Evacuate Houston	69%	97%	76%	91%	48%	69%	39%	76%	59%	75%
Find some-place safe in Houston	10%	1%	6%	3%	7%	2%	4%	4%	7%	3%
Stay in my home	13%	1%	14%	3%	34%	21%	43%	14%	25%	16%
Don't Know/ Refused	8%	1%	4%	2%	11%	8%	14%	7%	9%	6%