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Extreme Weather Communication
Preliminary Survey Report

UF

METHODOLOGY

Participants
Residents of hurricane states: Florida, Georgia, North Carolina, South Carolina, Alabama, Louisiana, Mississippi, and Texas

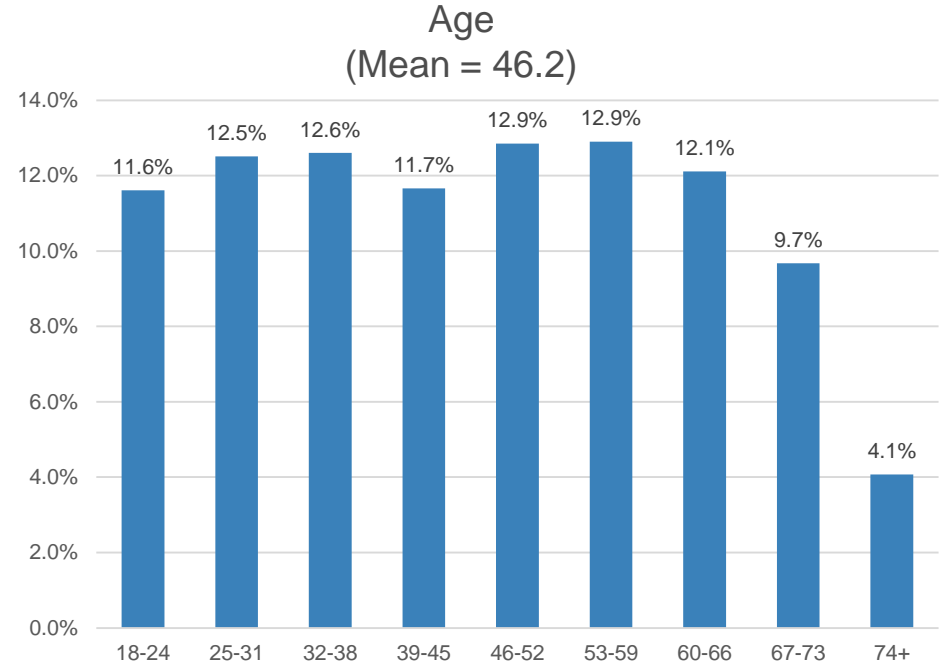**Pilot Online Survey**
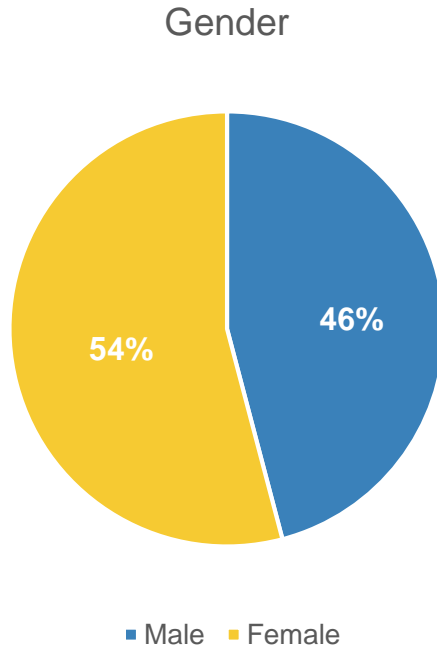100 participants from MTurk panel

Main Online Survey
A total of 2015 Qualtrics panelists

Demographic breakdown

1

What is the sample's demographic profile?
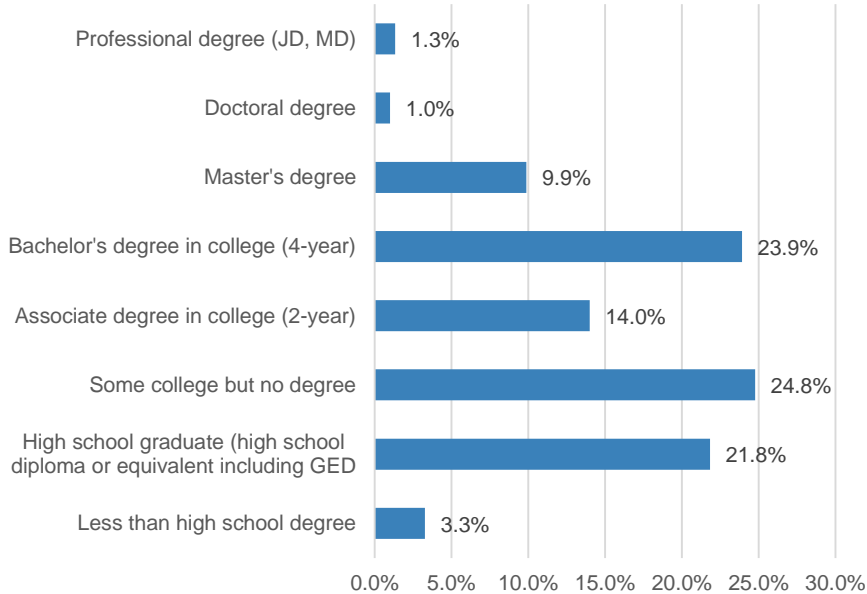How close do they live to coast lines?

The sample skewed female and represented all age groups

Gender

Male 46%
Female 54%

Age
(Mean = 46.2)

Age group	Percentage
18-24	11.6%
25-31	12.5%
32-38	12.6%
39-45	11.7%
46-52	12.9%
53-59	12.9%
60-66	12.1%
67-73	9.7%
74+	4.1%

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Most have at least high school education with 60+% Caucasians

Education

Professional degree (JD, MD)	1.3%
Doctoral degree	1.0%
Master's degree	9.9%
Bachelor's degree in college (4-year)	23.9%
Associate degree in college (2-year)	14.0%
Some college but no degree	24.8%
High school graduate (high school diploma or equivalent including GED	21.8%
Less than high school degree	3.3%

Race

Native Hawaiian or Pacific Islander	0.2%
Other	0.3%
American Indian or Alaska native	0.7%
Biracial	2.0%
Asian	5.2%
Black or African American	13.9%
Hispanic/Latino	16.3%
White/Caucasian	61.3%

Survey Sample demographics

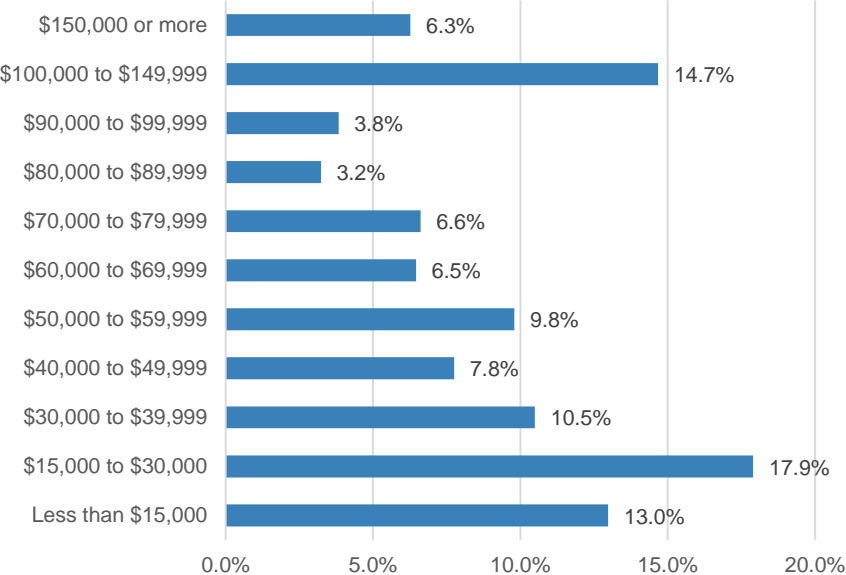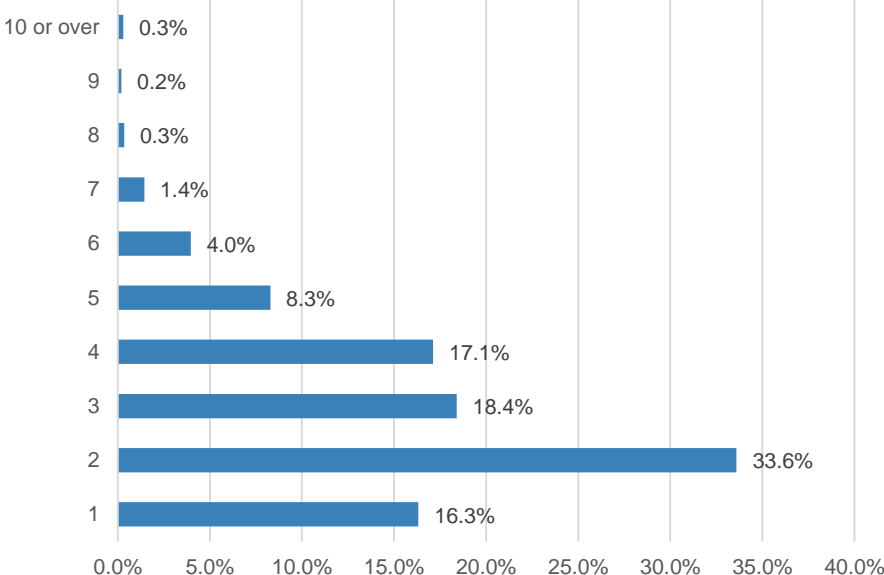UF | College of Journalism and Communications | UNIVERSITY of FLORIDA

Majority of sample lived in 2 – 4 person households with a diverse range of income levels

Income *4 missing cases

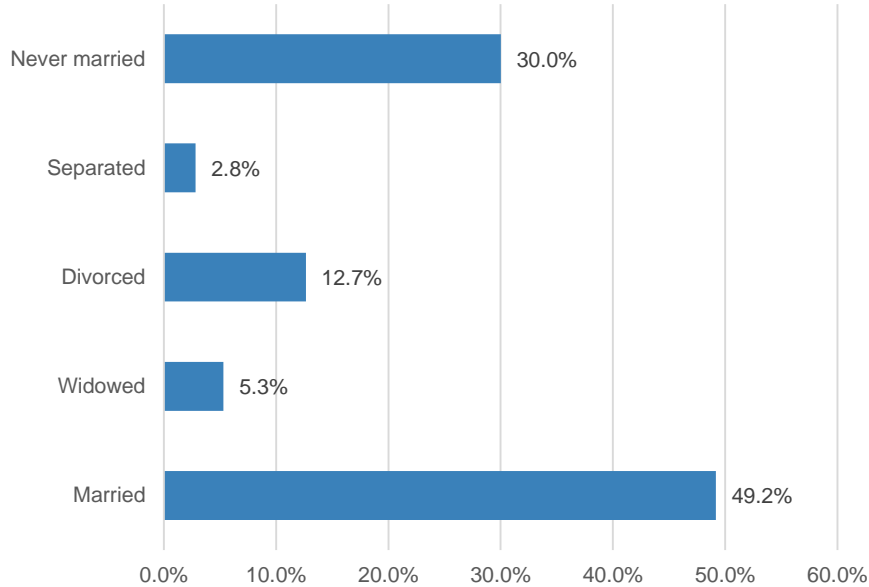| Income	Percentage
$150,000 or more	6.3%
$100,000 to $149,999	14.7%
$90,000 to $99,999	3.8%
$80,000 to $89,999	3.2%
$70,000 to $79,999	6.6%
$60,000 to $69,999	6.5%
$50,000 to $59,999	9.8%
$40,000 to $49,999	7.8%
$30,000 to $39,999	10.5%
$15,000 to $30,000	17.9%
Less than $15,000	13.0%

Household size

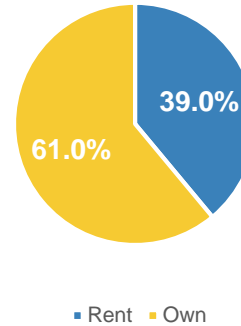| Household size	Percentage
10 or over	0.3%
9	0.2%
8	0.3%
7	1.4%
6	4.0%
5	8.3%
4	17.1%
3	18.4%
2	33.6%
1	16.3%

About half of the respondents were married and most were home and pet owners

Marital status

- Never married — 30.0%
- Separated — 2.8%
- Divorced — 12.7%
- Widowed — 5.3%
- Married — 49.2%

(axis: 0.0%, 10.0%, 20.0%, 30.0%, 40.0%, 50.0%, 60.0%)

Home ownership

- Rent: 39.0%
- Own: 61.0%

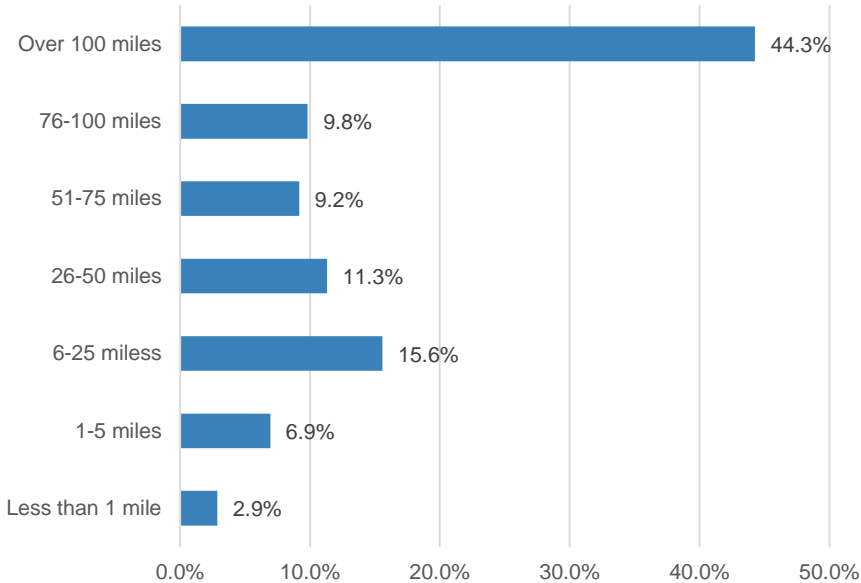■ Rent ■ Own
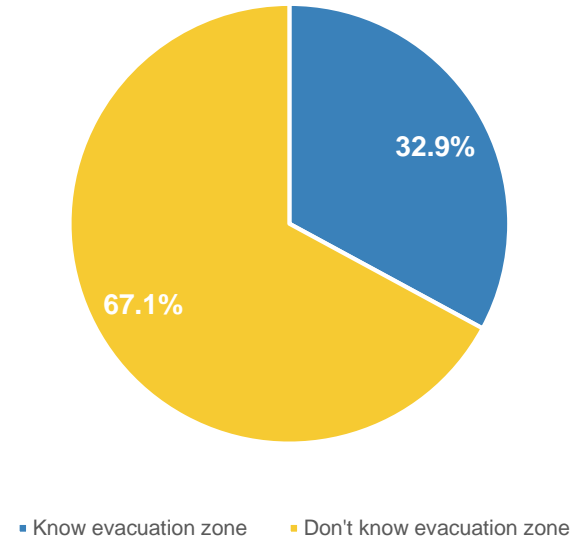
Pet ownership

- No: 32.2%
- Yes: 67.8%

■ No ■ Yes
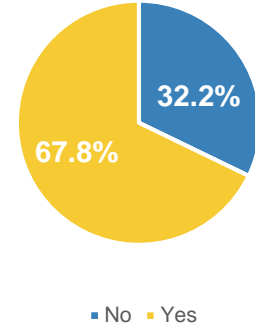
About a quarter of the respondents lived within 25 miles from the coast. Over 67% did not know their evacuation zones

Proximity to coast

Category	Percentage
Over 100 miles	44.3%
76-100 miles	9.8%
51-75 miles	9.2%
26-50 miles	11.3%
6-25 miless	15.6%
1-5 miles	6.9%
Less than 1 mile	2.9%

Evacuation zone

- 32.9% Know evacuation zone
- 67.1% Don't know evacuation zone
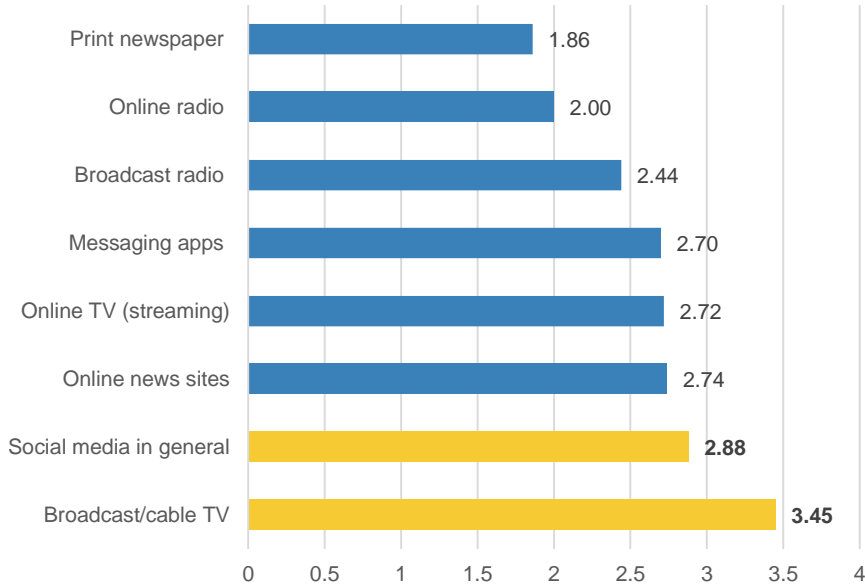
2 Media habits

What is the sample's media profile?
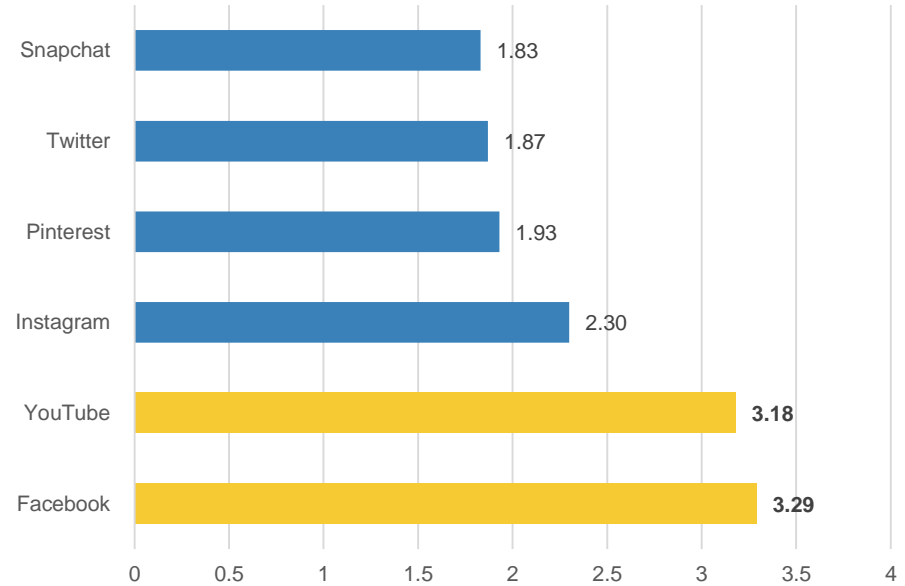What are their perceptions toward and usage of weather media sources?

TV and social media were the most frequently used media. Facebook and YouTube were the most popular social media

Frequency of media usage

Media	Value
Print newspaper	1.86
Online radio	2.00
Broadcast radio	2.44
Messaging apps	2.70
Online TV (streaming)	2.72
Online news sites	2.74
Social media in general	**2.88**
Broadcast/cable TV	**3.45**

On average in any given week, how often do you use the following media/platforms?
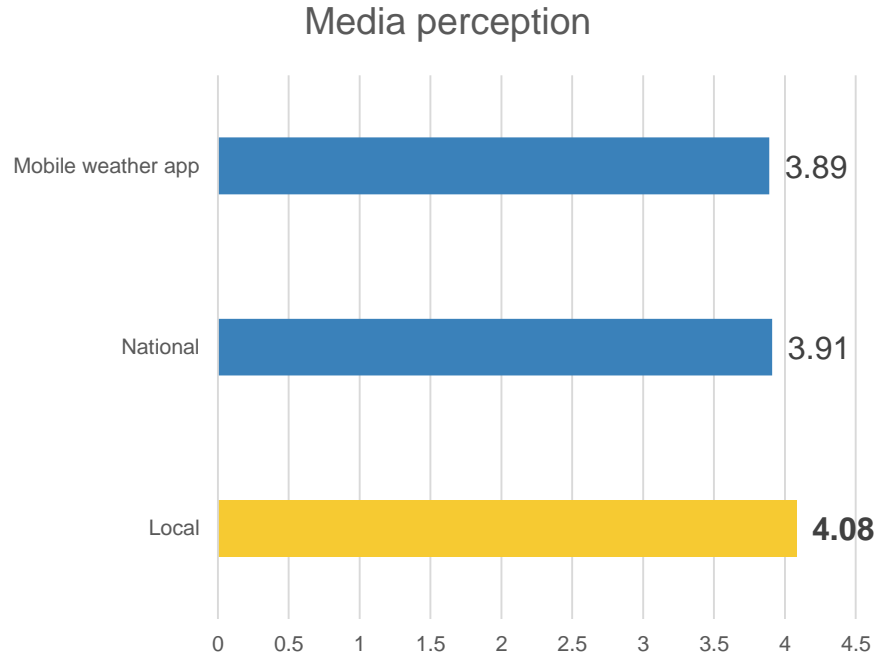1 = None at all, 5 = A great deal

Frequency of social media usage

Social media	Value
Snapchat	1.83
Twitter	1.87
Pinterest	1.93
Instagram	2.30
YouTube	**3.18**
Facebook	**3.29**

On average in any given week, how often do you use the following social media?
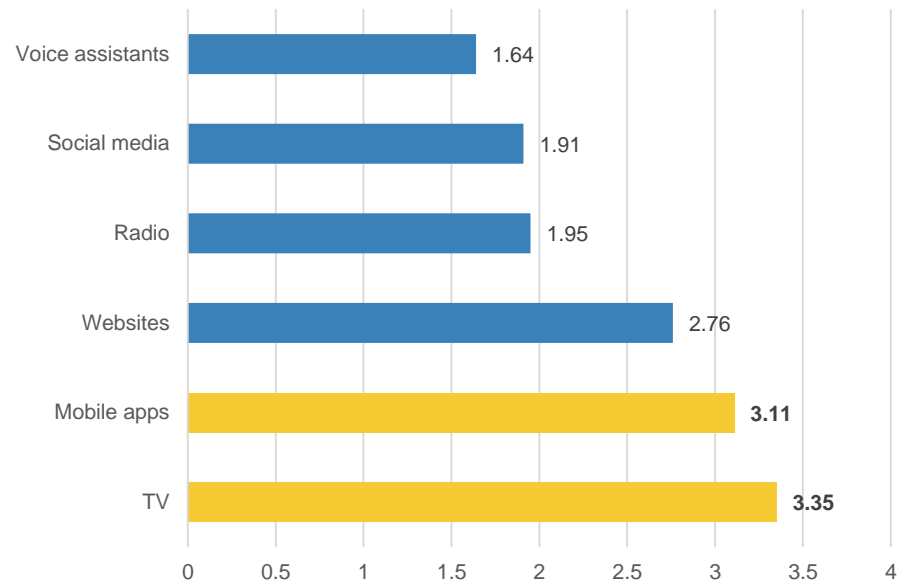1 = None at all, 5 = A great deal

TV and mobile apps were the most used media source for current and forecast weather content, followed by websites

Current weather source

Source	Value
Voice assistants	1.68
Social media	2.08
Radio	2.24
Websites	2.85
Mobile apps	**3.11**
TV	**3.63**
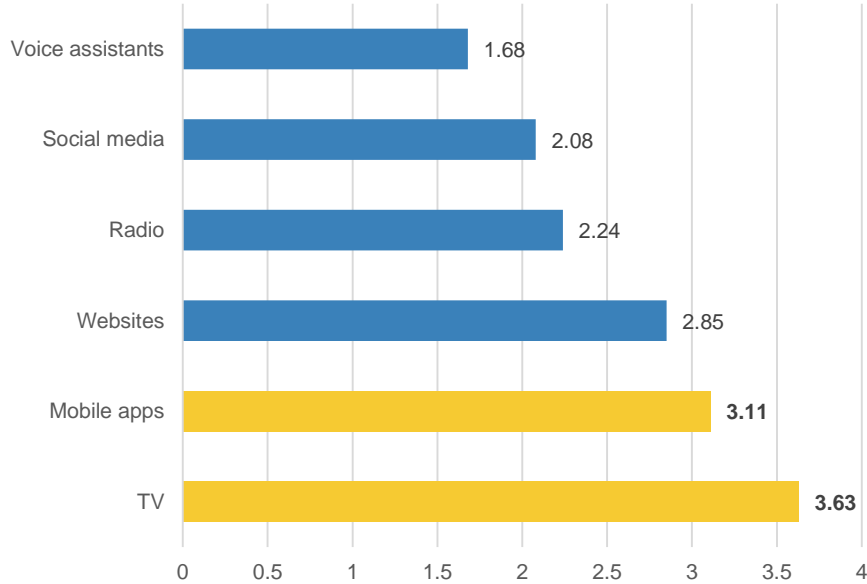
How often do you use the following platforms for current weather conditions/temperature?
1 = Never, 5 = Always

Weather forecast source

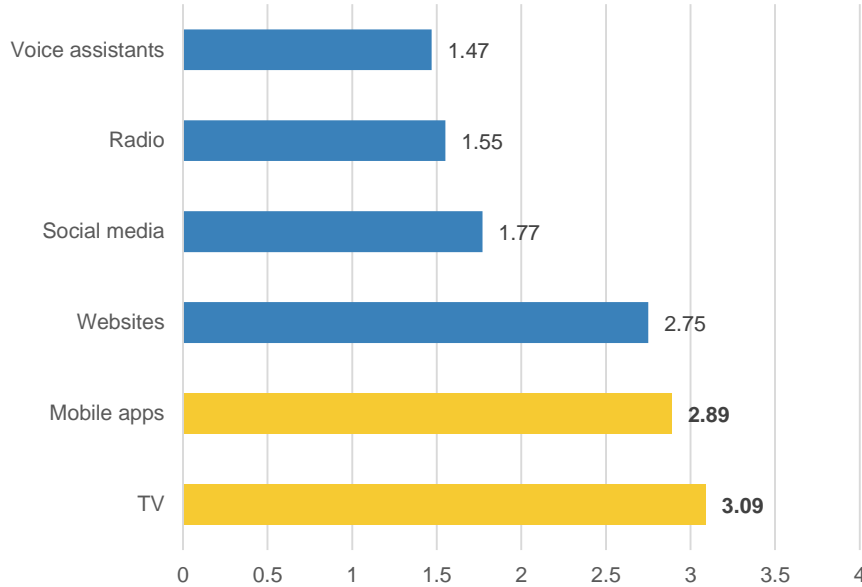| Source	Value
Voice assistants	1.64
Social media	1.91
Radio	1.95
Websites	2.76
Mobile apps	**3.11**
TV	**3.35**

What about for 7-day forecast (in non-extreme weather situations)?
1 = Never, 5 = Always

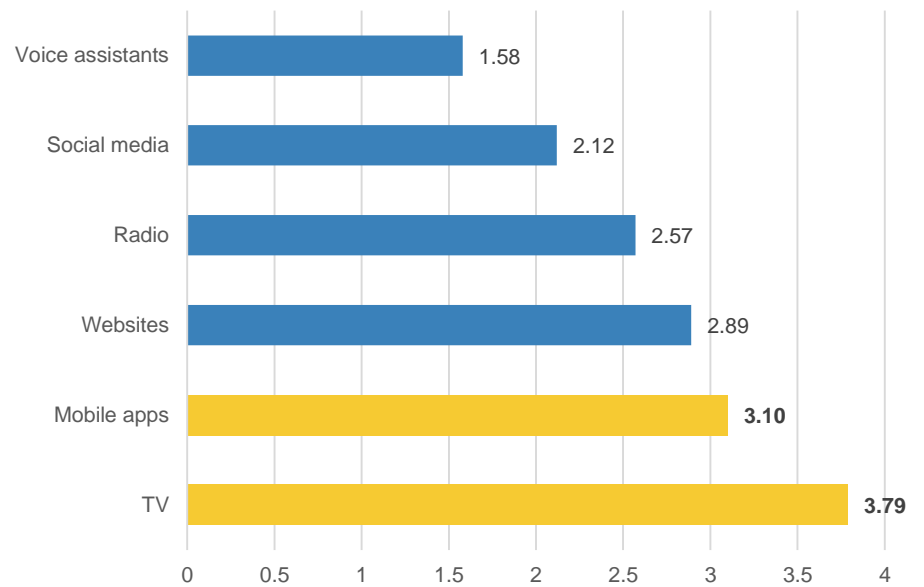UF | College of Journalism and Communications
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TV and mobile apps were the most used media sources for radar maps and extreme weather content, followed by websites

Radar map source

Source	Value
Voice assistants	1.47
Radio	1.55
Social media	1.77
Websites	2.75
Mobile apps	**2.89**
TV	**3.09**

What about for radar or similar maps?
1 = Never, 5 = Always

Extreme weather source

Source	Value
Voice assistants	1.58
Social media	2.12
Radio	2.57
Websites	2.89
Mobile apps	**3.10**
TV	**3.79**

Finally, how often do you use the following platforms during extreme weather situations like hurricanes or tornadoes?
1 = Never, 5 = Always

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Media usage during extreme weather situations

3

What is the main breaking news source for extreme weather conditions?
How does media usage differ by phase of the extreme weather condition?
Does social media usage differ during different weather phases?

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TV was the most relied on source for extreme weather information, followed by weather apps

EWC primary source
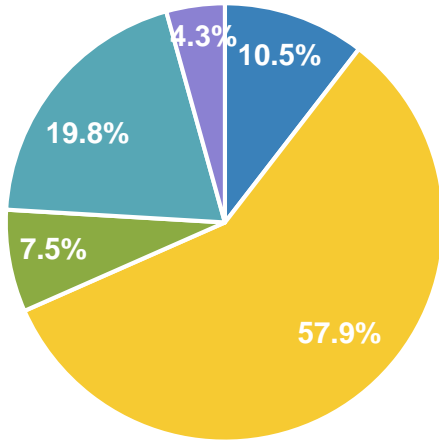
Legend: Radio · TV · Websites · Weather apps · Social media

Media	Count	Percentage
TV	1167	57.9%
Weather apps	398	19.8%
Radio	211	10.5%
Websites	152	7.5%
Social media	87	4.3%

When there is an extreme weather situation like hurricanes or tornadoes, which of the following media sources would you rely on the most?

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TV was also the most used medium for breaking news about extreme weather, followed by weather apps

Breaking news source
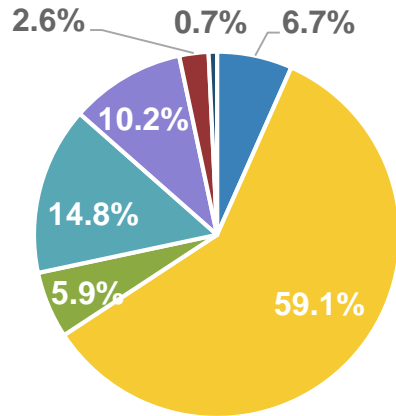
- Radio
- TV
- Websites
- Weather apps
- Social media
- Messaging apps
- Digital voice assistants

Media	Count	Percentage
TV	1191	59.1%
Weather apps	299	14.8%
Social media	205	10.2%
Radio	134	6.7%
Websites	119	5.9%
Messaging apps	52	2.6%
Digital voice assistants	15	0.7%

Where do you typically first learn the potential of an extreme weather situation?

Of the 205 cases that reported social media as primary breaking news source, more than half stated Facebook as the main social media platform

Breaking news source - Social media

Legend: ■ Facebook ■ Twitter ■ Instagram ■ Snapchat ■ YouTube ■ Wechat ■ Reddit
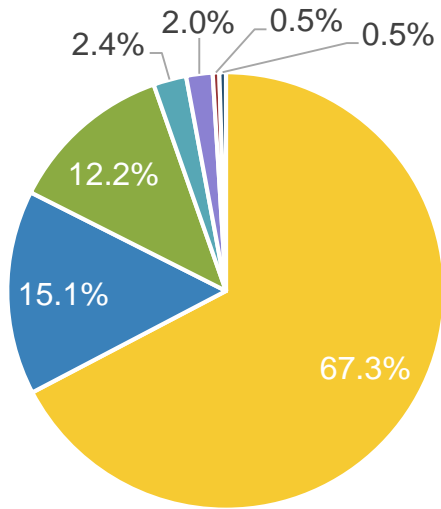
Media	Count	Percentage
Facebook	138	67.3%
Twitter	31	15.1%
Instagram	25	12.2%
Snapchat	5	2.4%
YouTube	4	2.0%
Wechat	1	0.5%
Reddit	1	0.5%

Which social media do you typically first learn the potential of an extreme weather situation?

On an average day, temperature and probability of precipitation were of the highest interest

In a normal weather day, what is the first piece of information you look for in an app?

During extreme weather situation, hurricane/storm, location, radar, and ETA were of the highest interest

A hurricane is approaching your area, what is the first piece of information you look for in an app?
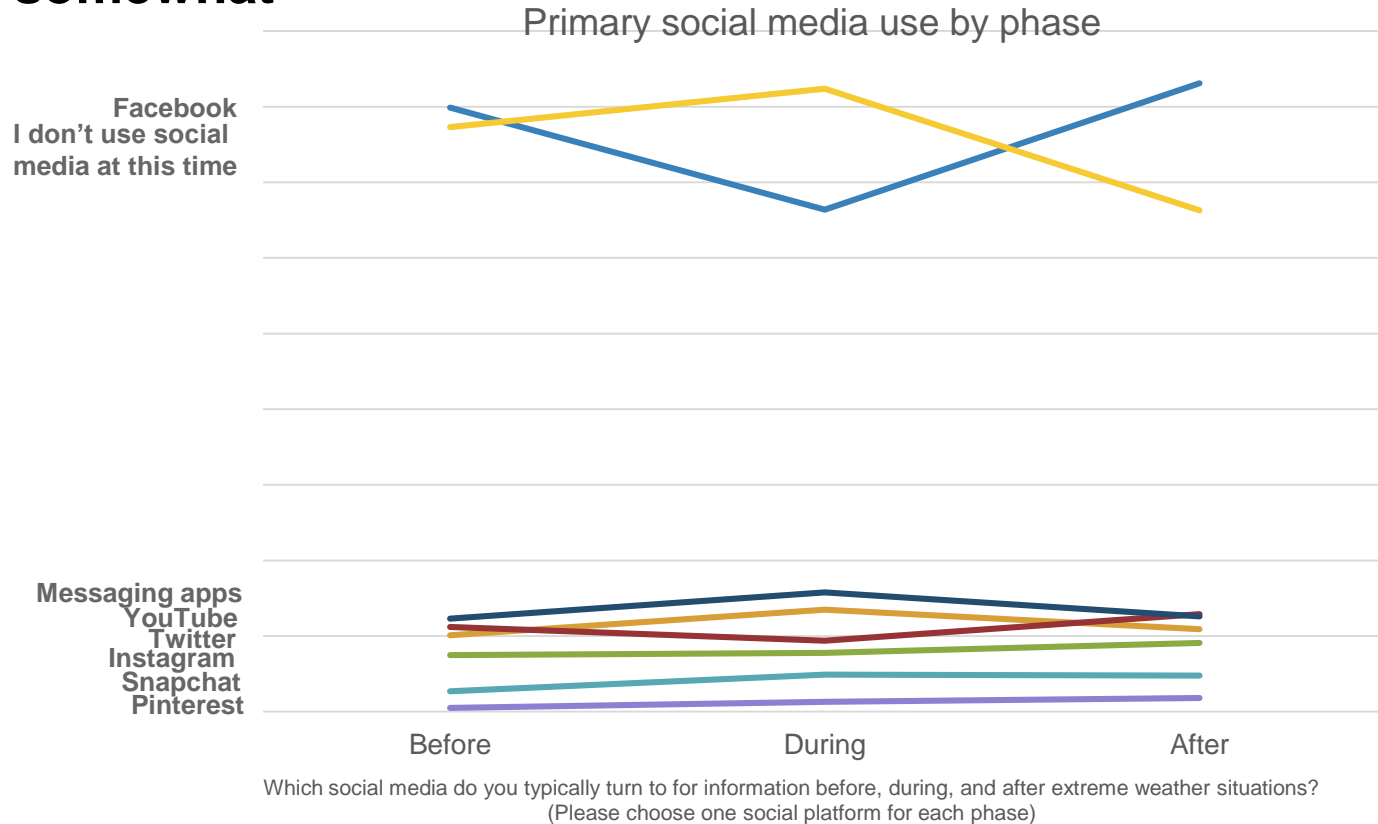
TV was the most heavily used media throughout the different phases of extreme weather situations. Mobile media like radio and apps were used significantly more during extreme weather situations, while website was more for prior and social media for after the weather situations

EWC primary media source by phase

TV

Mobile apps
Websites

Radio
Social media
Messaging apps
Voice assistants

Before   During   After

What is your primary information source before, during, and after extreme weather situations?
(Please choose one source for each phase)
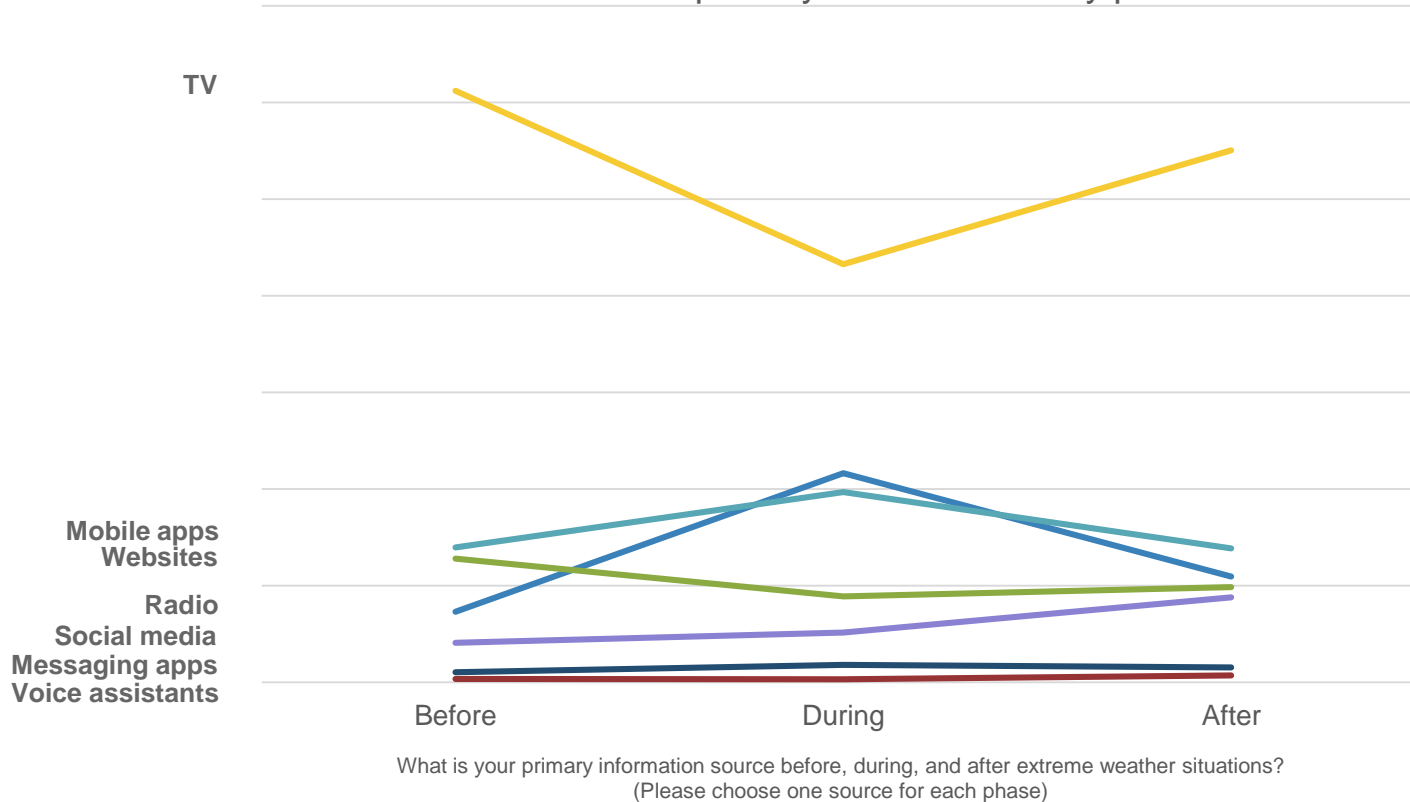
Although Facebook is an important medium, majority of respondents reported not using social media during extreme weather situations, except for after the extreme weather somewhat

Primary social media use by phase

Facebook
I don't use social media at this time

Messaging apps
YouTube
Twitter
Instagram
Snapchat
Pinterest

Before   During   After

Which social media do you typically turn to for information before, during, and after extreme weather situations?
(Please choose one social platform for each phase)

Perceived concern and trust during extreme weather situation

4

What type of meteorologist do people trust the most?
How concerned are people about hurricanes in their area?

Extreme weather information from media sources were perceived to be of high importance to participants

(Overall mean = 4.43)

Media EWC receptivity	Mean	SD
Unimportant to me (1) – Important to me (5)	4.50	.85
Inapplicable to me (1) – Applicable to me (5)	4.32	.92
Useless to me (1) – Useful to me (5)	4.46	.88

In a situation when you hear extreme weather information like hurricanes or tornadoes from TV or radio, you are likely to think that the information is…

Over 40% of the respondents were very concerned about hurricanes (4&5 on a 5 scale)

(Mean = 3.08)

EWC concern level	Count	Percentage
1 - Not concerned at all	371	18.4%
2	333	16.5%
3	498	24.7%
4	393	19.5%
5 – Extremely concerned	420	20.8%

On a 5-point scale, how concerned are you about the risk of hurricanes in your area?

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However, respondents generally don't feel they are really at risk for hurricanes

(Combined mean = 3.05)

Perceived seriousness	Count	Percentage
1 (not serious at all)	277	13.7%
2	281	13.9%
3	650	32.3%
4	481	23.9%
5 (extremely serious)	326	16.2%

On a 5-point scale, in your opinion, when a hurricane hits your area, it is likely to be…

Perceived risk	Count	Percentage
1 (not serious at all)	309	15.3%
2	435	21.6%
3	589	29.2%
4	422	20.9%
5 (extremely serious)	260	12.9%

In your view, how much are you at risk if a hurricane hits your area?

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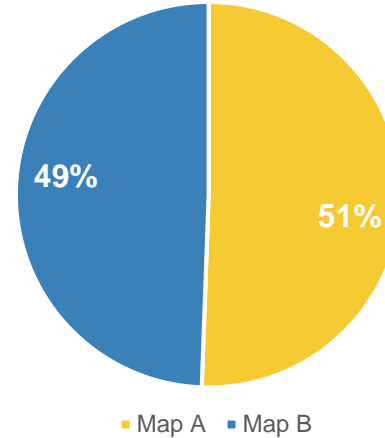# For test 1, respondents were almost equally divided between Map A & Map B
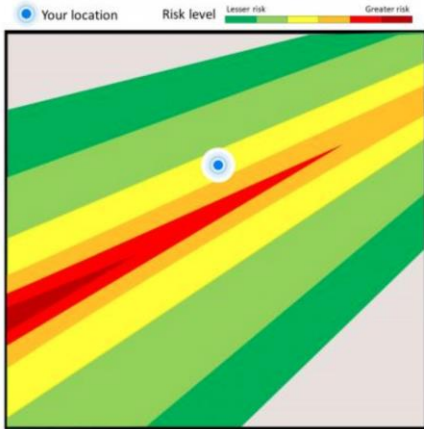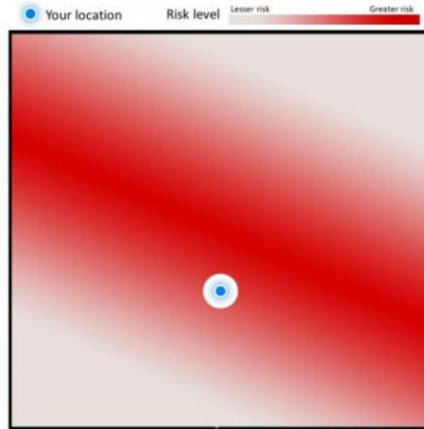
Map A
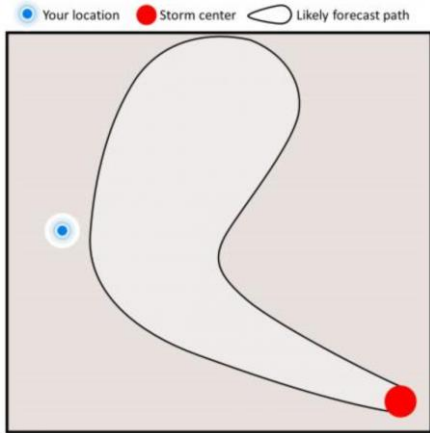
Map B
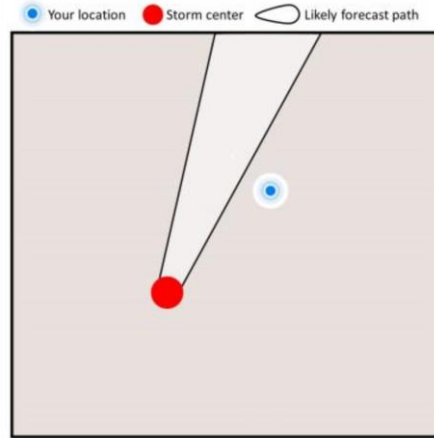
Risk visual 1

With the blue dot representing your location and the red dot representing the storm center, which map do you feel more in danger from an approaching hurricane?

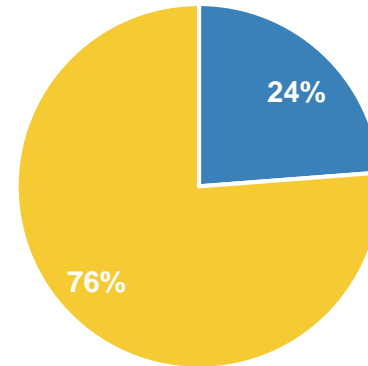# For test 2, majority of people perceived Map B to be riskier than Map A


Map A

Map B

Risk visual 2

24%

76%

Map A   Map B

With the blue dot representing your location and the color(s) representing the risk level associated with the probability of 74 mph winds or greater, which map makes you feel more at risk?

We look at the user trust level for their primary EWC source - TV delivers the highest level of trust as a primary EWC source, followed by websites. Social media has the lowest trust level

Trust level of primary EWC source

| Source	Value
Social media	3.95
Radio	4.08
Mobile apps	4.08
Websites	4.14
Overall	4.15
TV	**4.21**
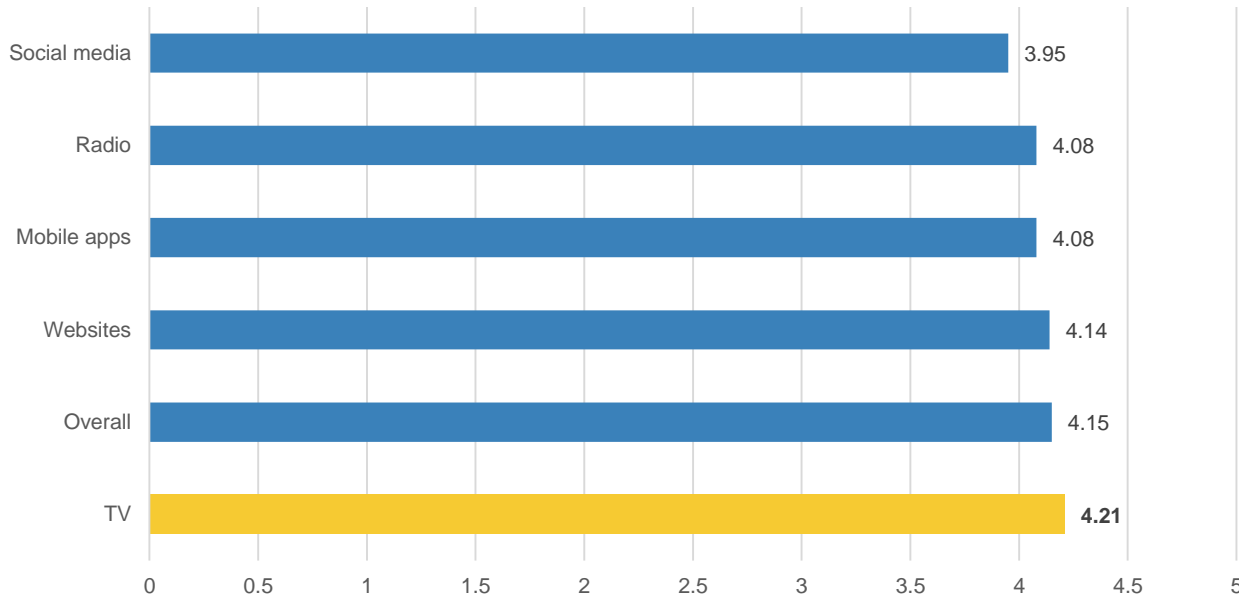
Please tell us how much you agree with the following statements regarding your primary weather information source during extreme weather situations
1 = strongly disagree, 5 = strongly agree

TV meteorologists were overwhelmingly perceived to be the most trustworthy, while most participants thought that meteorologists exaggerated the condition sometimes

Trust by meteorologist type

4.7%
5.1%
8.0%
82.2%

- TV meteorologist
- Radio meteorologist
- Social media meteorologists you follow
- Meteorologists you personally knew
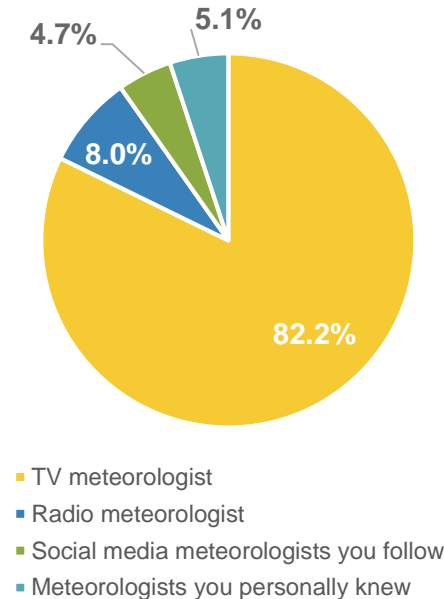
In general, which type of meteorologist do you trust the most?

(Mean = 2.28)

Response	Count	Percentage
Never	313	15.5
Sometimes	1164	57.8
About half the time	277	13.7
Most of the time	185	9.2
Always	76	3.8

Do you think meteorologists overstate/exaggerate the threat posed by a natural disaster?
(1 = never, 5 = always)