

North Carolina Survey on Human Health & the Environment

July 2020

N = 1,505

June 15-20

NOTE: NUMBERS IN THE FIRST COLUMN ARE INDIVIDUAL RESPONSES AND NUMBERS IN THE SECOND COLUMN ARE VALID PERCENT (EXCLUDING MISSING ANSWERS). *NA INDICATES HOW MANY RESPONDENTS DID NOT PROVIDE AN ANSWER TO EACH INDIVIDUAL QUESTIONS. COLUMNS MAY NOT TOTAL 100% DUE TO ROUNDING.

[ASK ALL:]

Q113 In the past week, how many days did you read a newspaper or a news website?

0 days	254	16.9%
1 day	94	6.3
2 days	169	11.2
3 days	165	11.0
4 days	113	7.5
5 days	147	9.8
6 days	59	3.9
7 days	502	33.4
*NA	2	

Q3 When you read a newspaper or a news website, how much attention do you pay to news about ... government and politics?

[No exposure]	254	16.9%
None at all	31	2.1
A little	216	14.4
A moderate amount	419	27.9
A lot	306	20.4
A great deal	274	18.3
*NA	5	

Q107 ... Science and technology?

[No exposure]	254	16.9%
None at all	81	5.4
A little	353	23.5
A moderate amount	456	30.3
A lot	233	15.5
A great deal	126	8.4
*NA	2	

Q108 ... Health and medicine?

[No exposure]	254	16.9%
None at all	36	2.4
A little	237	15.8
A moderate amount	455	30.3
A lot	332	22.1
A great deal	190	12.6
*NA	1	

Q115 In the past week, how many days did you watch television news? This includes online videos produced by television networks.

0 days	210	14.0%
1 day	84	5.6
2 days	129	8.6
3 days	165	11.0
4 days	114	7.6
5 days	184	12.2
6 days	79	5.2
7 days	540	35.9
*NA	0	

Q109 When you watch television news, how much attention do you pay to news about ... government and politics?

[No exposure]	210	14.0%
None at all	38	2.5
A little	234	15.6
A moderate amount	394	26.3
A lot	321	21.4
A great deal	303	20.2
*NA	5	

Q110.0 ... Science and technology?

[No exposure]	210	14.0%
None at all	87	5.8
A little	334	22.3
A moderate amount	465	31.0
A lot	259	17.3
A great deal	146	9.7
*NA	4	

Q111 ... Health and medicine?

[No exposure]	210	14.0%
None at all	39	2.6
A little	221	14.7
A moderate amount	454	30.2
A lot	337	22.4
A great deal	241	16.0
*NA	3	

Q8 In your day-to-day interactions with other people, how often do you have discussions with other people about ... government and politics?

Not at all	205	13.7%
A little	491	32.7
A moderate amount	460	30.6
A lot	203	13.5
A great deal	142	9.5
*NA	4	

Q70 ... Science and technology?

Not at all	309	20.6%
A little	576	38.3
A moderate amount	389	25.9
A lot	140	9.3
A great deal	88	5.9
*NA	3	

Q71 ... Health and medicine?

Not at all	144	9.6%
A little	463	30.9
A moderate amount	457	30.5
A lot	278	18.6
A great deal	155	10.4
*NA	8	

[START RANDOMIZED CONDITIONS]

[CONDITION 1A: CLOSED-ENDED ENVIRONMENTAL PROBLEM (N = 750)]

Q105 Here is a list of some different environmental problems. Which one problem do you think is the most important for North Carolina as a whole? (Select only one option.)

Air pollution	53	7.0%
Chemicals and pesticides	75	9.9
Water shortages	28	3.7
Water pollution	153	20.3
Nuclear waste	26	3.4
Domestic waste disposal	58	7.7
Climate change	178	23.6
Genetically modified foods	48	6.4
Using up our natural resources	69	9.1
None of these	67	8.9
*NA	0	

[CONDITION 1B: OPEN-ENDED ENVIRONMENTAL PROBLEM (N = 755)]

Q147 Thinking of different environmental problems, which one problem do you think is the most important for North Carolina as a whole? Please write down the first problem that comes to mind.

[Note: Will insert breakdown of responses after human coding individual responses.]

[END RANDOMIZED CONDITION]

**[START RANDOMIZED CONDITIONS]
[CONDITION 2A: PFAS QUESTIONS (N = 751)]**

As you may know, **per- and polyfluoroalkyl substances (PFAS)** are chemical compounds used to make consumer products like water-repellent coatings.

In the past few years, scientists discovered that some of these substances (for example, GenX and PFOA) have polluted water supplies in North Carolina. Now, scientists are trying to understand what the potential health impacts may be and how to remove PFAS from the environment.

We want to know what you have heard about PFAS, human health, and the environment.

In this next section, please think about the topic of PFAS and select the answer that best represents your opinion.

Q11 First, before you received this questionnaire, had you heard of PFAS (this includes GenX)?

Yes	303	40.9%
No	437	59.1
*NA	2	

Q15 How do you feel about the following statements? For each statement, please circle the response that best represents your views. ... Cooking with non-stick or Teflon pans is probably safe for my long-term health.

Strongly disagree	57	7.7%
Disagree	126	17.0
Neither agree nor disagree	313	42.2
Agree	195	26.3
Strongly agree	51	6.9
*NA	0	

Q16 Drinking bottled water is safer for my health than drinking tap water.

Strongly disagree	56	7.6%
Disagree	160	21.6
Neither agree nor disagree	187	25.3
Agree	223	30.1
Strongly agree	114	15.4
*NA	2	

Q17 It's not a big deal if I forget to wear sunscreen in the summer.

Strongly disagree	256	34.6%
Disagree	245	33.2
Neither agree nor disagree	124	16.8
Agree	75	10.1
Strongly agree	39	5.3
*NA	3	

Q18 Washing fruits and vegetables before I eat them keeps me healthy.

Strongly disagree	17	2.3%
Disagree	25	3.4
Neither agree nor disagree	114	15.4
Agree	369	49.9
Strongly agree	214	29.0
*NA	3	

Q94 Think about how PFAS may influence human health. How much do you think these substances will harm you personally?

Not at all	53	7.2%
A little	208	28.1
A moderate amount	285	38.5
A lot	128	17.3
A great deal	66	8.9
*NA	2	

Q95 How much do you think PFAS will harm your friends and family?

Not at all	52	7.0%
A little	220	29.8
A moderate amount	275	37.2
A lot	124	17.8
A great deal	68	9.2
*NA	3	

Q96 How much do you think PFAS will harm your community?

Not at all	49	6.6%
A little	190	25.6
A moderate amount	274	37.0
A lot	138	18.6
A great deal	90	12.1
*NA	1	

Q97 How much do you think PFAS will harm people in North Carolina?

Not at all	42	5.7%
A little	180	24.3
A moderate amount	278	37.5
A lot	151	20.4
A great deal	91	12.3
*NA	0	

Q22 How effective do you think each of the following activities is at preventing [PFAS] exposure? ... Drinking bottled water rather than tap water

Not effective at all	106	14.3%
Slightly effective	150	20.2
Moderately effective	213	28.7
Very effective	185	25.0
Extremely effective	87	11.7
*NA	0	

Q24 Removing furniture and carpet with stain resistant treatments from my home

Not effective at all	159	21.5%
Slightly effective	226	30.5
Moderately effective	219	29.6
Very effective	94	12.7
Extremely effective	43	5.8
*NA	1	

Q25 Working with your elected officials to reduce PFAS inputs to the environment

Not effective at all	74	10.0%
Slightly effective	121	16.4
Moderately effective	241	32.6
Very effective	195	26.4
Extremely effective	108	14.6
*NA	3	

Q26 Moving to a different community

Not effective at all	313	42.3%
Slightly effective	174	23.5
Moderately effective	145	19.6
Very effective	55	7.4
Extremely effective	53	7.2
*NA	2	

Q28 How willing would you be to perform each of these behaviors to prevent your exposure to PFAS? ... Drinking bottled water rather than tap water

Not at all willing	88	11.9%
Slightly willing	113	15.2
Moderately willing	166	22.4
Very willing	172	23.2
Extremely willing	203	27.4
*NA	0	

Q30 Removing furniture and carpet with stain resistant treatments from my home

Not at all willing	150	20.3%
Slightly willing	150	20.3
Moderately willing	194	26.2
Very willing	149	20.1
Extremely willing	97	13.1
*NA	2	

Q31 Working with your elected officials to reduce PFAS inputs to the environment

Not at all willing	69	9.3%
Slightly willing	139	18.8
Moderately willing	217	29.4
Very willing	174	23.6
Extremely willing	139	18.8
*NA	4	

Q32 Moving to a different community

Not at all willing	377	51.0%
Slightly willing	139	18.8
Moderately willing	119	16.1
Very willing	54	7.3
Extremely willing	50	6.8

Q34 We would like you to rate your knowledge about the risks of PFAS. Please use a scale of 0 to 100, where 0 means knowing nothing and 100 means knowing everything you could possibly know about this topic. Using this scale, how much do you think you currently know about the risk from PFAS?

Mean	27.99
Median	20.00
Mode	0.00
Standard Deviation	28.41

Q35 Think of that same scale again. This time, we would like you to estimate how much knowledge you would need to deal adequately with the possible risks from PFAS in your own life. Of course, you might feel you need the same, more, or possibly even less, information about this topic. Using the same scale of 0 to 100, how much information about PFAS would be sufficient for you, that is, good enough for your purposes?

Mean	59.35
Median	65.00
Mode	50.00
Standard Deviation	29.91

Q100 Can you tell us if each of the following statements is true or false, or if you don't know? ... Antibiotics kill viruses as well as bacteria.

True	224	30.2%
False (Correct)	420	56.6
*Don't Know/No Answer	98	13.2

Q101 Human beings, as we know them today, developed from earlier species of animals.

True (Correct)	356	48.0%
False	244	32.9
*Don't Know/No Answer	142	19.1

Q102 All radioactivity is man-made.

True	135	18.2%
False (Correct)	479	64.6
*Don't Know/No Answer	128	17.3

Q103 PFAS are substances that do not exist naturally and are only man-made.

True (Correct)	356	48.0%
False	109	14.7
*Don't Know/No Answer	277	37.3

Q104 All PFAS chemicals (including PFOS, PFOA, GenX) act the same way in humans and the environment

True	148	19.9%
False (Correct)	215	29.0
*Don't Know/No Answer	379	51.1

[CONDITION 4: COVID-19 (N = 779)]

Most people in North Carolina are likely aware of **COVID-19**, the disease caused by the novel coronavirus (SARS-CoV-2). This disease has been affecting people around the world since late 2019.

Other types of coronaviruses have been identified in the past, but this coronavirus is very new and scientists have only begun studying it. Infections have been able to spread widely and quickly.

We want to know what you have heard about COVID-19, its causes, and its health effects.

In this next section, please think about the topic of COVID-19 and select the answer that best represents your views.

Q115.0 First, before you received this questionnaire, had you heard of COVID-19?

Yes	751	97.7%
No	18	2.3
*NA	10	

Q117 How do you feel about the following statements? For each statement, please circle the response that best represents your views. ... Socializing with people who don't live with me outside of my home during the COVID-19 pandemic is risky.

Strongly disagree	34	4.4%
Disagree	52	6.8
Neither agree nor disagree	117	15.3
Agree	294	38.3
Strongly agree	270	35.2
*NA	12	

Q118 The symptoms associated with COVID-19 are not any worse than the seasonal flu.

Strongly disagree	224	29.2%
Disagree	227	29.6
Neither agree nor disagree	147	19.2
Agree	120	15.6
Strongly agree	49	6.4
*NA	12	

Q119 Washing my hands often is important during the COVID-19 pandemic.

Strongly disagree	20	2.6%
Disagree	11	1.4
Neither agree nor disagree	49	6.4
Agree	179	23.3
Strongly agree	509	66.3
*NA	11	

Q120 I am not really worried about COVID-19.

Strongly disagree	234	30.4%
Disagree	264	34.3
Neither agree nor disagree	123	16.0
Agree	104	13.5
Strongly agree	44	5.7
*NA	10	

Q121 Think about how COVID-19 may influence human health. How much do you think this virus will harm you personally?

Not at all	105	13.7%
A little	200	26.0
A moderate amount	219	28.5
A lot	137	17.8
A great deal	108	14.0
*NA	10	

Q122 How much do you think COVID-19 will harm your friends and family?

Not at all	93	12.1%
A little	186	24.3
A moderate amount	233	30.4
A lot	147	19.2
A great deal	108	14.1
*NA	12	

Q123 How much do you think COVID-19 will harm your community?

Not at all	28	3.6%
A little	141	18.4
A moderate amount	259	33.7
A lot	194	25.3
A great deal	146	19.0
*NA	11	

Q124 How much do you think COVID-19 will harm people in North Carolina?

Not at all	25	3.2%
A little	99	12.9
A moderate amount	239	31.0
A lot	218	28.3
A great deal	189	24.5
*NA	9	

Q126 How effective do you think each of the following activities is at preventing [COVID-19] exposure? ... “Social distancing” or having space between you and other people

Not effective at all	25	3.2%
Slightly effective	78	10.1
Moderately effective	197	25.6
Very effective	252	32.7
Extremely effective	218	28.3
*NA	9	

Q127 Wearing a mask in public

Not effective at all	53	6.9%
Slightly effective	86	11.2
Moderately effective	176	23.0
Very effective	234	30.5
Extremely effective	217	28.3
*NA	13	

Q128 Keeping certain businesses closed and limiting many social gatherings

Not effective at all	63	8.2%
Slightly effective	89	11.6
Moderately effective	174	22.6
Very effective	216	28.1
Extremely effective	227	29.5
*NA	10	

Q129 Moving to a different community

Not effective at all	487	63.2%
Slightly effective	127	16.5
Moderately effective	82	10.6
Very effective	37	4.8
Extremely effective	37	4.8
*NA	9	

Q131 How willing would you be to perform each of these behaviors to prevent your exposure to COVID-19? ... “Social distancing” or having space between you and other people

Not at all willing	24	3.1%
Slightly willing	49	6.4
Moderately willing	100	13.0
Very willing	200	26.0
Extremely willing	397	51.6
*NA	9	

Q132 Wearing a mask in public

Not at all willing	50	6.5%
Slightly willing	53	6.9
Moderately willing	118	15.3
Very willing	185	24.1
Extremely willing	363	47.2
*NA	10	

Q133 Keeping certain businesses closed and limiting many social gatherings

Not at all willing	72	9.4%
Slightly willing	89	11.6
Moderately willing	138	18.0
Very willing	185	24.1
Extremely willing	283	36.9
*NA	12	

Q134 Moving to a different community

Not at all willing	534	69.5%
Slightly willing	83	10.8
Moderately willing	61	7.9
Very willing	34	4.4
Extremely willing	56	7.3
*NA	11	

Q135 We would like you to rate your knowledge about the risks of COVID-19. Please use a scale of 0 to 100, where 0 means knowing nothing and 100 means knowing everything you could possibly know about this topic. Using this scale, how much do you think you currently know about the risk from COVID-19?

Mean	69.11
Median	75.00
Mode	90.00
Standard Deviation	26.19

Q136 Think of that same scale again. This time, we would like you to estimate how much knowledge you would need to deal adequately with the possible risks from COVID-19 in your own life. Of course, you might feel you need the same, more, or possibly even less, information about this topic. Using the same scale of 0 to 100, how much information about COVID-19 would be sufficient for you, that is, good enough for your purposes?

Mean	73.73
Median	80.00
Mode	100.00
Standard Deviation	25.78

Q138 Can you tell us if each of the following statements is true or false, or if you don't know? ... Antibiotics kill viruses as well as bacteria.

True	188	24.1%
False (Correct)	463	59.4
*Don't Know/No Answer	128	16.4

Q139 Human beings, as we know them today, developed from earlier species of animals.

True (Correct)	329	42.2%
False	280	35.9
*Don't Know/No Answer	170	21.8

Q140 All radioactivity is man-made.

True	127	16.3%
False (Correct)	488	62.6
*Don't Know/No Answer	164	21.1

Q141 The coronavirus that causes COVID-19 was first identified in Wuhan, China.

True (Correct)	656	84.2%
False	33	4.2
*Don't Know/No Answer	90	11.6

Q142 COVID-19 is a fatal health threat only to people who are over the age of 60.

True	96	12.3%
False (Correct)	622	79.8
*Don't Know/No Answer	61	7.8

[ASK ALL:]

Q37_1 In the past 12 months, have you... Used a filter for your drinking water?

Yes	940	62.9%
No	555	37.1
*NA	10	

Q37_2 Read food labels to know more about their ingredients?

Yes	1185	79.3%
No	310	20.7
*NA	10	

Q37_3 Avoided using insecticides in your home or garden?

Yes	861	57.6%
No	634	42.4
*NA	10	

Q37_4 Used fewer plastic straws?

Yes	992	66.4%
No	501	33.6
*NA	12	

Q83 How much do you trust the following sources of information to tell you the truth about health risks facing your community? ... Friends and family

Do not trust at all	65	4.3%
Trust slightly	341	22.7
Trust moderately	576	38.4
Trust very much	357	23.8
Trust completely	162	10.8
*NA	4	

Q84 Scientists at universities

Do not trust at all	74	4.9%
Trust slightly	165	11.0
Trust moderately	464	30.9
Trust very much	596	39.7
Trust completely	204	13.6
*NA	2	

Q85 Local media

Do not trust at all	310	20.6%
Trust slightly	455	30.3
Trust moderately	511	34.0
Trust very much	171	11.4
Trust completely	56	3.7
*NA	2	

Q88 Environmental groups

Do not trust at all	192	12.8%
Trust slightly	360	24.0
Trust moderately	529	35.3
Trust very much	316	21.1
Trust completely	100	6.7
*NA	8	

Q89 North Carolina Department of Environmental Quality

Do not trust at all	107	7.1%
Trust slightly	278	18.5
Trust moderately	513	34.2
Trust very much	438	29.2
Trust completely	165	11.0
*NA	4	

Q90 North Carolina Department of Health & Human Services

Do not trust at all	96	6.4%
Trust slightly	235	15.6
Trust moderately	490	32.6
Trust very much	490	32.6
Trust completely	191	12.7
*NA	3	

Q91 Chemical companies

Do not trust at all	640	42.6%
Trust slightly	432	28.7
Trust moderately	310	20.6
Trust very much	80	5.3
Trust completely	42	2.8
*NA	1	

**Q41 How much do you agree or disagree with each of the following statements?
... The balance of nature is very delicate and easily upset.**

Strongly disagree	41	2.7%
Disagree	137	9.1
Neither agree nor disagree	366	24.4
Agree	630	41.9
Strongly agree	329	21.9
*NA	2	

Q42 Humans have the right to modify the natural environment.

Strongly disagree	225	15.0%
Disagree	439	29.2
Neither agree nor disagree	495	33.0
Agree	265	17.6
Strongly agree	78	5.2
*NA	3	

Q43 **When humans interfere with nature, it often produces disastrous consequences.**

Strongly disagree	25	1.7%
Disagree	116	7.7
Neither agree nor disagree	322	21.4
Agree	646	43.0
Strongly agree	394	26.2
*NA	2	

Q46 **Most people can be trusted.**

Strongly disagree	160	10.7%
Disagree	320	21.3
Neither agree nor disagree	484	32.3
Agree	458	30.4
Strongly agree	78	5.2
*NA	5	

Q47 **I believe local government looks out for my best interests.**

Strongly disagree	235	15.7%
Disagree	395	26.3
Neither agree nor disagree	522	34.8
Agree	285	19.0
Strongly agree	63	4.2
*NA	5	

Q49 **When it comes to politics, local officials don't care much what people like me think.**

Strongly disagree	55	3.7%
Disagree	230	15.3
Neither agree nor disagree	428	28.6
Agree	513	34.2
Strongly agree	273	18.2
*NA	6	

Q51 **I have more self-confidence than most of my friends.**

Strongly disagree	82	5.5%
Disagree	204	13.6
Neither agree nor disagree	593	39.6
Agree	484	32.3
Strongly agree	135	9.0
*NA	7	

Q53 I am influential in my neighborhood.

Strongly disagree	194	12.9%
Disagree	402	26.8
Neither agree nor disagree	560	37.3
Agree	260	17.3
Strongly agree	84	5.6
*NA	5	

Q54 My friends and neighbors often ask my advice.

Strongly disagree	138	9.2%
Disagree	287	19.1
Neither agree nor disagree	489	32.6
Agree	483	32.2
Strongly agree	105	7.0
*NA	3	

Q55_1 How about your participation in local political and community life? In the past two years, have you... Attended a public meeting or community forum?

No	1017	67.9%
Yes	480	32.1
*NA	8	

Q55_2 Circulated a petition for an issue or candidate?

No	1146	76.6%
Yes	350	23.4
*NA	9	

Q55_3 Voted in an election?

No	412	27.5%
Yes	1084	72.5
*NA	9	

Q55_4 Contacted a public official?

No	996	66.3%
Yes	506	33.7
*NA	3	

Q55_5 Attended church services?

No	594	39.8%
Yes	897	60.2
*NA	14	

Q55_6 Participated in activities organized by a group in which you are an official member?

No	944	63.2%
Yes	550	36.8
*NA	11	

Q55_7 Attended a neighborhood meeting?

No	997	67.0%
Yes	492	33.0
*NA	16	

Q55_8 Participated in activities sponsored by a neighborhood association?

No	998	67.0%
Yes	492	33.0
*NA	15	

Q57 Do you rent or own your current residence?

Rent	447	29.8%
Own	1010	67.3
Not sure	44	2.9
*NA	4	

Q58 What is the highest level of schooling you have completed?

Less than high school	21	1.4%
High school graduate	279	18.8
Some college, no degree	283	19.1
2-year college degree	185	12.5
4-year college degree	429	28.9
Master's degree	200	13.5
Professional degree	44	3.0
Doctorate	44	3.0
*NA	20	

Q59 The terms "liberal" and "conservative" may mean different things to different people depending on the kind of issue one is considering. How would you describe your views in terms of economic issues?

Very liberal	164	10.9%
Somewhat liberal	297	19.8
Neither liberal nor conservative	479	31.9
Somewhat conservative	343	22.9
Very conservative	217	14.5
*NA	5	

Q93 How would you describe your views in terms of social issues?

Very liberal	223	14.9%
Somewhat liberal	345	23.0
Neither liberal nor conservative	425	28.4
Somewhat conservative	317	21.1
Very conservative	189	12.6
*NA	6	

Q60 How much guidance does religion play in your everyday life?

No guidance at all	263	17.5%
A little guidance	285	19.0
A moderate amount of guidance	372	24.8
A lot of guidance	332	22.1
Quite a bit of guidance	250	16.6
*NA	3	

Q61 What is your sex?

Male	715	47.7%
Female	783	52.3
*NA	7	

Q62 Age (Year of birth subtracted from 2020)

Mean	46.70
Median	46.00
Mode	21.00
Standard Deviation	17.65

Q64 We would like an estimate of your total 2019 household income before taxes. Please estimate the combined income for all household members from all sources. In 2019, was your household income before taxes:

Less than \$10k	103	7.0%
\$10k to \$19.9k	106	7.2
\$20k to \$19.9k	151	10.2
\$30k to \$19.9k	143	9.6
\$40k to \$19.9k	124	8.4
\$50k to \$19.9k	125	8.4
\$60k to \$19.9k	103	7.0
\$70k to \$19.9k	121	8.2
\$80k to \$19.9k	78	5.3
\$90k to \$19.9k	90	6.1
\$100k to \$149.9k	202	13.6
\$150k or more	136	9.2
*NA	23	

Q65_1	What is your race?		
	White	1030	68.8%
	Black or African American	307	20.5
	American Indian or Alaska Native	13	0.9
	Asian	44	2.9
	Native Hawaiian or Pacific Islander	2	0.1
	Other	44	2.9
	2 or more races	50	3.3
	3 or more races	7	0.5
	*NA	8	
Q66	What is your ethnicity?		
	Hispanic	132	8.8%
	Not Hispanic	1360	91.2
	*NA	13	
Q68	Have you participated in the GenX Exposure Study currently going on at NC State University?		
	Yes	100	6.6%
	No	1396	93.3
	*NA	9	

Variables Based on ZIP Codes:

PopGroups4	Participants divided by population density within county		
	Most dense quartile	391	26.0%
	Second most dense	416	27.6
	Third most dense quartile	384	25.5
	Least dense quartile	314	20.9
	*NA	0	
PopGroups3	Participants divided by population density within county		
	Most dense tertile	507	33.3%
	Middle tertile	579	38.5
	Least dense tertile	419	27.8
	*NA	0	
Region_Group	North Carolina Three Regions		
	Mountains	133	8.8%
	Piedmont	956	63.5
	Coastal Plains	416	27.6
	*NA	0	