

**Proposed Title:** Fear and Confusion: Mass Media and the Cultivation of Beliefs about Cancer

**Co-Authors:**

Whitney M. Randolph	301.402.9639	<a href="mailto:randolwh@mail.nih.gov">randolwh@mail.nih.gov</a>
K. Viswanath	301.435.6816	<a href="mailto:viswanav@mail.nih.gov">viswanav@mail.nih.gov</a>
Richard P. Moser	301.496.0273	<a href="mailto:moserr@mail.nih.gov">moserr@mail.nih.gov</a>
Barbara Rimer	919.843.8088	<a href="mailto:brimer@unc.edu">brimer@unc.edu</a>

**Research Questions:**

This manuscript seeks to explore the extent and determinants of agreement with three statements about cancer and cancer prevention (CK14a-CK14c). Specifically, three research questions guide this study:

1. How much do people agree with the three statements about cancer and what are the population estimates of this agreement?
  - “It seems like almost everything causes cancer” (Everything causes cancer)
  - “There’s not much people can do to lower their chances of getting cancer” (Can’t Lower)
  - “There are so many different recommendations about preventing cancer, it’s hard to know which ones to follow” (Too many recs)
2. Is higher media attention and media exposure related to agreement with the statements?
3. Is there evidence of a “knowledge gap” based on differences in media consumption in terms of agreement with the three statements about cancer controlling for other factors that may influence agreement?

This manuscript will explore the extent to which such beliefs are shared by the American public, the possible existence of digital divides in terms of access to certain types of communication technologies, and if these digital divides manifest themselves as a knowledge gap about cancer. The role of determinants such as socio-demographic characteristics, prior experience with cancer or cancer information will be looked at in addition to variables on attention to health information and media exposure. Dependent on the results from this study, we would like to link agreement with these statements to use of cancer screening modalities and health behaviors such as smoking and fruit and vegetable consumption.

**Study Description/Rationale:**

Prevention of cancer is the best way to reduce the burden of suffering from cancer. Most cancer preventive behaviors and cancer screening activities require the active participation of the individual for them to be effective. Therefore it is important that the public understand the potential risks that lead to cancer and the actions they can take to lower their chances of getting cancer. These impressions and beliefs about cancer are likely influenced by a myriad of factors including but not limited to a person’s sociodemographic characteristics, their access to health

care providers, their exposure to entertainment and news media and their attentiveness to health information. Beliefs about cancer causes and cancer risks have been linked to screening behaviors, dietary habits and behavior changes.

**Variable List:**

*Main Outcome Variables (Research Questions 1 – 3)*

CK14aEverythingCausesCancer

CK14bCannotLowerChances

CK14cTooManyRecommendations

CK-14. Tell me how much you agree or disagree with the following statements, or if you have no opinion.

	<u>STRONGLY AGREE</u>	<u>SOMEWHAT AGREE</u>	<u>SOMEWHAT DISAGREE</u>	<u>STRONGLY DISAGREE</u>	<u>NO OPINION</u>
a. It seems like almost everything causes cancer. Would you say you strongly agree, somewhat agree, somewhat disagree, strongly disagree, or you have no opinion? .....	1	2	3	4	5
b. There's not much people can do to lower their chances of getting cancer. (Would you say you...) .....	1	2	3	4	5
c. There are so many different recommendations about preventing cancer, it's hard to know which ones to follow. (Would you say you...) .....	1	2	3	4	5

*Independent Variables:*

Spage First, what is your age?

Spgender Are you male or female?

HC6aWatchTV On a typical weekday, about how many hours do you watch television?

HC6bListenRadio On a typical weekday, about how many hours do you listen to the radio?

HC7aReadNewspaper In the past seven days, how many days did you read a newspaper?

HC7bReadMagazine In the past seven days, how many days did you read a magazine?

HC-8. How much attention do you pay to information about health or medical topics [FILL MEDIA SOURCE]? Would you say a lot, some, a little, or not at all? (How about [FILL MEDIA SOURCE]?)

[CODE "DON'T USE" AS "NOT AT ALL".]

	<u>A LOT</u>	<u>SOME</u>	<u>A LITTLE</u>	<u>NOT AT ALL</u>
a. on TV .....	1	2	3	4
b. on the radio .....	1	2	3	4
c. in newspapers .....	1	2	3	4

d. in magazines .....	1	2	3	4
e. on the Internet .....	1	2	3	4

HC9SeekCancerInfo	Have you ever looked for information about cancer from any source?
HC15AconfidenceGetCancerInfo	Overall, how confident are you that you could get advice or information about cancer if you needed it?
HC20UseInternet	Do you ever go on-line to access the Internet or World Wide Web, or to send and receive e-mail?
CH1EverHadCancer	Have you ever been told by a doctor that you had cancer?
CH4FamilyEverHadCancer	Have any of your brothers, sisters, parents, children, or other close family members ever had cancer?
DM2marit	What is your marital status?
DM4hispa	Are you Hispanic or Latino?
DM5race1	What is your race?
DM6educa	Highest grade/year of school completed?
HHIncA	Income composite variable (B. Hesse)
TU2SmokeNow	Do you now smoke cigarettes?
Fwgt	Final full-sample weight

**Method of analysis:**

Initially some variables will need to be recoded for analysis. The direction of agreement needs to be recoded for the outcome variables and for confidence about getting cancer information. An exploration will also be made to determine if we can look at attention to media in the context of exposure and if an interaction variable would be worthwhile.

Research Question 1. What is the extent to which the American public believes that “everything causes cancer” and what are the factors potentially correlated with this belief?

We believe that this question captures to some degree how Americans perceive their cancer risk. We propose that those agreeing with the statement “everything causes cancer” more likely perceive greater cancer risk, possibly inflated risk, and risk from a greater number of sources.

Our first step in answering this question is to determine the weighted frequencies of respondents answering they strongly agree, agree, somewhat disagree, strongly disagree or have no opinion about the statement “It seems like almost everything causes cancer.” Those with no opinion, who refused, or don’t know are excluded from further analysis as their data is not meaningful for this portion of the analysis. Preliminary analysis found this to be approximately 11% of the sample. These people will be analyzed separately to determine if they have unique characteristics that make them different from those who did have an opinion.

In addition to the weighted frequency, we plan to conduct appropriately weighted chi-square analysis looking at the bivariate associations between the variables of interest. Variables which were either significant at the bivariate level or known to influence perception of cancer risk from the literature will be included in a multiordinal or linear regression dependent on whether we decide to treat the variable as ordinal or continuous.

Research Question 2. What is the extent to which the American public believes that there is not much that they can do prevent their chances of getting cancer and what are the factors that potentially influence such belief?

We believe that this research question taps into the feelings of fatalism that the public may have about preventing cancer. We plan to follow a similar pattern of analysis as stated above. Preliminary analysis found that those expressing no opinion, don't know or refusals were only 8% of the sample.

Research Question 3. To what extent does the American public perceive that there are too many recommendations about cancer prevention that it makes it difficult for them to follow the recommendations? What are the factors that influence such a perception?

We believe that this research question taps into peoples' perceived self-efficacy about preventing cancer. Using analysis similar to what was outlined in question one we will explore this question. Approximately 8% of the sample did not answer this question.

Target Journal: *Journal of Health Communication* or *Health Psychology*