From Two-Step Flow to the Internet: The Changing Array of Sources for Genetics Information Seeking

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Background

- Health information of particular interest in information seeking research

- From early 1970's to mid 1980's studies showed that interpersonal providers much more important than institutions or the mass media

- Consulting friends and neighbors before print and electronic sources labeled "two-step flow" or the "dual-link model"

- Influential friends, family, acquaintances known as "opinion leaders"

Background

- Recent study of working poor showed low regard for personal sources and high media usage

- Accessibility and likelihood of providing information determines source usage levels, not informativeness, credibility, or persuasiveness

- Before wide availability of Internet standard "two-step flow" tradition was the norm for health information sources

- Study in 1998 revealed a shift in health care seeking habits

Background

- In 2003 (UCLA), roughly 91% of Americans recognize the Internet as an "important" source of information

- In 2002 (Pew Study), 62% of Internet users had used it to seek health information

- Also 2002 (Stanford Univ.), more conservative study showed 40% of adult Internet users had utilized it for health-related purposes

- 1997 study found that 89% of messages on an online health bulletin board were authored by persons without medical training and 1/3 of advice unconventional

Background

- Studies in 1996 and 1997 found high levels of interest in genetic testing
  - Predictive testing: 82%-87%
  - Breast cancer: 97%
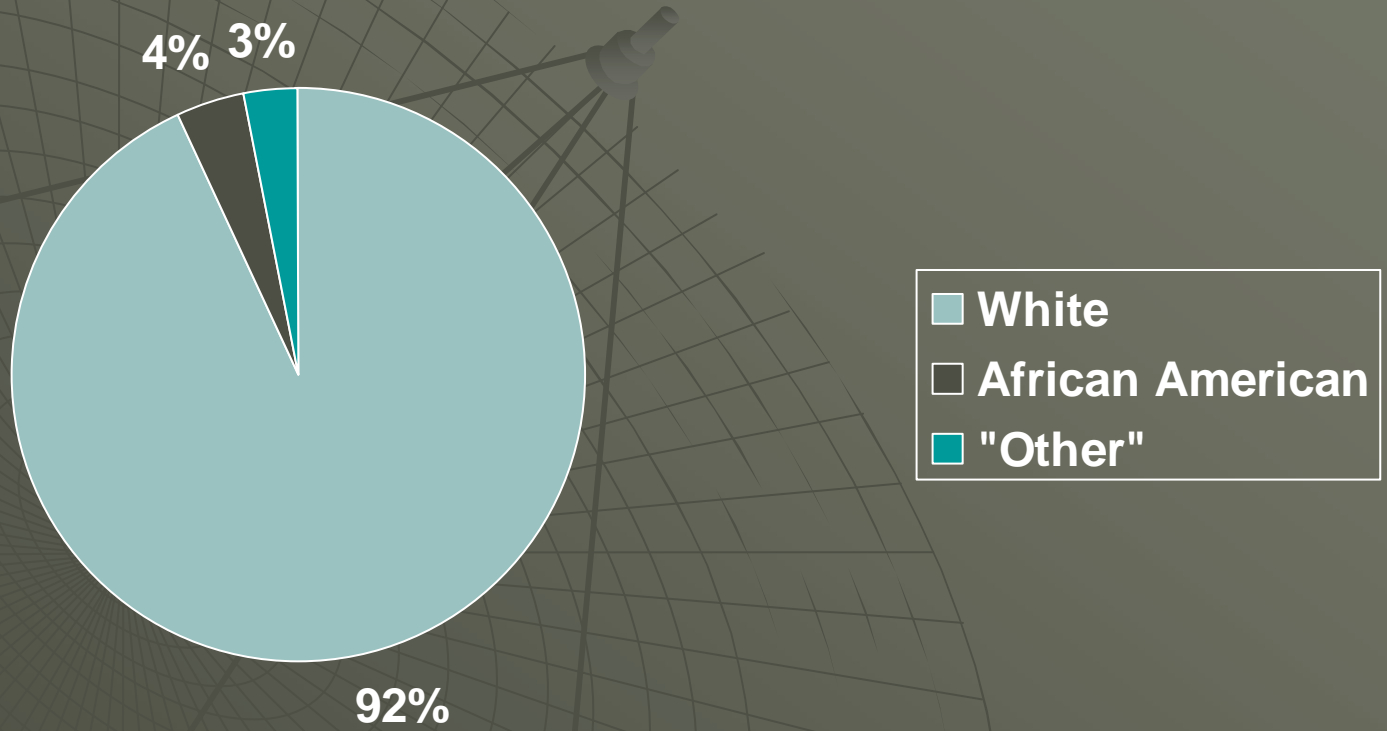- 2003 editorial feature in *The New York Times* discussed genome scanning and findings for the individual

Methods

- Telephone survey conducted July to August 2002 by trained interviewers working for University of Kentucky Survey Research Center

- Sample obtained via Waksberg random-digit dialing procedures.

- 41% (882), of 2,454 possible respondents (minus 125 ineligible respondents) agreed to be polled.

- Margin of error: +/- 3.3% at 95% confidence

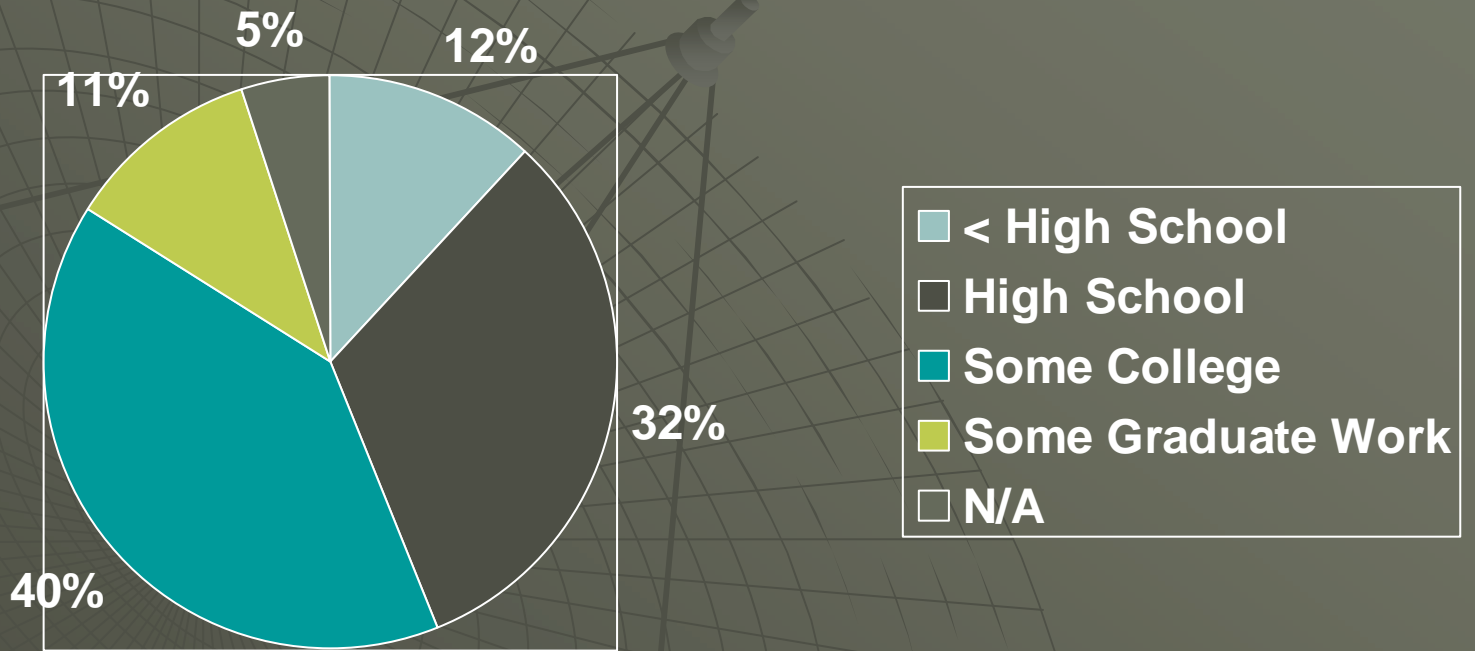- Other than African Americans and males, fair representation of adults in Kentucky

Methods

◆ First 3 questions dealt with awareness of cancer "running in their family", their understanding of genetics, and their level of worry about inheriting cancer

◆ Second set of 3 questions concerned their 1st, 2nd, and 3rd choice of sources if they were "trying to find information about inherited cancers"

◆ Last set of 3 questions concerned if they would want or need help finding information about genetic testing, how much they would need, and if they would choose to "have a genetic test to determine your risk for inherited cancer if it was readily available"
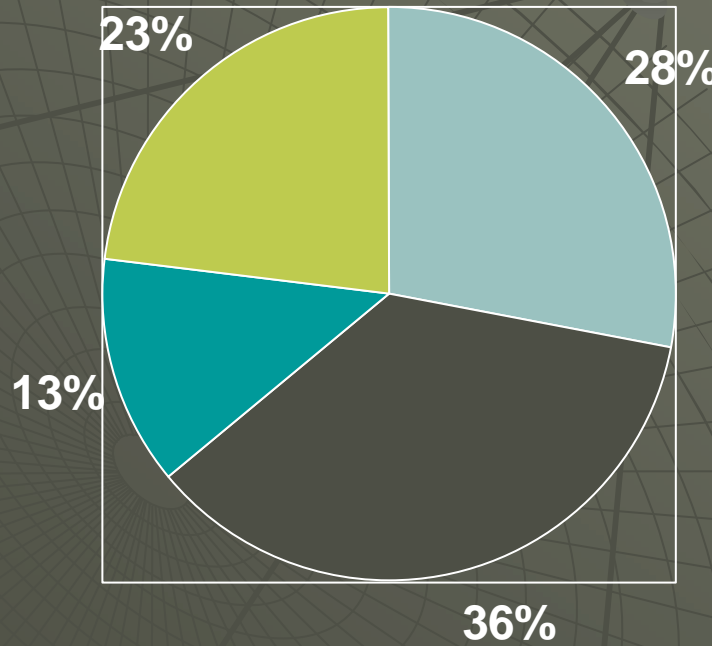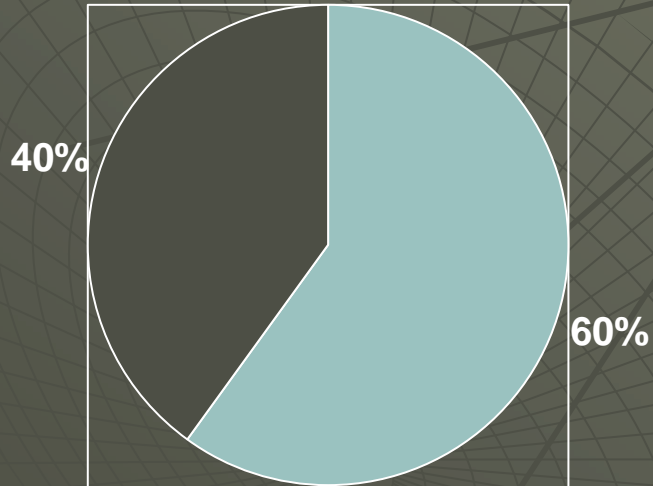
Demographics

4% 3%
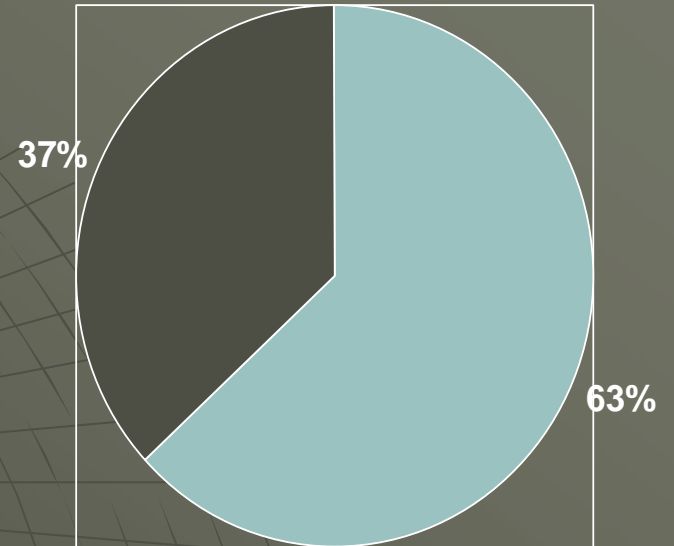
92%

Legend:
- ☐ White
- ☐ African American
- ☐ "Other"

Demographics

Pie chart showing educational demographics:
- < High School: 12%
- High School: 32%
- Some College: 40%
- Some Graduate Work: 11%
- N/A: 5%

Demographics

Demographics

40%

60%

☐ **Male** ☐ **Female**

37%

63%

☐ **Married** ☐ **"Other"**

Findings

- Information sources for inherited cancer
  - 93% able to identify one source
  - 68% able to name at least two
  - 34% able to identify three sources
- Total of 15 unique sources given
- Sources
  - Internet (46.5%)
  - MD (18.4%)
  - Public Library (14.1%)
  - Family Member (10.6%)
  - Other Medical sources (8.7%)
  - Mass Media (1%)
  - Friends and Family (.5%)

Findings

- Length of time using Internet positively associated with ranking Internet higher (not statistically related to other sources)

- Encouraging that total of 10.5% of respondents thought to call CIS

- Statistically significant relationship between understanding of genetics and the number of sources given (maybe due to monitors/blunters)

- Patients may turn to the Internet before/after seeing a physician, but very few (2-3%) substitute for seeing a doctor

Findings

◆ Internet not a good source for information

◆ Nearly half (47%) judged understanding of genetics to be inadequate

◆ Logistical regression showed that 3 most predictive variables were understanding of genetics, age, and household income

◆ Regression able to correctly classify 74.7% compared to correct chance classification of 50%

◆ Wealthier respondents go to Internet first, which is counterintuitive.

Paper's Discussion

- Popularity of Internet as source is cause for concern

- Dominance of Internet sources a further mutation of two-step flow hypothesis

- Idea that most people turn to friends/family as first source is in doubt (could be due to newness of subject matter)

- Appeal of Internet could be that it allows public to bypass experts

- Questions were "what if" questions, so don't know what respondents would really do

Paper's Discussion

- Answers provided could have been "socially acceptable answers", but doubtful
- Shortage of qualified cancer genetic counselors
- Primary care physicians not prepared to satisfy informational or clinical needs for genetic related questions