Understanding People’s Attitudes and Behaviors for Weather Forecast Information

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Introduction, data, and analysis methods

The meteorological community wants to provide better information in better ways to better serve the many weather forecast users. This requires empirical information about people’s attitudes and behavior regarding forecast information. This includes developing robust knowledge about how people acquire, process, and use weather forecasts. The current study reports three objectives. First, we conducted a statewide survey to understand people’s sources of forecast information, their perceptions and uses of that information, and its accuracy. Second, we assessed the importance of several factors that influence these behaviors, including demographic factors. These results are used to develop an improved model for understanding how people use weather information. The study’s limitations are also described.

Source of forecast information

Survey respondents were asked “How often do you get weather forecasts from the sources listed below?” The response options were “frequently,” “occasionally,” “seldom,” and “never.” The most common sources were: newspapers (72%), weather radio (54%), radio (53%), cable TV (52%), and the Internet (48%). These results are similar to previous studies, which found newspapers and weather radio to be the most common sources.

Factors influencing sources of information

The linear regressions on the three factors of weather forecast source information are shown in Table 3. The work is exploratory, but the regressions show some interesting results, some of which may reflect broader relationships and implications worth further exploration.

- Older people are more likely to rely on traditional sources (e.g., local and cable TV, paper, newspaper, and TV weather), which suggests they are more likely to use traditional sources even in the face of new technologies (e.g., web, electronic devices).
- The younger people are more likely to use newer technologies in (e.g., web, electronic devices).

The potential implications for weather forecast information are shown in Table 4. This includes the importance of weather forecast information in different areas, the perception of accuracy, and the confidence in forecasts.

Future work

Further analysis on this project will include several components:

- Additional interpretation of the linear regression results shown here.
- Linear regression analysis to explore how different factors influence the use of weather information for personal use (Table 3) and for decision-making (Table 4).
- Ordinal regression to explore how people’s confidence in forecasts, satisfaction with forecasts, and importance of weather forecasts vary across different forecast information sources.
- Regression analysis to explore how different factors influence people’s perceptions of, and preferences for forecast uncertainty information.

References


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