Nutrition-Related Cancer Prevention Attitudes and Behavioral Intentions: Testing the Risk Perception Attitude (RPA) Framework

Helen W. Sullivan1,2, Ellen Burke Beckjord1,2, Lila J. Finney Rutten2, & Bradford W. Hesse2

1 Cancer Prevention Fellowship Program, Division of Cancer Prevention, National Cancer Institute (NCI) 2 Health Communication and Informatics Research Branch, Behavioral Research Program, Division of Cancer Control and Population Sciences, NCI

Introduction

- An estimated 35% of cancer deaths could be prevented through good nutrition (1).
- Accordingly, several programs emphasize the benefits of good nutrition to motivate people to improve their diets (2).
- Data suggest that people who agree that nutrition is related to cancer have healthier diets (e.g., 3).
- Thus, strategies to change people’s nutrition-related cancer prevention attitudes could impact their diets and ultimately decrease cancer rates.
- Psychological constructs associated with nutrition-related outcomes provide potential targets for health communication messages and interventions.
- A framework that allows researchers to identify people with varying nutrition-related cancer prevention attitudes and behavioral intentions is needed.

The Risk Perception Attitude (RPA) Framework

Identifies 4 groups based on:
- Perceived risk—the extent to which people believe they are vulnerable to an outcome
- Efficacy—the extent to which people believe they are able to take action to avoid an outcome

RPA predicts that efficacy affects outcomes at high levels of perceived risk (responsive individuals have better outcomes than avoidance individuals), but not at low levels of perceived risk (indifference = proactive).

The RPA framework has been shown to predict prevention behaviors in the context of skin cancer (5, 6).

Objective

To test whether the RPA framework is predictive of attitudes and behavioral intentions related to nutrition in cancer prevention in a nationally representative sample.

Method

Data Collection

The Health Information National Trends Survey (HINTS) is a national probability survey of the U.S. adult population.

Adults 18 years or older (n = 6,369) completed a one-time random-digit dial telephone survey in 2002-2003.

Further details about the sampling plan and response rates are published elsewhere (7).

Table: Predicted Marginals (95% Confidence Interval) for Demographic Characteristics, by RPA Framework Categories.

<table>
<thead>
<tr>
<th>Demographic Characteristic</th>
<th>Indifferent</th>
<th>Avoidant</th>
<th>Proactive</th>
<th>Responsive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-34</td>
<td>37 (33-41)</td>
<td>34 (32-36)</td>
<td>32 (29-37)</td>
<td>35 (31-38)</td>
</tr>
<tr>
<td>35-64</td>
<td>49 (45-53)</td>
<td>56 (54-58)</td>
<td>54 (50-58)</td>
<td>58 (54-62)</td>
</tr>
<tr>
<td>65+</td>
<td>15 (13-17)</td>
<td>10 (8-12)</td>
<td>13 (11-15)</td>
<td>6 (4-8)</td>
</tr>
<tr>
<td>Gender (% Female)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>49 (45-53)</td>
<td>50 (48-52)</td>
<td>51 (47-55)</td>
<td>51 (47-55)</td>
</tr>
<tr>
<td>Female</td>
<td>50 (48-52)</td>
<td>51 (48-52)</td>
<td>50 (48-52)</td>
<td>50 (48-52)</td>
</tr>
</tbody>
</table>

Data Analyses

SAS and SUDAAN software were used to estimate appropriate standard errors of point estimates for the complex survey data. Demographic variables were included in all models as covariates (Table).

Results

• Respondents with higher efficacy (proactive, responsive) were more likely to report that good nutrition can prevent cancer and reported more preventive dietary changes compared to those with lower efficacy (indifference, avoidance) regardless of level of perceived risk (Figures 1 & 2).

• Respondents with higher efficacy (responsive) were more likely to report intentions to change their diets compared to those with lower efficacy (avoidance) but only at higher levels of risk (Figure 3).

• Respondents with higher efficacy and higher risk (responsive) reported more changes to their own diets compared to other respondents (Figure 4).

• Results suggest that to improve attitudes about the role of nutrition in cancer prevention, interventions should target efficacy beliefs; to increase intentions to change nutrition behaviors, interventions should target efficacy and risk perceptions.

Conclusions

References