
Theoretical Concepts as a Guiding Principle for Developing Food Preservation and Safety Program for Youth

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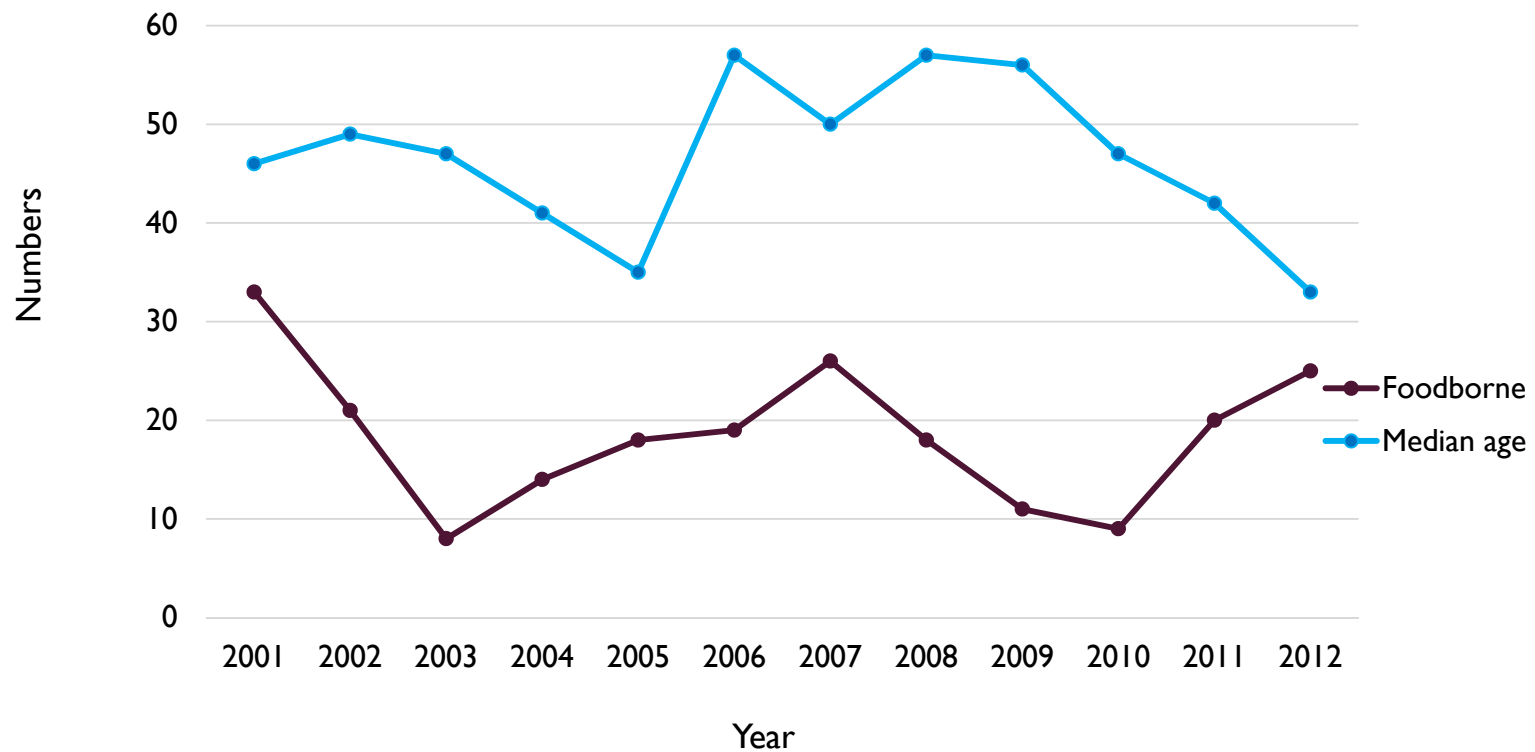
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OBJECTIVES

- Modify an existing adult food preservation program for youth
- Identify a well known public health theory
- Incorporate the health belief model for youth program planning

FOODBORNE BOTULISM IN THE UNITED STATES

Foodborne botulism cases and median age in the United States from 2001-2012



UNSAFE FOOD PRESERVATION

- Unsafe food handling behaviors
 - Personal hygiene
- Outdated equipment/recipes
 - Recipes before 1997
- Unreliable processing methods
 - Inversion canning
 - Microwave canning



FOOD PRESERVATION AND SAFETY PROGRAM FOR YOUTH

Associated risk

Increased recognition of farmer's markets and community/ home gardening.

Increased popularity & participation in county/state fairs

Research & USDA recommendations

Youth program

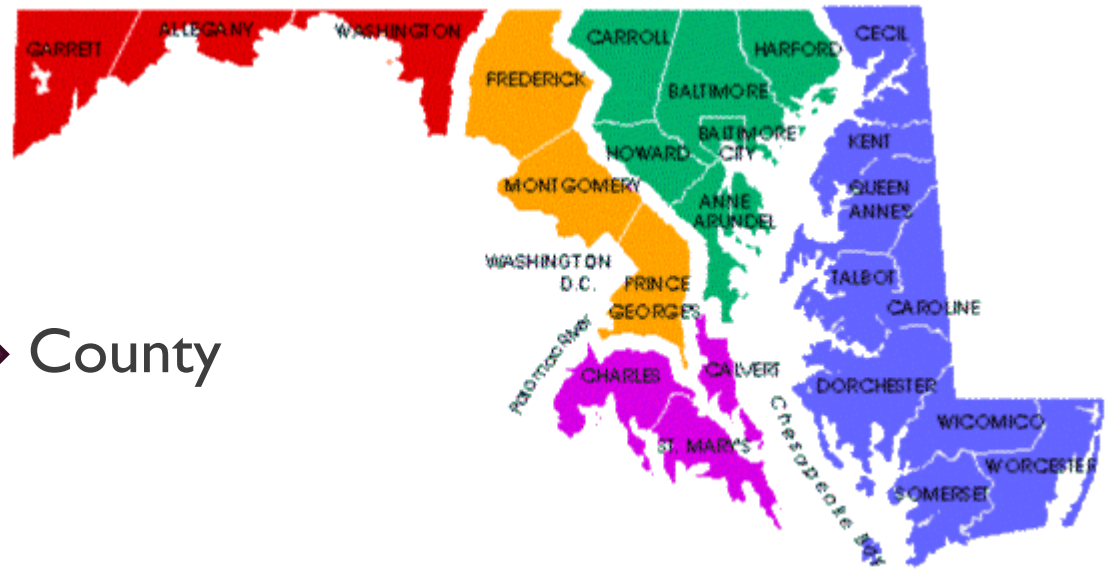
WHO WE ARE?

- Smith-Lever Act 1914, partnership between the agricultural colleges and the U.S. Department of Agriculture.
- Over 100 Land Grant Universities throughout USA.
- University of Maryland College Park & University of Maryland Eastern Shore.

WHO WE ARE CONTD...

- Major Areas: Agriculture, Leadership Development, **Family & Consumer Sciences**, 4-H Development, Natural Resources, Community & Economic Development.

- State → Cluster → County





WHAT WE DO?

- Assess needs in the communities
- Establish & strengthen partnerships
- Create & implement community focused programs

GROW IT EAT IT PRESERVE IT

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High-acid Canning (Hot Water Bath Canning)

Educator's Name and Date



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Low-acid Canning

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Jams and Jellies

Educator's Name and Date



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Pickles and Pickled Products

Educator's Name and Date



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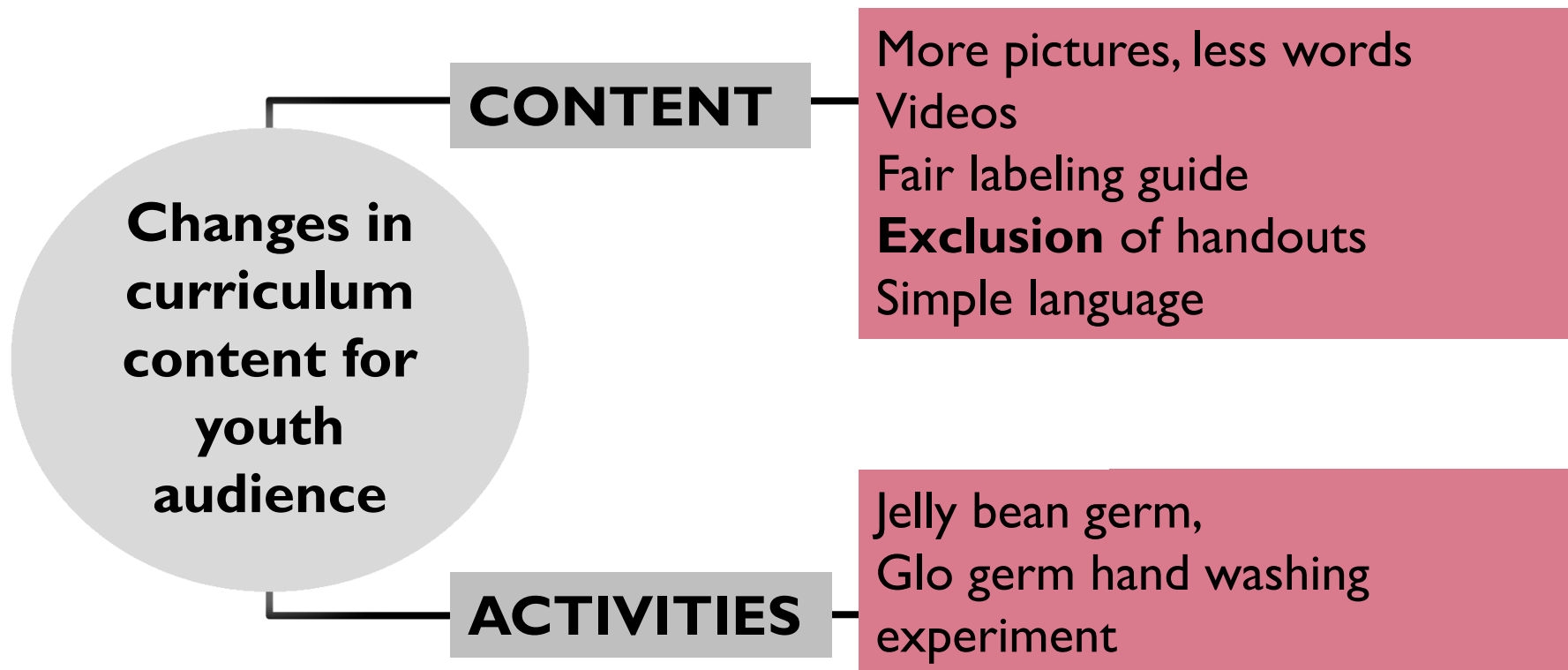
Tomatoes

Educator's Name and Date



GLIMPSE OF GROW IT EAT IT PRESERVE IT FOR YOUTH

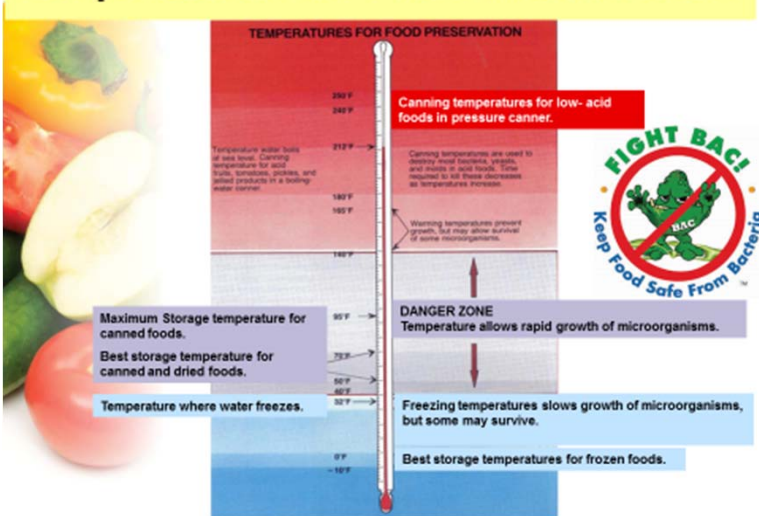
Adapted from University of Maryland Extension's (UME)
adult Food Preservation curriculum.



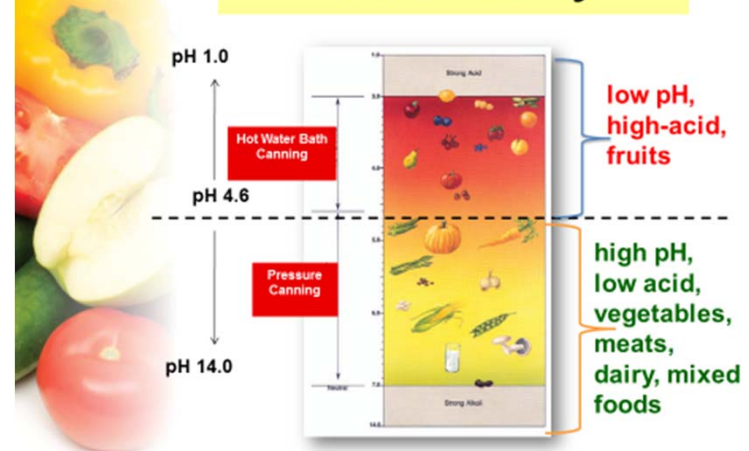
GLIMPSE OF GROW IT EAT IT PRESERVE IT FOR YOUTH CONTD....

- How canning preserves food
- Safe temperatures and danger zone for canning
- Link between food acidity and spoilage

Temperatures for Food Preservation



Food Acidity



GLIMPSE OF GROW IT EAT IT PRESERVE IT FOR YOUTH CONTD...

- Risk of botulism and symptoms
- Participating in fairs
- Videos, games, activities, taste-testing, hands-on canning.



Labels for Fair Entry

Sample 1
Peach Preserves
5 minute hot water bath
Sure-Jell

Sample 2
Whole Tomatoes
Pressure canned – 11 pounds, 25 minutes
So Easy to Preserve



It Only Takes a Taste

CLEAN SEPARATE COOK CHILL

A story about Botulism

UNIVERSITY OF MISSOURI Extension

We know the C, but will only give it a pH below 4.5. To lower the pH of the salsa, we can add acid. Our goal is to bring the pH below 4.5, but for added safety we will shoot for a pH below 4.2.

GLIMPSE OF GROW IT EAT IT PRESERVE IT FOR YOUTH CONTD.....

- Recommended canning methods, equipment, recipes and processing
- Personal hygiene, preparing and handling food ingredients
- USDA recommendations
- Not recommended practices

Dishwasher Canning



Open Fire Canning



THEORY

- A theory presents a systematic way of understanding events or situations.
- It is set of concepts, definitions and propositions that explains and predicts these events or situation by explaining relationship between variables.

THEORY CONTINUED...

Concepts

Primary elements of a theory

Constructs

Concepts developed or adopted for use in specific theory

Variables

The way a construct is to be measured in a specific situation

Models

A number of theories to help understand an issue

USING THEORY FOR PROGRAM PLANNING

- Program planning (program outlining, flow, content development)
- Answering questions (what, why, how etc.)
- Assessment of current program
- Framework for studying problems (why of the issue)
- Evaluation tool designing
- Program evaluation (overall success and lessons learnt from the program)

HOW TO SELECT A THEORY?

Questions to ask while selecting a theory:

- Does the theory include similar variables/issues and exclude redundancy?
- Does it make sense in certain scenario?
- Has it been used for similar purpose/ research/ program?
- Start with a logic model
- Work backwards from the end goal/outcome.

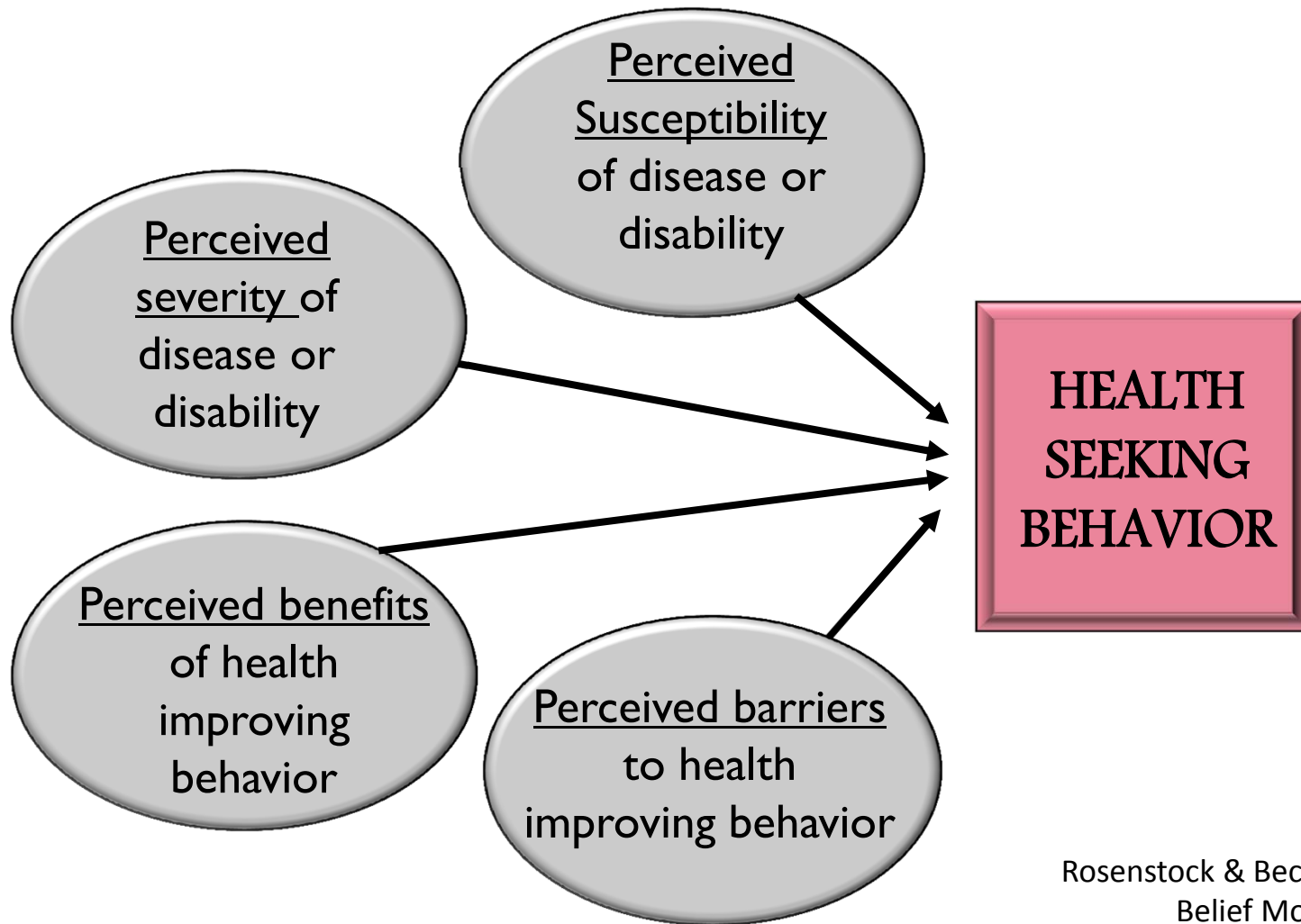
WELL KNOWN THEORIES IN PUBLIC HEALTH

- Health Belief Model
- Transtheoretical Model
- Social Cognitive Theory
- Theory of Planned Behavior
- Socio-Ecological Model

HEALTH BELIEF MODEL (HBM)

- HBM is widely used theory in public health.
- It addresses the individual's perceptions of the threat posed by a **health problem, the benefits of avoiding the threat**, and factors influencing the decision to act.

HEALTH BELIEF MODEL (HBM) CONTD...



Rosenstock & Becker's Health Belief Model

HEALTH BELIEF MODEL (HBM) COMPONENTS

Symptoms of foodborne illnesses, and news article on botulism cases,

Incidence of Botulism & foodborne illnesses through canning.

Perceived Susceptibility

Perceived severity

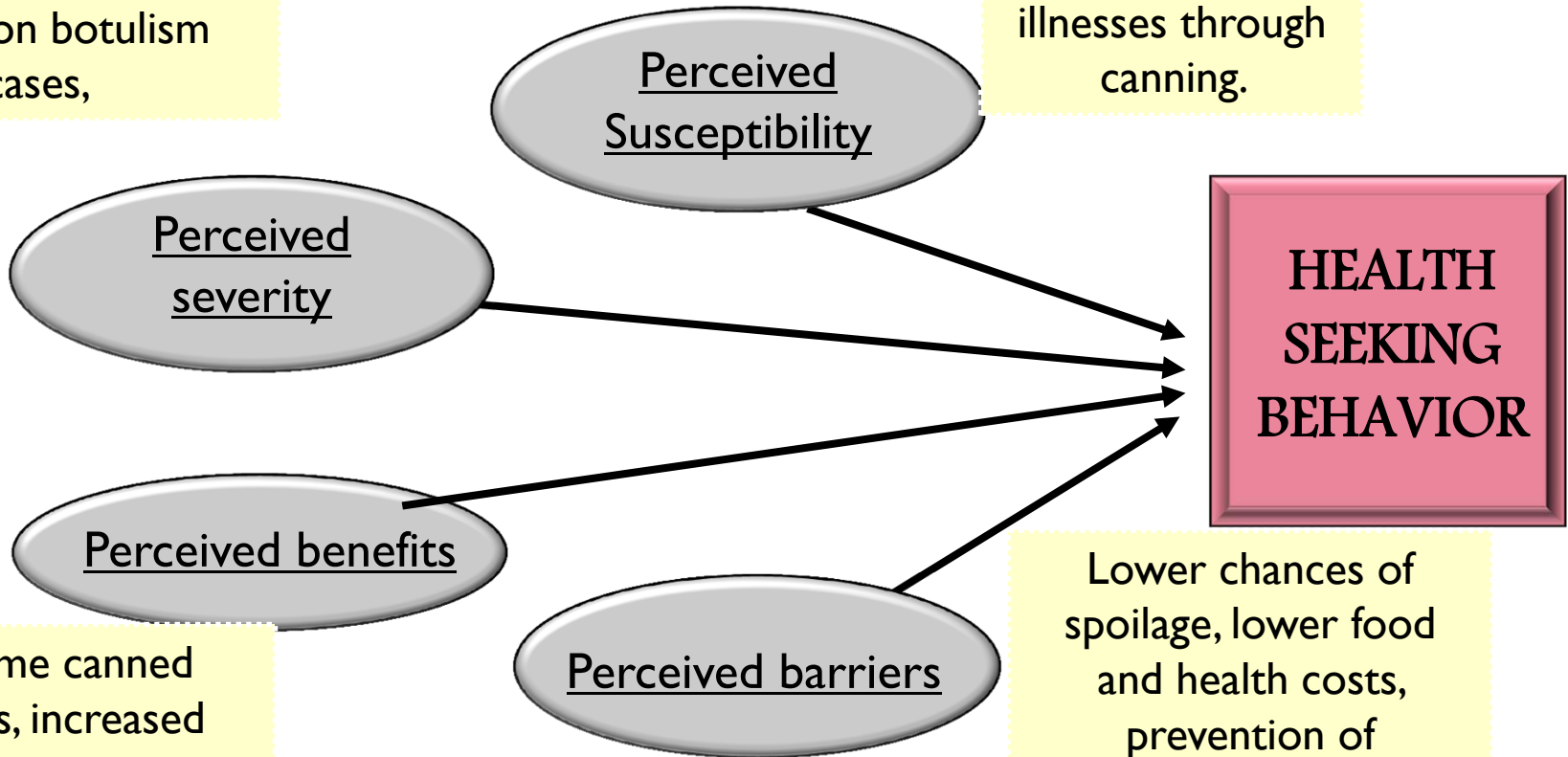
HEALTH SEEKING BEHAVIOR

Perceived benefits

Safe home canned products, increased confidence in canning, prevention of foodborne illnesses,.

Perceived barriers

Lower chances of spoilage, lower food and health costs, prevention of foodborne illnesses through home canned foods.



THANK YOU!

Authors of the Grow It Eat It Preserve It for Youth

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Adapted from:

USDA Home Canning Guide #6 (2009)

So Easy to Preserve text (5th edition 2006)

University of Georgia, National Center for Home Food Preservation

Putting Food By, Janet Greene, Ruth Hertzberg, and Beatrice Vaughan, Penguin Group, 2010

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QUESTIONS? COMMENTS!

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