

Behavior, Culture and Supplements



Objectives

- What behavioral themes are emerging?
- How can emerging theoretical constructs be conceptualized, measured and validated?
- What environmental triggers have contributed to the growth in dietary supplement use in the elderly?



Global presence of dietary supplement use

Dietary supplements are used around the world

- Native Americans and Mexican Americans**
- Eastern versus Western traditions**
- US, Canada, Europe, Asia**

Global patterns of dietary supplement use

Vitamins, minerals, herbals, pills, sport drinks, Liquid supplements

- History, climate, location**
- Culture**
- Unlikely will find discrete, simplistic patterns of supplement use across the globe**

Values and Social Norms

What are some of the values and beliefs on which Americans base decisions and behaviors, and how have these values changed over time?

- Youth
- Thinness, beauty
- Immediacy—I want it now
- Choices, freedom to choose



Environmental and societal factors: Changing norms

- **Role of TV and advertising**
 - **Exposure to ideas, images, product ads....**
- **Transportation—cars and the suburbs**
 - **Expanded access to products and choices**
 - **Rather than the corner store, the mega-mall**

Increasing rates of education:

- **Better trained workforce**
- **Employment opportunities and higher incomes—thus increased buying power**
- **Increased information seeking**
- **Increasing use of technology**

Societal change triggers:

- **Right to know movements**
- **Changes in federal policy—e.g. 1994 Dietary Supplement and Health Education Act-restricting FDA**

Regulatory status of Dietary Supplements was, in part, a response to consumer and industry demands for product information and choices



A Place for Theory:

Expectancy theories—

Health Belief model—

- **Susceptibility**
- **severity/threat,**
- **Cues to action**
- **Outcome expectations**
- **Barriers/incentives to adoption**

Case illustration

How might the health seeking behavior of a woman who has undergone surgery for breast cancer differ from the woman who has not had cancer?

Theory would suggest behavioral differences in susceptibility, outcome expectations, etc



Motivations Given 1:

- **Health, Health Maintenance**
 1. **At which age, if any, does motivation decline, for age / gender segments?**
 2. **Insurance—”just in case”—healthy habits folks**
 3. **Counterbalance poor dietary practices**

Motivations Given 2:

Response to acute or chronic conditions

- Colds, immunity—Echinacea**
- Depression, anxiety--St. John's Wort**
- Improve memory—Ginkgo biloba**
- Hyperlipidemia—Garlic**
- Prostate enlargement—Saw Palmetto**
- Joint pain--Chondroitin sulfate**
- Hot flashes—Red clover**

Motivations Given 3:

- **Anti-aging, antioxidants and Food as Medicine**

**Can use of some products slow or reverse
the aging process?**

Scientific American, May 2002

AARP, June 2002

Motivations Given 4:

- **Concern about the adequacy of agricultural practices and the safety of the food supply**
 - **Nutrient depletion**
 - **Use of pesticides/herbicides**
 - **Introduction of genetically modified (GMO) foods**

Motivations Given 5:

- **Mind-body-soul spiritual perspective**

**Dissatisfaction with the extent of
traditional Western medical care and
lack of holism**

Desire for autonomy in self care

Perceptions of CAM

Eisenberg et al. 2001:

Why not disclose CAM therapy to MD?

- **“It wasn’t important for the Doctor to know”**
- **“It was none of the Doctor’s business”**
- **“The doctor would not understand”**



Categories of Users:

- Health promotion, CAM for insurance
- Dissatisfaction with extent of traditional medical care, lack of holism
- Treatment of real or perceived symptoms dissonant with health—
memory lapses, depression, joint pain
- Cancer survivors, others with chronic conditions



Cancer Survivorship Literature

Aziz, J Nutr, 2002

- Issues facing cancer survivors may not be the same as those in treatment, including self concept, body image, personal autonomy, coping
- Importance of Quality of Life issues



Medical conditions and DS Use

The VITAL Study

Abouta et al. Am J Prev Med 2003

- **45,000+ in Washington state, ages 50-75**
- **# supplements used increased with age in men, but not women**
- **DS use higher in 13 of 21 medical conditions**



Self-treatments:

Abouta et al...

- If low energy or depressed, more likely to use zinc or folate, often found in B vitamin complexes (Energy boosters)
- men with benign prostatic hyperplasia more likely to use selenium—
- CAD more likely to use Vitamin E

Summary: Research Gaps 1:

- **Measurement of motivational constructs**
 - Diet quality perception accuracy
 - Triggers for use for acute, time limited conditions versus for chronic conditions
 - Spirituality
 - Autonomy in self care
 - Acculturation differences

Research gaps 2:

- **Cohort or other longitudinal analyses to distinguish between the behavioral differences observed across age, cohort and time in cross sectional analyses.**
- **Quality of Life measures of relevance**

Need for Decision Analysis

Consider a multi- step decision analysis related to the use of Dietary Supplements

Step 1—yes/no—decide to try

Step 2—Given initial trial, decide to continue, reject, or substitute a similar product, based on efficacy, acceptability, side effects



Acknowledgements:

- **Jill Reedy, PhD Doctoral Candidate,
University of North Carolina at
Chapel Hill**
- **USDA ERS grant support:
Lifestyle Mediators of Diet Quality**