

Preventative Effects of Cranberry Products Against Urinary Tract Infections in Healthy, Immunocompetent Women

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Background

- Urinary tract infections (UTIs) are one of the most commonly diagnosed bacterial infections in the world with an estimated 300 million women diagnosed per year.
- Annual healthcare costs for diagnosis and treatment of UTIs in the United States alone accounts for approximately \$1.6 billion.
- As rates of antibiotic resistance continue to climb, alternative, cost-effective methods for UTI prevention is needed, including complementary and alternative medicine (CAM) options.
- Cranberry products are considered a therapeutic CAM regimen.
- Women who consume cranberry products on a regular basis are 38% less likely to develop UTI symptoms. Additionally, cranberry products have been shown to reduce the risk of UTI recurrence by 26% in healthy women.
- Attitude, knowledge, and use of safe and alternative, prophylactic self-treatment methods for women with a history of UTI may contribute to reduced recurrence of clinical UTI, thereby reducing the need for antibiotic treatment.



Two Study Aims

- To explore the influence of attitude and knowledge on the use of CAM in healthy, immunocompetent women 18 to 65 years of age enrolled at Texas State University.
- To explore the attitude and use of cranberry products as a preventative method in UTI recurrence in otherwise healthy, immunocompetent women 18 to 65 years of age enrolled at Texas State University.

The Research Team would like to thank Dr. Viola G. Benavente, PhD, RN, for her time, support, and guidance.

Methods

Design

- A cross-sectional descriptive study was designed to examine two study aims.
- Convenience sampling was used to recruit eligible participants.
- Electronic surveillance methodology through a Qualtrics web-based platform was used for data collection and to maintain anonymity.

Instrumentation

- An 11-item Holistic Complementary and Alternative Health Questionnaire (HCAMQ) measured attitudes toward and understanding of CAM and holistic health beliefs.
- 13-item Researcher-designed Sociodemographic Questionnaire and Screening Tool collected demographic data and assessed cranberry use.

Study Site and Sample

- Study Site: Texas State University, including both San Marcos and Round Rock campuses
- Inclusion Criteria: English-speaking immunocompetent female students without a current UTI but with a positive history of UTIs, ages 18 to 65 years
- Recruitment and Enrollment: Consent form and electronic surveys sent directly by email to the target population using Qualtrics; N=213

Data Analysis

- Performed descriptive and inferential statistical methods using Microsoft Excel and Qualtrics.
- Recorded data for analysis and interpretation of the findings.

Implications for Practice

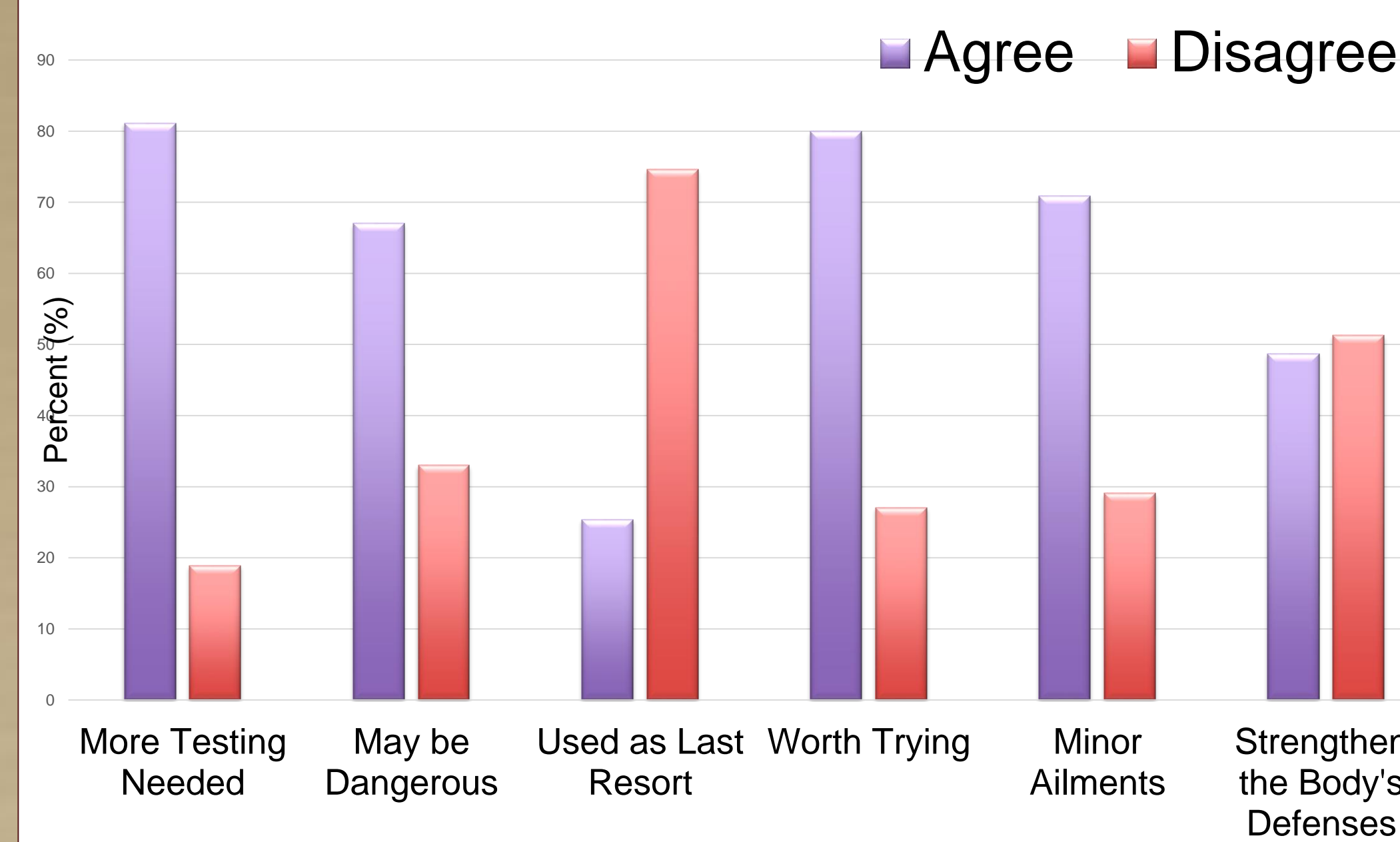
- Opportunity for education on the safety and efficacy in the use of CAM for UTI prevention;
- Reduction of the overuse of antibiotic therapy in light of increased bacterial resistance; and
- Exploration of the importance of open and direct communication between PCP and patient.

Results

Key Findings from HCAMQ regarding CAM:

- 81% agreed CAM needs more scientific testing before it can be accepted for conventional treatment.
- 67% agreed CAM could be dangerous in that it may prevent people from getting proper treatment.
- 72.95% agreed it is worthwhile trying CAM before going to see a primary care provider (PCP).

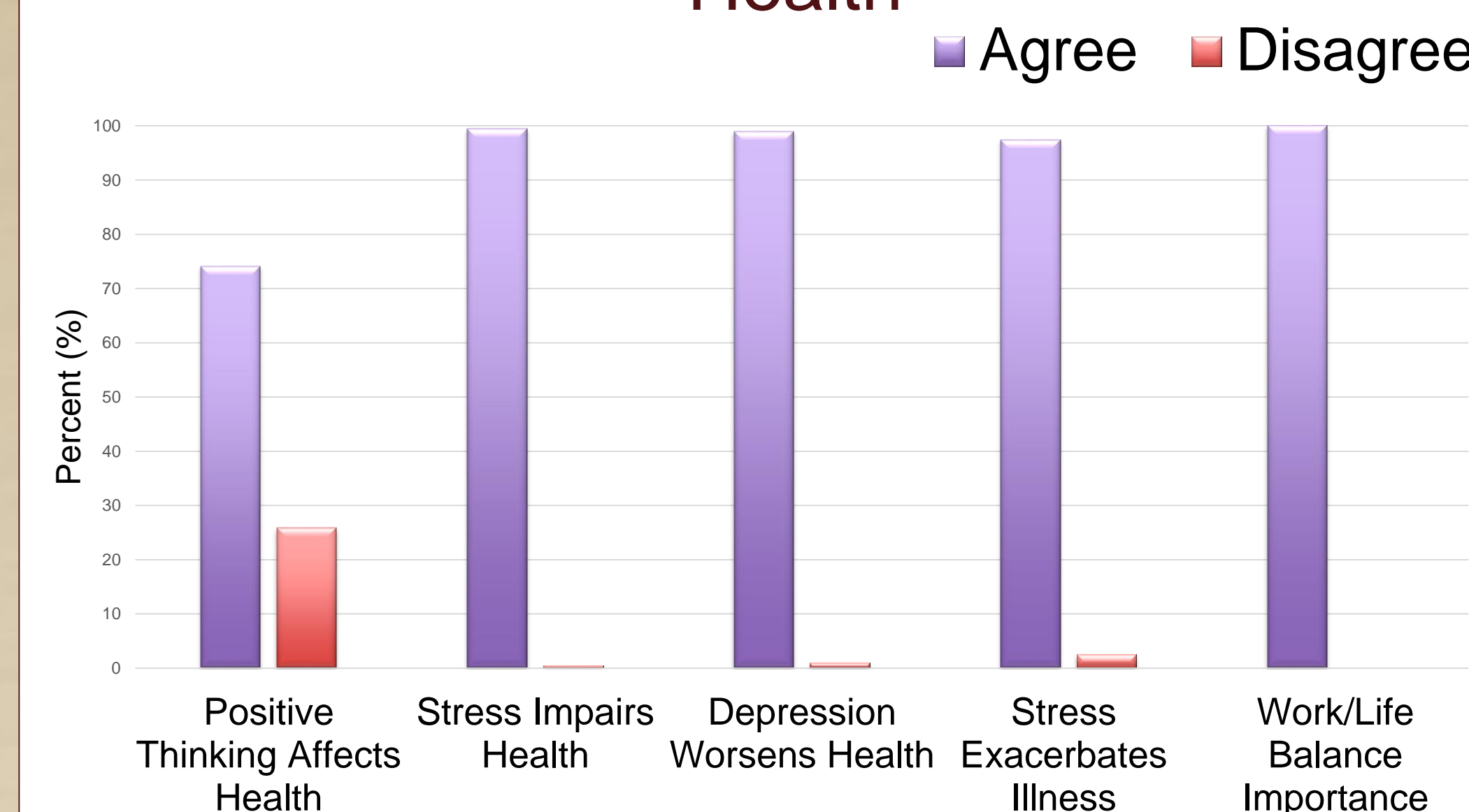
HCAMQ Attitudes Toward CAM



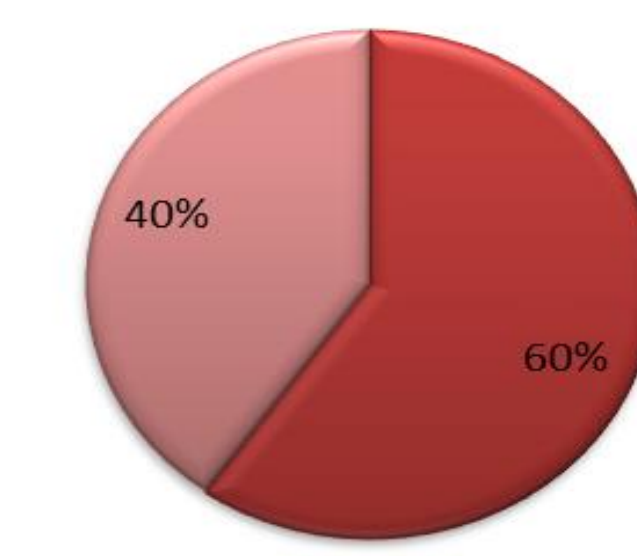
Key Findings from HCAMQ regarding Holistic Health:

- 99.49% agreed stress impairs overall health.
- 100% agreed it is important to find a balance between work and relaxation to stay healthy.
- 98.98% agreed the symptoms of an illness can be made worse by depression.

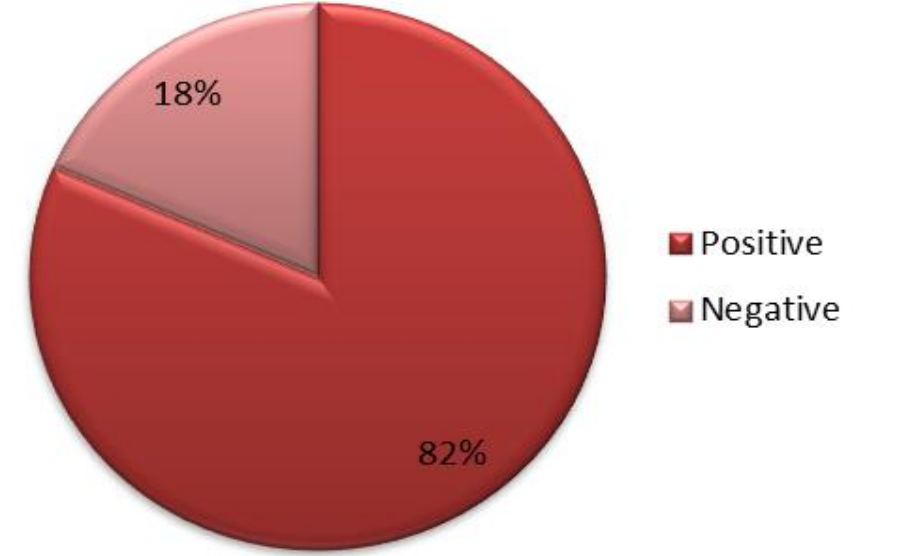
HCAMQ Attitudes Toward Holistic Health



Cranberry Use



Cranberry Use Results



- 82% reported no UTIs within the last 12 months
- 16% reported 1 to 2 UTIs within the last 12 months
- 27% admitted to past use of CAM
- 60% of participants reported using cranberry to prevent or treat UTI
- 82% who used cranberry products to prevent or treat UTIs reported a positive result

Discussion

- Overall findings based on HCAMQ scores indicate a positive attitude toward CAM and holistic health.
- Unclear understanding of what therapies are considered CAM persists in women.
- Positive attitude toward the concept of CAM, but a cautious attitude toward the use of CAM.
- Patient education is needed to increase the knowledge and usage of CAM.

Study Limitations and Future Research Recommendations:

- A clear definition of what constitutes CAM was not included on the survey.
- Cross-sectional study design only allowed data collection at one point in time.
- Race, ethnicity, and cultural beliefs were not included on the screening tool and therefore were not considered as an influencing factor, as implied in the scientific literature.
- Recommend future study on effects of patient education and the influence of race/ethnicity and culture on the attitude and use of CAM.

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