The Obesity Epidemic
Finding Aid in Empowerment
Karen Gatliiff-Holley, MSN, CNP-BC
University of South Carolina, Aiken, Student Health Center
DNP Student Georgia Southern University
Office of Lamar Murray, MD., Rural Health Center
What is “Empowerment”?  
• 17th Century-“to authorize”.  
• Catalyst to social reform.  
• Facilitate knowledge and self-care.  
• Increase positive patient outcomes.  
• Provider acts as patient advocate.  
• Non-paternalistic viewpoint.  

“When we want your opinion, we will give it to you!”

The United States spends more on health care than any other nation, (+2.6 trillion).

60 million Americans (1 in 5) have inadequate access to care.

1.7 million American deaths annually from chronic disease.

80% could be reduced by behavioral and lifestyle changes.

Positive relationship between education and patient outcomes.

Knowledge alone cannot predict a positive outcome.

Patients recall half of all information given them.

To improve knowledge, education must be integrated into daily activities.

82% of Americans own a cell phone capable of internet use.

Use of advanced technology increases self-efficacy and knowledge.

Research is limited regarding long-term chronic disease management and technology.

What’s the Problem? Why is it so Hard to Lose Weight?

- More than 1/3 or 35% of adults are obese with a BMI of 30 or above.
- 17% of US children are in the 95th percentile, meeting criteria for obesity.
- 30% increase in 10 years.
- Greater prevalence of chronic disease.

(Caroll, Kit, Flegal, & Ogden, 2012; CDC, 2012; WHO, 2012).

<table>
<thead>
<tr>
<th>Factors</th>
<th>Health Implications</th>
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<tbody>
<tr>
<td>Socioeconomic</td>
<td>Sleep Apnea</td>
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<tr>
<td>Medical: thyroid, post-menopause, medications, inactivity, and diet.</td>
<td>Type II DM</td>
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<tr>
<td>Psychological:</td>
<td>Heart Disease</td>
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<tr>
<td>1. Loss of Control/“Stress”</td>
<td>CVA</td>
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<td>2. Self-Esteem</td>
<td>Certain Cancers</td>
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“When you deprive your body by dieting, it may interpret this as starvation and adapt as necessary to survive.”
The American Culture of Over-Eating...

We have a love/hate relationship with food—a part of our traditions. Behavior modification is the key to lifelong change (AADE, 2012).
How Did We Get Here?
Why is the Problem Still “Growing”?

**Traditional Medical Model**
- How People Should Behave
- Assumptions Made from Theory
- Expectation of Rational Behavior

**Patient Behavioral Model**
- How People Actually Behave
- React to Environment
- Manipulated by Psychology, Culture, Economics…

“All great change in America begins at the dinner table”, (Ronald Regan).

“Our dilemma is that we hate change and love it at the same time; what we really want is for things to remain the same and get better”, (Sidney Harris).

(BrainyQuote, 2012).
The University of South Carolina, Aiken-Empowering Change!

**Student Body**
- Rural community, 5 miles outside of Aiken.
- Approximately 3,300 students-80% full-time, traditional.
- 67% female & 33% male student population.

**Student Health Center**
- Provide comprehensive primary care.
- Holistic approach staffed by LSW, APN’s, RN’s, and off-site collaborating MD specializing in Infectious Disease.

**Wellness Center**
- State of the art cardiac-rehab. facility.
- Referrals for evaluations within a 25,000 sq. ft. fully equipped and staffed center.
“Exercise is Medicine”: conditioning, weight loss, and chronic disease risk reduction.

Collaborative partnership allows for close medical supervision of other conditions.

SHC focuses on nutrition education, sleep hygiene, and other barriers to weight loss.

Technology aids comprehension and integration of knowledge into daily life.

Introduction of ShopWell application has been vital to “mobile population”.

Free nutrition application, designed to empower users to make healthier food choices.

Individualized profiles rate foods based on specific needs.

Food scores 0-100 with corresponding red, yellow, or green sign.
DUEAT Research Project
(Diabetics Utilizing Empowerment and Advanced Technology)
Improving Self-Efficacy Skills and Nutrition Knowledge in the Rural Patient with Adult Type II Diabetes
Utilizing Advanced Technology in Group Diabetic Teaching

Methodology
Health Outcomes were Measured by:
1. Michigan Diabetes Training Center Knowledge test
2. Diabetes Short Form Empowerment Scale
3. ShopWell Food Choice/Food Swap Logs

Goals
To improve the treatment, monitoring, and management of chronic disease by:
 a) promoting self-efficacy through increased dietary knowledge.
b) improving health care outcomes by integrating knowledge into daily activities.

Theory
- Rogers Diffusion Theory-addressing the gap between disseminating research to evidenced based practice, as well as behavioral change.

ShopWell
- ShopWell follows IOM, FDA, ADA, and AADE national standards.
- Designed by a team of dietitians, Stanford University statisticians and engineers providing regular updates.
- Food is scored based on individual health needs.

(ADA, 2012; AADE, 2012; FDA, 2012; Garcia, Green Hiatt, & Ottoson, 2009; Rogers, 2003; ShopWell, 2012)
Results (pre-post descriptive study design)

- SPSS evaluation of Michigan Diabetes Research Training Center Knowledge Pre- and Post-Test.
- Likert Scale utilized with multiple linear regression analysis demonstrated a 52% increase from pre-test scores.
- Use of ShopWell as an adjunct to traditional instruction demonstrated positive outcomes.
- Mean average hemoglobin A1C 8.1%, with a maximum average of 12%.
- All were referred to the study due to complicated disease states, comorbidities, and noncompliance.
- Positive correlations were found with hemoglobin A1C and cholesterol.
- Cholesterol level and age positively correlated with the job status of the participants.
- Results hold promise for future collaborative research.
Collaborative Opportunities.....

- The DUEAT Research Project is in Phase 3 committee-publication is next step! I welcome all collaborative opportunities for future research—particularly in areas of advanced technology, adult, student, and rural populations.

- Karen Gatliiff-Holley, MSN, CNP-BC; GA Southern DNP Student
  KEHolley@Comcast.net
  (706) 871-6515
- Mila Padgett, Wellness Center Director; Holly Guy, Assistant Director
  Many collaborative research opportunities for “Exercise is Medicine” for student populations.
  milap@usca.edu  hollyg@usca.edu
  (803) 641-3230  (803) 641-3734

- Cindy Gelinas, LISW-CP
  Counseling Center & Disability Services Director;
  Interim Director of Student Health Center
  Unlimited research and collaborative opportunities.
  cindyg@usca.edu
  (803) 641-2840 or (803) 641-3609

- Marci Harnischfeger, MS RD-Head Dietitian
- Brian Witlin, Co-Founder, and CEO
- Scott Golubock, Head of Engineering
  ShopWell is an Empowerment Application that can be specialized to meet your specific needs.
  marci@shopwell.com  www.shopwell.com

Thank You!
References


