Partnerships in Global Health: Nursing Assessments with School-Age Children in Belize to Promote Healthy Living

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Nursing Students- Promoting Child Health and Wellness in Belize
Danriga, Belize

- Danriga: formerly known as Stann Creek Town, is in southern Belize—location on the Caribbean coast.
- Danriga is the third largest with a population of 11,400 residents and noted to be the culture capital of Belize.
- Home of the Garifuna, a cultural and ethnic group with their Carib language, African music and religious traditions.
- One of the oldest schools in Belize is Sacred Heart School (first opening in 1898).
Procedures and Methods *Project Learn Belize*

1. **Focus Groups: Preparation on Cultural Awareness and Preparation on Health Teaching and Presentations and Activities separate meetings** *(each individual group presenting on: nutrition, immunizations, self-esteem, first aid, and oral care scheduled meetings).*

2. **Preparation of Immersion Project Materials and Fund-Raising for Supplies** *(mailing ahead to principal of school-donations of school supplies-paper / pencils, crayons, hand sanitizers, soaps, first aid kits, socks).*

3. **Supplies for Assessment: Vision Charts, Scales for Weight** *(9 weight scales purchased ahead of time for each assessment/ class later), Individual Blood Pressure Cuff/ Stethoscope--size specific and extra).*
4. Dialogue/ Communication with Principal, Teachers, and Project Director (Project Learn Belize to discuss developmental plan (Monday-Friday 8am to 5pm with evening reflections)

5. Health Teaching Plans: Individuals / Groups During Assessment (teachers/ teaching assistants and staff on nutrition, diabetes, heart disease/ blood pressure management, and health promotion follow-up).
Health Belief Model

- Assessment: Child as related to growth, weight, or nutritional deficiencies of:
  - iron, Vitamin A, iodine, and zinc
- Barriers to health and change related to nutrition and availability of fruits/vegetables and costs of foods for individual/families [How to overcome the barriers through the Health Ministry of Belize—Nutrition Lunch Program for 75 new school lunches]
- Benefits of Engagement in learning with students while reinforcing healthy behaviors
- Follow-up with health care providers/Principal/ and Project Learn Belize Director for action plan [dialogue and personal 1:1 health teaching, follow-up with referrals for physicians-physicals, eye exams by local visiting doctors for assessments—health issues/glasses, weight management overtime in classroom].
World Health and Children
Project Assessment and Health Promotion

- Sample of 758 children attending Sacred Heart School in Dangriga, Belize [Standard 1-6 Students/Special Education Students].
- Standard measurement and data supported on each student: BMI levels [height and weight/age], blood pressure, pulse, vision, and personal health concerns: skin color, skin elasticity and dryness, dehydration, eyes (vision/allergies) and walking/stance/gait.
- Presentation to support interdisciplinary medical follow-up with local community with Project Learn Belize at clinic/Southern Hospital in Dangriga.
- Follow-up in March/April 2014 [opportunity to monitor weight/height in classroom—over this year ~further].
Procedures and Method

1. **Focus Groups: Preparation and Health Teaching**
   - **Assignments** [each individual group presenting on: nutrition, immunizations, self-esteem, first aid, and oral care] ongoing in Fall 2012

2. **Preparation of Materials and Fund-Raising for Supplies** [mailing priority mail to Principal of school: donations of school supplies, soaps, first aid kits, socks].

3. **Supplies for Assessment: Vision Charts, Scales for Weight** [weight scales purchased ahead of time for each assessment/class later]

4. **Dialogue/ Communication to discuss developmental plan** [week from 8am to 5pm]

5. **Health Teaching Plans: Individuals / Groups** [nutrition, diabetes, heart disease/blood pressure management, and health promotion follow-up].
## Phases in Project Learn Belize

<table>
<thead>
<tr>
<th>Phase</th>
<th>2010</th>
<th>2012</th>
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<tbody>
<tr>
<td><strong>Culture, Communication, and Preparation for the Immersion</strong>—SONHP and Project Learn Belize</td>
<td>May</td>
<td>March</td>
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<tr>
<td><strong>Health Promotion and Advocacy</strong></td>
<td>Continuous</td>
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<tr>
<td><strong>Power of the Teachable Moments</strong> (Special In-service for Teachers)</td>
<td>Small Groups and Standards 4, 5, 6</td>
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BMI

Guidelines for Sacred Heart School

- \( \text{lb} \times 703/\text{in}^2 \)
- \(<18.5 = \text{underweight} \)
- \(18.5-24.9 = \text{normal} \)
- \(25-29.9 = \text{overweight} \)
- \(30-34.9 = \text{obese (Class I)} \)
- \(35-39.9 = \text{obese (Class II)} \)
- \(40+ = \text{obese (Class III)} \)
# BMI results

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<tr>
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<th>Hgt</th>
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- **Overweight**: 7
- **Underweight**: 3
- **Obese**: 5
- **Healthy**: 3
Follow-up on Chronic Health Conditions: March-April 2014

• Vision
• Cardiac (Blood Pressure)
• Respiratory (Asthma / Use of Inhalers for Breathing)
• Dehydration (Water / Weather)
• Sickle Cell Disease
• Other Chronic Diseases
• First Aid Prevention
Results of Child Vision Assessment:
N= 758

Vision Follow-up
n = 60
Transforming Lessons in the Field

Health Teaching in Groups During Assessments
Follow-up Presentation: Nutritional Foundation for Disease Prevention

- adding available fruits and vegetables
- limiting starch (rice)
- limiting salt (sweating in tropical area & need for fluids)
- limiting refined sugars
- calcium choices (milk, yogurt, & cheese)
- protein as possible & adding legumes (beans) for high protein
- diseases & concerns regarding high blood pressure, diabetes, and mental health issues (depression).
Deciding Factors for Health and Nutrition: March-April 2014

- Monitor growth patterns by: age, sex, height, weight, & physical health.

- Support educational lessons on hygiene, nutritional food choices / availability of resources in town/community.

- Referrals to local doctors / community clinic for health care concerns
Measures of Success for SONHP Immersion Program

- Curiosity for Learning-exploring opportunities for thinking “outside the box” toward innovative approaches for health promotion

- Courage-encourages each student/faculty to have confidence and trust their instincts

- Compassion-creating a generation of nurses who have a global perspective

- Competency-achievement of measured objectives to “gauge” the effectiveness of the program

- Capacity Building- sustain the program and offer guidance –ethics of a program

- Collaboration-commitment to the partnership for SONHP (3 years)-pre/post collaboration
Implications and Lessons Learned

- Promote health awareness with creative innovations involving the school community in child health
- Support nutritional programs and Public Health initiatives with the Ministry of Health in Belize
- Platform for educating the teachers and building network for health care workers
- Screening scheduled to monitor the physical growth of children overtime and complete nutritional assessments
Partnerships in Time~ Community of Dangriga, Belize

2010:
http://www.youtube.com/watch?v=5-2CUwBHtN0

2013:
https://www.youtube.com/watch?v=WKK4XoTaLeM
REFLECTIVE NURSING PRACTICES

Build Awareness & Sustain Partnership (Day #3 on Immersion)

1. Understanding the child/adolescent health needs and supportive teachers

   Students, Teachers (i.e., Family with Diabetes, Hypertension, and Learning and Physical Disabilities)

2. Developing an awareness of the resources available in the school, family, and community.

   (Lunch program at the school, snacks, walking home from Sacred Heart School, attending the church program on Sunday with the families, and talking with the teachers/assistants)

3. Supporting leadership amongst nurses and other health providers (interview on Belize radio on the health promotion program at the school / supported by Health Ministry).
Community Gateway for Children and Health Promotion

Stann Creek /Dangriga River---To Caribbean Sea

Sacred Heart School Yard
Future Steps Toward Building Community Wellness