A College and a University Collaborates on the “Moving On” Project: Reducing Obesity in Hispanic & Non-Hispanic Children

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Sigma Theta Tau International Nursing Research Congress- Dublin, Ireland
Background

• More than 10% of world’s population is obese (Frieden, TR et al, *JAMA*, June, 2017; *Miami Herald*, June, 2017; Dietz, *JAMA*, 2017)

• Florida ranks 35th in overall prevalence with 33.1% of children considered either overweight or obese (www.nichq.com)

• Hispanic children are at a greater risk for obesity with ↑prevalence with 34.3% overweight/obese in Florida and 41% nationally.

• In Miami-Dade County, Florida 20% of children are obese, especially boys. Obese children are more likely to develop Diabetes Type 2 and cardiovascular diseases (*RWJ & NCSL*, 2012).

• Miami Chapter National Association of Hispanic Nurses (NAHN) designated as one site for Muevete USA™ Project (Millan, 2012).


• Evans, A et al (2016) Impact of school-based vegetable garden and physical activity coordinated health interventions on weight status and weight-related behaviors of ethnically diverse, low-income students: *BCM Public Health* 16(1), 973.
Morbid Obese Child in Mexico

Amaranth, an ancient grain-answer to Mexico’s obesity solution

(Lanpher, K & Rydoff, 2015 2nd part The Amaranth Solution)
The Muevete USA event at Miami Dade College South Campus
Purpose of the Project

- To demonstrate awareness and understanding of Nutrition Facts Labels
- To identify daily portions of fruits, vegetables, grains, dairy and protein needed each day
- To describe importance of incorporating daily physical activity and exercises
- To engage children doing exercise with a Physical Fitness instructor to Hip Hop Spanish music or other exercises and games
Methodology

• A descriptive exploratory research design was used.
• The children completed 5 pre & post tests with 4 responses; otherwise yes or no answer.
  – 1\textsuperscript{st} test “My Plate”
  – 2nd test “Food Label”
  – 3rd test “Physical Activity and Exercise”
  – 4th test “Healthy Snacks”
  – 5th test “Goal Setting”

• Content validity was established.
Implementation

• Prior to the event, a nutrition seminar was presented by a nutritionist to prepare the nursing students on the five lessons and assist them in creating their storyboards.

• Community Health ASN & BSN students participated in “Moving On”, receiving 10 community hours for 2 hour nutritional seminar, 1 hour orientation and a 7 hour “Moving On” event.

• The children were divided into 12 groups with two students/group; taking food cutouts and making plates with appropriate portions, nutritional requirements, reading labels.

• MDC School of Nursing NAHN officers, members and community health students collaborated with MDC Continuing Education & Professional Development who offers a summer camp.
Implementation

• Nursing faculty facilitated the event while two certified physical fitness instructors presented the HIP HOP fitness session.
• Student made posters outlining nutrition aspects and obesity health risk factors.
• An ASN student constructed two life-like cardboard dolls (7’ male chef and 5’8’’ waitress) with meal portions.
Results

- The children (5-12), were divided into 12 groups with two students per group.
- The children took the food cutouts and made plates with appropriate portions, nutritional requirements, reading labels.
- Most were complete, even with younger children progressing to kindergarten; They were able to understand all the information.
- When small flags from different countries were distributed, the children identified their native country.
- NAHN member @ Barry University collaborated with MDC faculty to conduct a “Moving On” session.
Findings from MDC Kendall Campus

• 1st year 130 children participated in 2013
  – ages 5-12; males 50%, females 50%; mostly Hispanics
  – All mean scores increased from pre-to posttest
  – 1st test 3.13 to 4.67 3rd test 3.50 to 4.55
  – 2nd test 2.94 to 3.72 4th test 3.50 to 4.13 5th test 2.96 to 3.52

• 2nd year 125 children participated in 2014
  – ages ranged 4-15 mean= 8 years, kg-8th grade
  – males-62%, females 38%;
  – Hispanic 55%, White 30%; Black 9% Asian/other 6%;
  – pretest-posttest scores increased from 9.40--10.68, 13.62% change

• 3rd year 128 children participated in 2015
  – ages ranged 4-15 mean= 8.51 years, kg-8th grade
  – males- 59%, females 41%;
  – Hispanic 74%, White 20%; Black 5 % Asian/other 1%;
  – pretest-posttest scores increased from 9.77--11.81, 42% change
Findings from Homestead, Florida

• 2nd site 102 children at Homestead, 1st site 2014
  – ages ranged 4-15 mean= 9 years;
  – males- 54% females 46%.
  – Hispanic 41%, Black 38%, White 13%, Asian-8%
  – pretest-posttest scores ↑ 8.33-9.45, a 13% change.

• 2nd site 109 Migrant children at Homestead 2nd in 2015
  – ages ranged 5-12 mean= 8.51 years;
  – males- 65% females 41%.
  – Hispanic 41%, Black 36%, White 22%, Asian-1%
  – pretest-posttest scores ↑ 9.77-11.81, a 21% change
Findings from Homestead, Florida

- **2nd site (VG)**- 102 children
  - Ages 4-15; M- 54% F 46%.
  - Hispanic 41%, Blacks 38%, Caucasians 13%, Asians-8%
  - Pre-posttest scores ↑ 8.33-9.45, a **13% change**.

- **3rd site (Homestead)** 109 children
  - Ages 5-12; males- 65% females 35%.
  - Hispanic- 41%, Blacks 36%, Caucasians 22%, Asians-1%
  - Pre-posttest ↑ 9.77-11.81, a **21% change**.

- **4th year (Homestead)** 56 children
  - Ages 5-12
  - 58% M 42% F
  - Hispanic 76%, white 24%
  - Scores 10.4% to 13.2% **change 34%**
Findings from Doral, Florida

- 4\textsuperscript{th} year (Doral) 42 children in 2016
  - ages 10 -12
  - 45% M, 55% F. All were Hispanic
  - Scores went from 10.5-12., 23\% change
- 5\textsuperscript{th} year (Doral) 101 participants in 2017
  - 71\% males; 39\% females
  - 45\% M, 55\% F.
  - Hispanic-98\%, 8\% White- 8\%; 38\% White; 1\% Asian
  - Many children identified with two groups.
- Scores went from 11.3-11.6, 5\% change
Findings

• Community Health ASN & RN-BSN students from a college and university participated in five Muevete projects at three different sites over three years, receiving 10 community hours.

• Aerobic exercises were provided with hand washing teaching provided by Federal Drug Administration (FDA).

• Parents received nutrition classes.

• Children with pretest-posttest scores increased in all sites over the three years.

• The most missed question: "How much Sodium is in this entire food product"? Although Sodium was 440mg it was for 4 servings so the correct answer was 1760 mg.
**Conclusion**

- Over 1004 children participated from 2013-2017
- The children loved the program as they received healthy snacks and exercised.
- The children understood the need to manage childhood obesity according to pre/post test results.
- Younger children are more motivated to learn about diet and exercise to combat the obesity problem.
- The implementation of this program helped to reduce the number of Hispanic and other children with obesity.
- This should decrease the level of obesity in Hispanics and reduce the associated costs.
Zumba
Zumba
Exercise to You Tube
References


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Mexico tries taxes to combat obesity
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Questions?