Sigma's 30th International Nursing Research Congress

Nutritional Knowledge, Lifestyle Influences, and the Impact on Overweight and Obesity Rates Among Druze Children

Ymame Whaby-Kamal, MA
nursing- faculty of social welfare and health sciences university of haifa, University of Haifa, Daliet El-Carmel- Haifa, Israel
Cheryl Zlotnick, DrPH, MPH, MS, RN
Cheryl Spencer Department of Nursing, University of Haifa, Mt Carmel, Haifa, Israel

Overview:
Rates of overweight and obesity in adults and children has reached epidemic proportions globally. In 2016, 1.9 billion adults (18+) were overweight, and of these, 650 million adults suffered from obesity. Among children, 41 million preschool children were overweight and over 340 million children and adolescents, aged 5-19 were overweight or obese.

Childhood obesity is not only a strong predictor for adulthood obesity, but also increases the risk of developing premature onset of illnesses and serious non-communicable diseases. In addition, life quality is poorer in overweight and obesity in children and may affect the child`s social life. Due to the ominous trends of increasingly overweight and obese children and adolescents, and the correspondingly problematic morbidity of associated diseases, the World Health Organization (WHO) has declared childhood obesity an epidemic requiring world attention.

The proportion of overweight and obese adults and children is inequitably distributed in different population groups, and varies according to social characteristics such as socioeconomic status, ethnicity and geographic area. Many research studies found that among low socioeconomic status and ethnic minorities, overweight and obesity rates are higher, both in children and adults. In addition to genetics, other explanations for this inequity includes social and environmental factors such as eating patterns, food choice and parent`s attitudes to lifestyle and eating habits. Children born to overweight or obese parents, who have problematic eating habits, and who adopt a sedentary lifestyle are at an increased risk for being overweight and obese as children and later as adults.

The Case of Israel: Arabs and Jews
Israel is a high income and urbanized country of 8.7 million citizens with more than a quarter of its population composed of children between 0-14 years old (27.5%) and more than half between 15-54 years old (52.7%)**.** Obesity rates in Israel's general population in the year 2017 were high at 49.8%, and approximately 12% of the Israeli pupils from kindergarten to 9th grade were overweight or obese.

In Israel, the majority population is comprised of Jews (74.7%), and the largest minority group is comprised of Arabs (20.8%). Between the two largest population groups (Jews

and Arabs), the majority Jewish population demonstrated better outcomes compared to the minority Arab population in almost every aspect of life, such as in:

- Socioeconomic status - 49.2% of the Arab population in Israel live in poverty compared to 18.5% of the national poverty incidence in 2016;
- Education levels - 64.9% Jewish students received a matriculation certificate compared to 58.8% Arabs students, and 55.1% Jewish students met universities admission requirements compared to 43.8% among Arab's students;
- Unemployment – rates are 6.4% Arabs compared to 4.36% Jews; and
- Infant mortality rates -are higher among Arabs than Jews, 6.2 per 1000 in Arabs versus 2.3 per 1000 in Jews.

According to the OECD, disparities between the Jewish majority and Arab minority also exist, with obesity in Arab men 19.8% versus Jewish men 18%, and Arab women 24.3% compared to 16% among Jewish women. Patterns of child obesity varied by grade and ethnicity. Overall, more Arab children suffer from overweight and obesity compared to Jewish children: overweight and obesity in first grade Arab children 19% compared to 18% Jewish children; Arab children 37% compared to 27% Jewish children in seventh grade.

The Druze as an ethnic Minority in Israel
The heterogeneous Arab population is composed of three primary religious subgroups: Muslims (17.2%), Druze (1.6%) and Christians (1.9%); all three of which differ by demographic characteristics, lifestyle and integration into the majority society, culture, norms and identity. Data lack specification regarding these subgroups, referring and treating all three groups as if they were a collective and homogeneous population. . For example, there are no data on obesity rates among Druze.

Therefore, it is not known whether overweight and obesity rates among Arabs are applicable to Druze. There simply is a lack of information on this subject. The trend of omitting the Druze population in sampling or lumping them with in with the Muslims and Christian populations is a common practice, and exists in many health issues. As a result, there is a lack of information regarding the fundamental and important topic of overweight and obese individuals in this Israeli minority population.

The intensive and deliberate efforts, both through curricula and through the informal education system, build the Druze-Israeli consciousness in Druze students. This consciousness, which is intended to make young Druze identify with the state and its symbols, was built with emphasis on the commonalities between the Druze and Jews, and the separation between the Druze and other Arabs.

The very different nature of the Druze community from the Arab minority suggests that this group may have very different needs and health risks. Due to their way of life and culture, Druze straddle the cultural line between Jews and Arabs. It may be that the actual rates of obesity among Druze children are as high as Arab children due to the similarity in lifestyle. Conversely, due to school activities to develop an "Israeli consciousness" and to become part of Israeli society, their rates may mirror those of the Jews and be lower than those of Arabs. This question will only be answered if rates among Druze children are measured.

Druze in Israel are concentrated in 18 localities, 16 in Galilee and 2 in the Carmel. In four localities, they are a minority living in a separate neighborhood called the Druze

neighborhood to preserve their identity, lifestyle, and faith, and to reduce assimilation with those outside the Druze community.

Theoretical framework
Bronfenbrenner`s ecological model suggests a variety of factors and influences on the person`s lifestyle behaviors. According to this model, the child develops and has behaviors based on influences and interactions with the child's social and physical environment. In the Bronfenbrenner`s ecological model, these influences are represented by a series of concentric circles with the child in the center. Circles successively closer to the child at the center represent stronger influences due to more frequent and close contact with the child at the center. Bronfenbrenner`s ecological model ideally depicts the national, school, peer and family influences on behaviors related to obesity in children. Moreover, it encourages measurement of social and cultural influences that influence the child's behaviors.

Purpose:
Rational and implication/ significance
Due to the absence of information on rates of child obesity in the Druze community, this study, for the first time, will measure the rates of obesity, and assess the link between these rates and social and environmental influences in the Druze school children.
Study aims and objectives
Guided by Bronfenbrenner`s ecological model, the overall aim of this study is to measure the overweight and obesity rates among 3rd and 5th grade children, and assess the impact of Druze community, family and peer (child's friends) influences. The need for measuring two elementary school grades is based on the Israeli Health Ministry finding among Israeli-Jewish children, who demonstrate a gradual increase in obesity rates from kindergarten to the 5th grade. Obesity rates in children stabilize between 5th and 7th grade.
Specific objectives:
1. To measure rates of overweight and obesity among Druze children in elementary school age.
2. To assess the connection and influence of the microsystem- family and school (children and teachers) on the body mass index (BMI) of Druze children.
3. To compare rates of overweight and obesity among Druze villages in northern Israel (based on village size and proximity to urban areas such as the city of Haifa).
Setting and study design
Setting: this study will be conducted on elementary school children (i.e., 3nd and 5th grade) located in Druze villages in northern Israel, where the local community is more than 97% Druze and the village has a population greater 1000 people.

Methods:
Study design, population and data: mixed methods incorporating qualitative and quantitative methods.
The **quantitative component** using a cross-sectional study design will contains two parts: (1) a cross sectional survey from 3nd and 5th grade children on health behaviors

and the influence of the social environments including family, friends, school and community, and (2) objective measurements of children`s height and weight.
The **qualitative component** will contain audio-taped focus groups of two groups (the school staff and parents committee) using discussion guides, to gather these two perspectives on the influences from children's friends, stores/kiosks nearby the schools, and advertisements on eating and exercise habits of 3nd and 5th grade children.
Analysis: For the **quantitative component**, univariate analysis will begin with examination of variable distributions including means and standard deviations of continuous variables, and frequencies of categorical variables. Among the bivariate analyses will be comparison BMIs (rates of obesity and overweight) between 3nd and 5th grade children. Multivariate analyses will examine family, peer, community influences on BMI using analysis of variance, regression analyses. Structural equation models exploring Bronfenbrenner's Ecological model fit. For the **qualitative component,** audio-taped data will be transcribed. From the transcripts, excerpts will be coded and analyzed using traditional qualitative methods of thematic analysis (identification of main patterns and areas of focus).

Results: ongoing project

Conclusion: ongoing project

Title:
Nutritional Knowledge, Lifestyle Influences, and the Impact on Overweight and Obesity Rates Among Druze Children

Abstract Describes:
Ongoing Work/Project

Applicable category:
Students, Researchers

Keywords:
Bronfenbrenner`s Ecological Model, Druze and Obesity

References:
CBS. (2018). Well-being, Sustainability and National Resilience Indicators, 2016
Lazar, S. O.-., & Jabareen, Y. (2016). *Conditional Citizenship on Citizenship , Equality and Offensive Legislation* Pardes.
Rubin, L., Honovich, M., Shtal, Z., Yaari, S., & Grotto, I. (2013). Data on Growth Tests of Schoolchildren in Israel 2010-2011.
WHO. (2017). Ending Childhood Obesity. Retrieved October 11,2018
from http://apps.who.int/iris/bitstream/handle/10665/259349/WHO-NMH-PND-ECHO-17.1-eng.pdf?sequence=1: World Health Organization.
WHO. (2018). Obesity and Overweight. Retrieved April 01,2018
from http://www.who.int/media+centre/factsheets/fs311/en/: World Health Organization.

Abstract Summary:
Obesity rates in Israel's general population and children is high. In Druze, minority among minorities, there is lack of information on rates of child obesity. This research will measure the rates of obesity, and assess the link between these rates and social and environmental influences in Druze elementary school children.

Content Outline:
Overview:
- overweight and obesity.
- The Case of Israel: Arabs and Jews.
- The Druze as an ethnic Minority in Israel.

Theoretical framework:
- Bronfenbrenner`s ecological model.

The proposed study
- Rational and implication/ significance
- Study aims and objectives
- Specific objectives
- Setting and study design
  - *Setting*
  - *Study design, population and data*
- Analysis