



Eye on Farmworker Health

Current Developments in Research and Policy

Obesity Among Latino Children Within a Migrant Farmworker Community

Title: *Obesity Among Latino Children Within a Migrant Farmworker Community*

Authors: *Javier I. Rosado, Suzanne Bennett Johnson, Kelly A. McGinnity, Jordan P. Cuevas*

Source: *American Journal of Preventive Medicine 44 (3): S274-S281, March 2013*

The rate of childhood obesity has increased significantly over the last 30 years with Latino children among those at greatest risk. Several studies show a rise in the prevalence of obesity among Mexican-American children. However, there are few studies that focus on the children of migrant Latino farmworkers. This study examines the prevalence of overweight and obesity among the children of migrant Latino farmworkers. The connection between obesity and conditions such as cardiovascular disease, endocrine system complications and mental health problems necessitates early identification and prevention. Because parents can play a key role in these efforts by influencing eating habits and physical activity, the study also observes parental perception of weight and intention to take corrective action.

Participants were patients and their children between the ages of 3 and 16 at a community health center in a rural area of southwest Florida. An interview with the parents and a medical chart review for each child provided the information used in the study, which took place during a 15-month period between 2010 and 2011. Interviews contained questions regarding parental concern towards their child's weight and intention to improve said weight. Medical reviews supplied demographic and health information. Each child's age- and gender-specific body mass index (BMI) percentile was calculated and used to classify them as obese, overweight, healthy or underweight. Researchers also calculated the BMI of each parent.

Of the children in the final sample of 472, most were U.S. born of Mexican descent and 47.1% were obese or overweight. The majority of parents were foreign born mothers who had lived in the U.S. an average of 11.8 years. Most parents had less than a high school education and almost all (83%) were either obese or overweight. Approximately half of the families did agricultural work on a migrant or seasonal basis.

Most parents of obese children were concerned about their child's weight while few parents of overweight children were concerned. Parental concern about overweight children was no different than that of normal-weight children. 65% of

ARTICLES REVIEWED IN THIS ISSUE

→ [Obesity Among Latino Children Within a Migrant Farmworker Community](#)

→ [Heat-Related Illness Knowledge and Practices among California Hired Farm Workers in the MICASA Study](#)

→ [Anticipatory Guidance Preferences of Latina Migrant Farmworker Mothers](#)

→ [Heat Index in Migrant Farmworker Housing: Implications for Rest and Recovery from Work-Related Heat Stress](#)

→ [Policy Update](#)

the parents believed overweight children outgrow their weight problems. However, a similar percentage (64%) stated that overweight children become overweight adults. Most parents believed overweight children are at high risk for conditions including diabetes, high blood pressure, high cholesterol, and heart complications. Yet only half of parents (49%) identified asthma as a potential risk associated with obesity even though 36.9% of the parents with overweight or obese children had been diagnosed with asthma. Almost all parents said that adapting exercise and eating habits can lead to weight loss and expressed an interest in intervention programs to improve their child's weight and overall health. Few believed nothing can be done to improve one's weight or size.

The outcome of 47.1% overweight or obese children is higher than other national studies but consistent with reports from rural communities. The authors speculated this could be a result of the lifestyle that comes with migrant labor, which has health effects for both children and adults: 83% of parents were obese or overweight. Other studies with migrant farmworkers found similar numbers of overweight and obese adults. Interestingly, the authors found that boys did not necessarily have higher rates of overweight/obesity than girls, contrary to previous national studies. The authors point out that more research is needed to determine if this conclusion is consistent across other migrant populations.

The authors suggest cultural influence may underlie parental perception of weight and recommend gaining a better understanding of any cultural factors involved. Parents born in the U.S. expressed less concern about their child's weight. Children's weight levels were associated with parents' concern about their child's weight. The results of the study suggested that parents of overweight children are unlikely to take corrective action or any action beyond what they would take for a normal-weight child.

The authors acknowledge several limitations to this study. The study is unable to infer causality. The children in the study were attending a well-child office visit. These parents may be more concerned about their child's health and weight than parents who do not schedule well-child appointments. Further, the parents' BMI data were based on self-reported height and weight, which may alter the study's high prevalence of overweight/obesity among the parents.

Overall, the study reinforces the existence of the problem of childhood obesity among Latino children, though further research is needed. Healthcare providers in primary care settings can play a key role in assessing and reporting children's weight statuses as well as identifying and addressing parental perceptions of children's weight. The authors suggest that future studies examine how the weight status of Latino children can be addressed during primary care visits.

Heat-Related Illness Knowledge and Practices among California Hired Farm Workers in the MICASA Study

Title: Heat-Related Illness Knowledge and Practices among California Hired Farm Workers in the MICASA Study

Authors: Maria Stoecklin-Marios, Tamara Hennessy-Burt, Diane Mitchell and Marc Schenker

Source: Industrial Health 51: 47-55, 2013



WHO ARE WE?

Eye on Farmworker Health: Current Developments in Research and Policy is an electronic newsletter covering important recent developments in research and regulation on issues affecting the health and safety of migrant farmworkers.

It is a publication by [Farmworker Justice](#), supported by grant number U30CS22741 from the Health Resources and Services Administration's Bureau of Primary Health Care. Each issue includes summaries of recent articles and reports, as well as recommendations for using the information to help health professionals, outreach workers, *promotores de salud*, and advocates strengthen their efforts on behalf of farmworkers and their families.

The contents of this publication are solely the responsibility of Farmworker Justice and do not necessarily reflect the official views of the Bureau of Primary Health Care or the Health Resources and Services Administration.

STAY IN TOUCH

For more information, please contact Juan Guevara at jguevara@farmworkerjustice.org.

California farmworkers constitute a group at risk for exertional heat-related illnesses. According to the Centers for Disease Control and Prevention, U.S. crop workers suffer a heat-related average annual death rate almost twenty times the national rate. Risk factors include lack of acclimatization, poor fitness and being overweight. Weather conditions, level of activity, type of clothing, and hydration levels also factor. Regulations in California to combat these risks include required availability of potable water, toilets, shade and rest. However, heat-related illnesses and deaths still occur. Farmworkers endure long hours in the sun and may have restricted access to water, washrooms and shade.

The study aims to describe farmworkers' understanding of heat-related illnesses and view of their own vulnerability to heat conditions. Two rounds of interviews were conducted with the Mexican Immigration to California: Agricultural Safety and Acculturation (MICASA) cohort of 467 hired farmworker households in Mendota in Fresno County, California. Summer temperatures in the area have been recorded as high as 115°F. Baseline interviews were conducted between January 2006 and April 2007. Follow-up interviews were completed between May 2008 and February 2010. The study analyzes the second-round interviews of 474 participants. Interview questions related to heat illness in four aspects: training and knowledge, hydration, rest, and access to shade.

91% of participants reported receiving training on heat-related illness but the level of heat illness knowledge was moderate with 70% of participants answering correctly to 4-5 questions. Knowledge on acclimatization was low with 44% severely underestimating the time required, and water consumption was inadequate to insure proper hydration. 87.8% of participants reported having employers who provided beverages at the work site and 89.7% were able to take a five minute break if feeling heat stress symptoms. 93% of participants had shaded areas available for breaks.

The authors found notable gender differences in heat-related illness and knowledge among study participants. Women were more likely to report receiving training compared to men, though they were less likely to have a high heat knowledge score. Also, women were more concerned about heat illness risk than men. Women were significantly less likely than men to report feeling comfortable taking water breaks. The authors suggest that these gender differences are due to the different tasks that men and women engage in while working in California agriculture. Packing and sorting tasks are largely done by women while machine operation is largely done by men. The authors believe that because machine operation jobs are a "higher-level task" with more job security and autonomy, men feel more comfortable than women taking a break from the heat when needed.

Reports by the Intergovernmental Panel on Climate Change (IPCC) indicate that global climate change has great potential for increasing the number and duration of extreme heat events in California. Low socioeconomic populations are at particular risk due to aspects such as health care, housing conditions and cultural practices. Working conditions compounded by socioeconomic circumstances put farmworkers at high risk. Little is known about the specific risks faced by farmworkers or their level of knowledge and ability to implement heat illness prevention practices. Most of the participants in the study reported receiving training, but specific components of training were not determined.

Because MICASA is limited to family farmworker households, the study does not include unaccompanied male farmworkers. Also, the data relies on self-reporting by study participants. This study is an initial attempt to assess health knowledge and practices among farmworkers. More research is required to understand the reasons that workers do not drink frequently enough during the day to prevent dehydration.

The authors conclude that the results suggest important areas to target for heat illness prevention in farmworker populations, such as the process of acclimatization and risk of heat illness. Additionally, gender specific approaches may be needed for effective heat illness prevention.

Anticipatory Guidance Preferences of Latina Migrant Farmworker Mothers

Title: Anticipatory Guidance Preferences of Latina Migrant Farmworker Mothers

Author: Jill F. Kilanowski

Source: Journal of Pediatric Health 27 (3): 164- 171, September 2011

Studies show Latino children are at high risk for behavioral and developmental disorders, dental caries, environment hazards, diabetes, obesity, asthma, lack of health insurance, and nonfinancial barriers to health care access. Parents can greatly contribute to the development of environments that foster healthy children, but most health education programs have a North American cultural bias that may not cohere with personal or group values of Latino families. The provision of health education materials requires development of promotion materials that are culturally sensitive and appropriate for their lifestyles. This study aims to learn which forms of education materials appeal to Latina migrant farmworker mothers.

The study was qualitative, descriptive and community-based participatory in design. Four focus groups conducted in Spanish discussed strengths and weaknesses of numerous mixed-media samples. There were a total of 31 participants recruited from Michigan and Ohio vegetable farms. All of the participants were mothers who had children ages 2 to 13. 68% of the mothers had less than a high school education, 51% had a monthly household income of less than \$1000, 61% were married or living with a partner and were 36 years old or younger, 74% only spoke Spanish and 81% worked in the fields.

Numerous types of educational materials on different health topics were presented to the focus group participants including auditory health education materials (radio announcements), DVDs, hands-on visual props, and printed materials (fotonovelas and pamphlets). The group moderators were Latino and fluent in Spanish. Each focus group session lasted 60 minutes. The author identified three themes for printed materials: use of color, portability, and balance of pictures and words. The mothers preferred comic book-style handouts, games, food replicas, text in English/Spanish and DVDs, even though few of them had the adequate equipment to play the DVD in their homes. Black-and-white photos and cartoon-like illustrations had low appeal. Colored illustrations, limited verbiage on a page and material easily carried in purses were determined as factors of importance.

The results of the study reveal that the topics of materials should be quickly and

easily identifiable. Also, content, style, and physical dimensions need to be considered during material development. Colorful visuals are essential as well as keeping lessons lively with hands-on material. It is important to remember that the mothers are busy and that their time to devote to health education is limited.

The focus group participants were from pre-selected migrant camps so the results of this study cannot be generalized to the Latino migrant farmworker population. Also, the author was not able to provide different types of materials on the same topic. Therefore, it is hard to determine if the participant preferred the type of material or the topic of the material.

This study will be used to develop health promotion interventions that take into account the preferred learning styles of migrant farmworkers. The findings from this study can inform other interventions with Latino populations and serve as a prototype for other populations of immigrant non-English-speaking parents.

Heat Index in Migrant Farmworker Housing: Implications for Rest and Recovery from Work-Related Heat Stress

Title: Heat Index in Migrant Farmworker Housing: Implications for Rest and Recovery from Work-Related Heat Stress

Authors: Sara A. Quandt, Melinda F. Wiggins, Haiying Chen, Werner E. Bischoff, Thomas A. Arcury

Source: American Journal of Public Health, June 2013

A majority of the approximately 1.4 million farmworkers in the United States works during the hottest months of the year. They perform physical labor in hot, humid environments that expose them to serious health risks. Humidity often worsens the negative effects of heat. Studies show that heat-related death affects these workers at higher rates than other U.S. workers. Several states enforce heat standards that prescribe shaded rest breaks during hot weather and education on adequate water intake. However, risks from enduring excessive heat in housing, which can affect rest and recovery, have been neglected. Daily recovery alleviates the effects of heat on health. For farmworkers, recovery relies significantly on cooler facilities for their nonworking time but they possess limited control over their accommodations. Farmworkers often live in employer-provided housing. Sometimes they rent from a small supply of low-quality rural housing stock. This study aims to define the burden of heat endured by farmworkers in employer-provided housing and to what extent fans or air conditioning can provide relief.

A cross-sectional survey of 170 migrant farmworker camps, in 16 counties of eastern North Carolina, took place June 15 to October 4, 2010. Digital Thermo Hygrometers, with DataLogger calibrated to National Institute of Technology standards, measured the temperature and relative humidity in common rooms and sleeping rooms after 4 pm. Heat index (HI) was calculated using the standard equation.

The surveyed camps included 53 barracks and 117 non-barracks. Two-thirds (113) of the camps housed workers with H-2A temporary agricultural work visas. The average age of workers was 35.2 years and median length of education was 7 years. 94.8% of the workers were from Mexico. 25% were in their third season or

less of work in U.S. agriculture. Over half of the workers (55.1%) reported having no air conditioning in common rooms. 6.6% of the workers reported having central air conditioning, and 38.3% reported having window air conditioning units. 90.1% of workers with window units had them in the sleeping areas. Among workers with air conditioning, 85.9% reported having used it 20 or more of the preceding 30 days. A large majority of workers (78.1%) reported having electric fans in sleeping rooms.

HI measurements were classified as risk levels of either “danger” or “no danger,” with no danger less than 80°F and danger further divided into four sub-categories: low caution at 80°F to 90°F, moderate caution at 91°F to 103°F, high danger at 91°F to 103°F and very high or extreme danger at greater than 115°F. Most measurements were in the danger category of risk. Early and middle summer had higher measurements than late summer. Common rooms generally had worse heat conditions than sleeping rooms. Air conditioning was associated with slightly lower HI measurements, especially in sleeping rooms. There were also significant associations of heat index with time of summer and access to air conditioning in both common and sleeping rooms. There was no association between HI and housing type.

The study reveals that farmworkers endure burdensome heat and humidity after leaving the fields. Studies show that humans do not adjust to on-going exposure to high heat and high room temperatures and that increased humidity prevents deep and restorative sleep. Consequently, the HI farmworkers experience at night impairs recovery from heat stress endured during daily work. And although the HI decreases during late summer, the levels are still dangerous. Fans can provide some cooling but are less efficient in rooms with high temperature and humidity. They can also promote dehydration.

The authors note limitations on the study in lack of information on humidity, physiological impacts of the HIs measured in farmworker housing, and the effects of fans on physiological impacts of indoor HI. They recommend further research in these areas. They conclude that the findings of the study indicate that high heat in farmworker housing should be recognized and addressed through state and federal policies.

POLICY UPDATE: FJ TALKS WITH FARMWORKERS ABOUT THE ACA

“Will farmworkers have access to health insurance?” “What are the obligations of employers?” “How will our access to healthcare change?” These are some of the many questions we heard about the Affordable Care Act from farmworkers across the country. Over the summer, FJ met with farmworker community-based organizations in California, Florida and Arizona to talk about the Affordable Care Act (ACA). We spoke with *promotores de salud* and community members to discuss their questions and concerns.

Many of the farmworkers and *promotores* we spoke with had heard about the ACA through Spanish television or radio but had little idea what it meant for themselves or their families. Rumors were widespread. In California, one woman had heard that

after 2014, a person without health insurance who visits a hospital emergency room will have to pay a fine in addition to the hospital bill. Another woman heard that failure to follow a doctor's instructions could result in the loss of insurance coverage.

Farmworkers and their families need accurate information about the ACA. Farmworker Justice is developing materials for farmworkers that address their questions and connect them to resources in their communities. We also are developing a curriculum for outreach workers and *promotores de salud* that will help them understand the basic provisions of the ACA and how to guide community members to resources that can help answer questions about insurance coverage and enrollment.

For more information about FJ's ACA curriculum and materials, contact Alexis Guild at aguild@farmworkerjustice.org.

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