

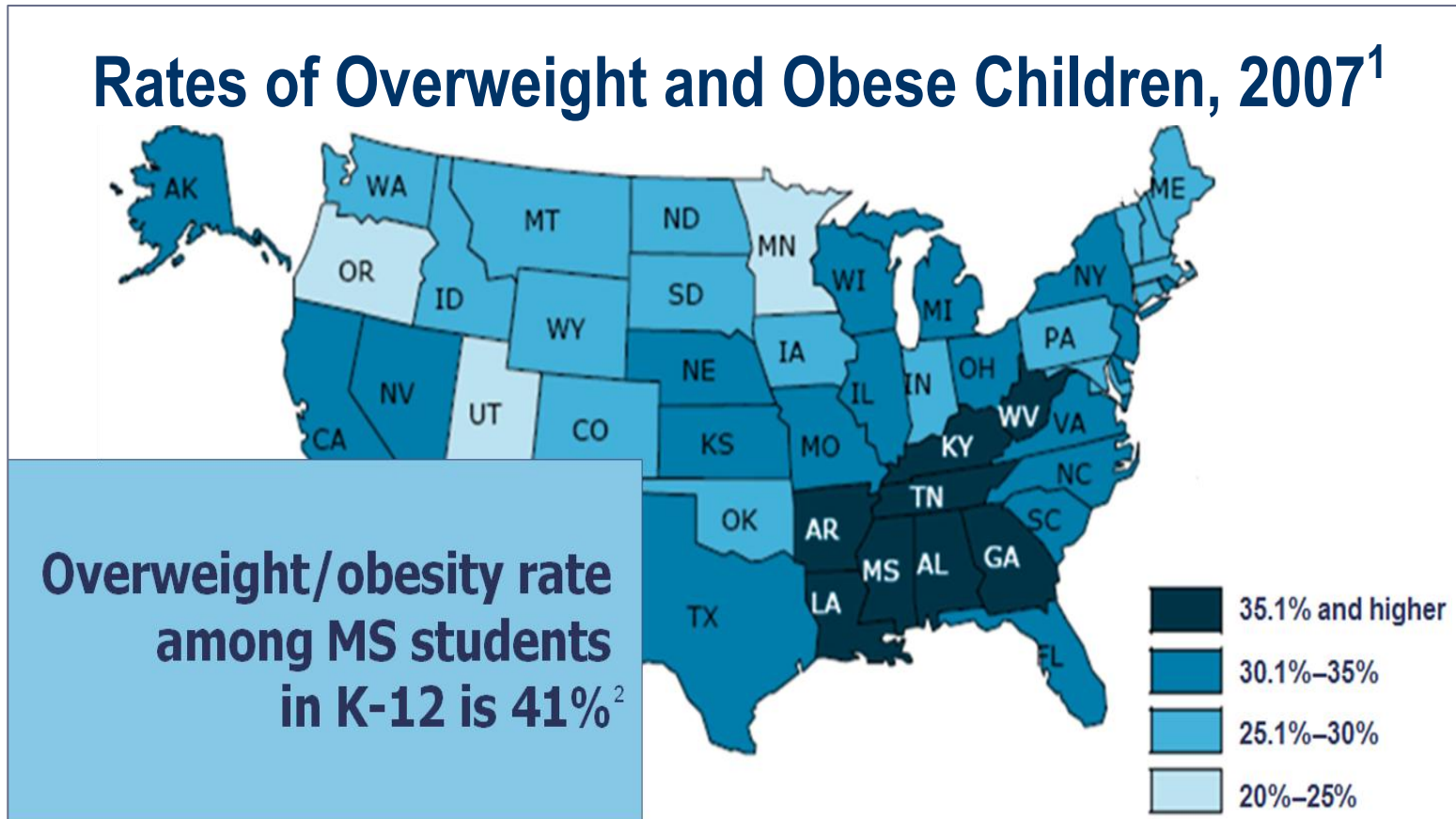
Interactive Health Communication Targeting Elementary Students in Mississippi: Evaluating Effects of Be A Food Groupie Program on Health Literacy



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Background

- High rates of childhood obesity are concentrated among resource-limited states in the Southeast such as AL, GA, KY, and MS
- MS has an overweight/obesity rate of 41% among students in K-12—one of the highest rates in the nation [Kolbo et al, 2012]



Source: ¹National Conference of State Legislatures (2013). Childhood overweight and obesity trends, 2007. <http://www.ncsl.org/issues-research/health/childhood-obesity-trends-state-rates.aspx>; ²Kolbo JR, Zhang L, Molaison EF, et al. (2012). Prevalence and trends in overweight and obesity among Mississippi public school students, 2005–2011. J MS State Med Assoc; 53(5): 140–146.

- Yet—as First Lady Michelle Obama highlighted during her trip to MS in February 2013—the state has made significant progress
- Efforts to reduce childhood obesity in MS have produced a 13% decline in the state’s overweight/obesity rate from 2005 to 2011 [Center for MSHealth Policy, 2012; RWJF, 2012]
- The First Lady’s visit brought attention to the fact that MS is addressing childhood overweight/obesity through multi-level health promotion

Multi-level health promotion: Working with schools to promote health literacy

- Efforts in MS include promoting health literacy at an early age, so children are better equipped to make smart health choices that can be carried into adulthood [Rodriguez, 2011; Rowe et al, 2011]
- A key way to accomplish health promotion for children is by engaging schools in health ed program like those at HW!



About HEALTH WORKS!

- HW! is an interactive children’s health ed center in MS. Its mission is to improve health literacy by ‘infectiously contaminating kids of all ages, everywhere, to learn, have fun, and make great life choices’ [<http://www.healthworkskidsms.org>]
- HW! fulfills its mission by delivering health ed programs such as Be a Food Groupie (BAFG) to rural elementary students during field trips to HW!

Methods

- In Fall 2012, 3rd–5th graders from 11 schools participated in the BAFG evaluation (N = 1,000). We used a constructed matched comparison group design to match schools on: 1) percentage of students of minority status, 2) percentage of students at poverty level, 3) MCT2 language proficiency scores (low, medium, high)
- Intervention students received: pre-test, field trip, post-test
- Comparison students received: pre-test, post-test, field trip
- BAFG’s 22-item pre-/post-test addressed 3 key health knowlege areas: 1) Comprehending food labels, 2) Understanding food servings, 3) Understanding food groups

Results

- 83% of intervention students (n = 446) had improved post-test scores (M = 15.57, SD = 13.25) compared to 45% of comparison students (n = 554) (M = 2.76, SD = 21.67)
- ANOVA results: Intervention students post-test scores improved by an average of 16 percentage points. Comparison students post-test scores improved by an average of 3 percentage points
 - Differences between two groups was significant at p = 0.00
- Among intervention students with improved post-test scores, 50% improved by 18 or more percentage points
- After controlling for language proficiency, post-test scores differences between the two groups remained:
 - Low MCT2 category: Intervention students were more likely to have improved scores (p = 0.00)
 - Mid MCT2 category: Intervention students were more likely to have improved scores (p = 0.00)
 - High MCT2 category: Intervention students were more likely to have improved scores (p = 0.05)

Implications

- Although some children’s museums and science ed center have developed programs to promote children’s health literacy, “studies examining whether provision of health education in these venues increases knowledge are lacking” [Freeman, 2010]
- Our evaluation results help fill this critical gap by providing evidence of BAFG’s impact on children’s health knowledge

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