

Common Ground: A Place to Grow

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Background

New Haven, CT has very high rates of diet-related risk factors for chronic diseases. Common Ground is a community-based organization in New Haven, CT working to address those risks, that comprises a high school, an urban farm, and an environmental learning center. With a sprawling 20-acre campus, a student body of approximately 200 students, and an urban farm that provides food for approximately 2,500 residents from low-income neighborhoods, Common Ground has an expansive reach into the surrounding community. Common Ground is very interested in better understanding the impacts of its programs.

Methods

○ Survey Analysis: 387 high school students completed an online survey that focused on students' participation levels in Common Ground programs and activities, eating habits, physical and outdoor activity, and other health behaviors. The survey had three administrations over the course of 1.5 years. Data from these surveys was analyzed using R version 3.3.2. A subgroup of students (n = 63) took the survey twice within a year and a half, and their changes over time are shown in Table 2.

○ Community Data Discussion Groups: Three Community Data Discussion Groups were held at Common Ground High School, one with high school students from all grade levels (n=8), one with parents of a student/students at Common Ground (n=4), and one with family units (parent and student both in attendance; n=5). Open-ended questions were asked relating to the results of the school-wide survey. Focus groups were audio recorded, transcribed, and coded thematically using Dedoose Mixed Methods and Qualitative Research Software Version 4.3.

Table 1: Health of Low-Income New Haven Residents [2]

| Health behaviors of low-income New Haven residents | % |
|---|----|
| Classified as overweight/obese | 69 |
| Drink sugary beverages 5+ days a week | 59 |
| Meet recommended consumption of 5+ servings of fruits/vegetables each day | 13 |
| Experience food insecurity | 33 |

Common Ground's mission is "to cultivate habits of healthy living and sustainable environmental practices within a diverse community of children, young people, adults, and families" [1].



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Objectives:

- Assess the health impact of Common Ground programs on students and families
- Describe student and parent perspectives on their health-related and programmatic experiences at Common Ground
- Develop a detailed data analysis protocol

to allow Common Ground faculty/staff to internally analyze institutional data on student health behaviors

- Provide recommendations on how Common Ground can improve and expand current programs to further improve the health of the community.

Results

Change in health behavior over time (Table 2)

- Students ate more fruits and vegetables, drank fewer unhealthy vegetables and ate less fast food at the second time they were measured.
- Students reported getting slightly more physical activity per week at the second time point. However, average time is still far below the recommended amount.
- Students also reported feeling less confident in their leadership abilities at the second time point.

Table 2: Health behavior statistics of students who took survey twice

| Variables (Recommended amount for adolescents [3]) | Measure | Spring 2015 | Fall 2016 |
|---|------------------|-------------|-----------|
| | | Mean | Mean |
| Fruit and vegetable consumption (5 or more) | Servings per day | 2.14 | 2.71 |
| Unhealthy beverage consumption (As little as possible) | Drinks per day | 0.54 | 0.46 |
| Fast food consumption (As little as possible) | Times per week | 2.04 | 1.97 |
| Physical activity (420 or more) | Minutes per week | 125.00 | 163.10 |
| Perceived Leadership Skills (N/A) | Likert Scale* | 33.50 | 30.72 |

*Based on eight questions where 1= “strongly disagree” and 6= “strongly agree”

Relationships between participation in specific activities and health outcomes

- School lunch participation is positively correlated to healthy eating behaviors (e.g. more fruit/vegetable consumption, less unhealthy beverages and fast food).
- Participation in Green Jobs Corps is positively correlated to healthy eating habits, time outdoors, physical activity time per week and confidence.
- Participation in the FarmShare program is positively correlated with food security.

Community Data Discussion Results

Physical Activity

“I worked on the farm too and then I worked with the chickens for a while so that is like a lot of exercise. So like I get exercise like moving wheelbarrows and stuff.” -11th grader

“Well I think for physical activity, it might be because we only have gym class two times in our whole like four years at high school so like if people don’t do sports or something then they might not actually have physical activity for like two and half years or three years.” -11th grader

Leadership and Confidence

“Over the years it helped me use my voice more effectively. I remember having problems with a teacher or an administrative staff or another person, if I’m ever having problems with a teacher or anything I’ll like call a meeting or like I’ll talk things out.” -10th grader

Student Nutritional Changes

“My daughter made a big change, she don’t eat fast food no... Everything has to be organic, she changed big time, she don’t eat pork no more, she changed a lot.” - Parent

“Our food and environment teacher has taught us about what you’re supposed to eat and how the industry for food has been messing our bodies up so that’s been helpful.” -9th grader

Common Ground Community

“Common Ground is more accepting, and [my son will say] ‘yeah my home boy’s gay, that’s my home boy you know, no he’s not my boyfriend, that’s my friend you know’ and I’m glad that they’re like that because you know I want them to accept people for who they are.” -Parent

Farmshare

“I think that the farm share is a phenomenal program. And also for the amount of stuff they send home for what you pay for it if you went to a regular grocery store and tried to buy that much fresh produce for that price you would never get that amount, that abundance of food. So I think that it’s definitely beneficial in helping you stay on task of having more fresh fruits or fresh vegetables in home.” -Parent

Data Analysis Protocol

To empower Common Ground faculty and staff to analyze future survey results, a detailed data analysis protocol was created in conjunction with the quantitative analysis. The protocol includes instructions for performing simple analyses in R Studio, along with sample R code.

Conclusion

- ❖ Quantitative results suggest that students exhibit healthier behaviors as they spend more time at Common Ground. Namely, students report consuming more fruits and vegetables and less unhealthy beverages and fast food. Qualitative data shows that students have adapted these healthy behaviors, possibly as a result of Common Ground's programming and curriculum, and have begun to encourage their families to adapt these behaviors as well.
- ❖ While the quantitative results found students feel less confident in their leadership over time, in the Community Data Discussion Groups both students (personally) and parents (with regard to their children) spoke of increased leadership and confidence during their time at Common Ground.
- ❖ Common Ground's Green Jobs Corps and school lunch programs are correlated with healthy eating habits, increased physical activity, and more time outdoors for the students who participate in these programs. The relationship between the FarmShare program and health behaviors is less clear. However, qualitative data suggests that the FarmShare program gives Common Ground families more access to fresh produce, and introduces them to new foods.

Recommendations

- Continue to administer survey on a regular timeline using freshmen as a baseline.
- Integrate physical activity into the school day as much as possible.
- Expand school lunch options for all students, not just those with dietary restrictions.
- Expand leadership development opportunities.

Limitations

- Diet and physical activity are difficult to measure quantitatively; student responses may not be accurate.
- The leadership and confidence results may also be biased, possibly due to age or the time of year of survey distribution.
- Many variables had non-useable values, suggesting that students may not have been completing the survey accurately.
- Focus groups had small sample sizes, and the recruiting methods used may have introduced selection bias. Therefore, the views and experiences of the focus group participants may not be representative of all students and parents at Common Ground.

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References:

1. Common Ground Website: <http://commongroundct.org/about/>
2. Center for Disease Control, National Center for Chronic Disease Prevention and Health Promotion Division of Nutrition, Physical Activity, and Obesity www.choosemyplate.gov
- 3.