



UT Health  
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Charles E. Cheever, Jr. Center for  
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# 5-Year Evaluation of the Healthy Choices Team Program as a Community-Based Lifestyle Intervention

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## Introduction

Health education is essential for well-being, yet many individuals face significant barriers to access vital information. This study examines how fostering longitudinal community relationships can bridge gaps in health education within a multicultural San Antonio community. [1]

The El Bari Community Health Center (CHC) Fair has provided free health services and education. Guided by CDC's Social Determinants of Health, the interdisciplinary Healthy Choices Team (HCT) has empowered individuals with holistic health education and resources since 2019 leveraging CHC as a point of contact. As our understanding of the community evolved, we refined questionnaires, session content, and delivery methods to better address gaps in health literacy.

Through the analysis of longitudinal HCT data, we evaluate the impact of HCT interventions and refine future initiatives by utilizing pre- and post-survey data from participants in the four-month HCT course.

## Materials and Methods

The program consisted of biweekly sessions, which were modified across the years (Table 1). Topics covered included grocery store tours, healthy cooking modifications, mindful eating, nutrition, portion sizes, physical activity, and dental health. Participants who attended at least 5 sessions were recognized at a graduation ceremony, after which they were invited to return as community ambassadors to engage new participants, lead health initiatives, and assist in future sessions. Ambassador, student leader, participant, and professional feedback directed yearly modification. Each year, modified pre- and post-surveys were administered via Redcap to assess changes in health knowledge, attitudes, and habits over the course of the program (Table 2). A z-test of proportions was used to evaluate statistical significance in pre- and post-survey results, with  $p < 0.05$ .

Table 1. Annual Shifts in Course Structure: Modality, Format, Curriculum, and Session Count

| Cohort Year | Session Location          | Format                             | Main Curriculum Changes                                       | Number of Sessions |
|-------------|---------------------------|------------------------------------|---|--------------------|
| Year 2      | Remote                    | Lecture                            | Technical Emphasis  | 10 Sessions        |
| Year 3      | Remote                    | Lecture                            | Simplified Curriculum Content                                 | 8+ Sessions        |
| Year 4      | In person + remote hybrid | Lecture                            | Adapted to in-person  | 8 Sessions         |
| Year 5      | In person + remote hybrid | Lecture + Discussion + Application | Discussion Focused  | 8 Sessions         |
| Year 6      | In person + remote hybrid | Lecture + Discussion + Application | Formally incorporated cultural humility in education approach | 9+ Sessions        |

X+ = optional

Table 2. Annual Breakdown of Survey Question Themes

| Survey Question Categories                  | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | YEAR 6 |
|---|--------|--------|--------|--------|--------|
| DEMOGRAPHIC INFORMATION                     | 7      | 5      | 12     | 5      | 6      |
| Social Determinants of Health               | 22     | 10     | 18     | 11     | 14     |
| PROGRAM PARTICIPATION                       |        |        | 3      | 3      | 4      |
| NUTRITION KNOWLEDGE                         | 19     | 9      | 25     | 18     | 18     |
| PHYSICAL ACTIVITY                           | 3      | 4      | 12     | 13     | 9      |
| DENTAL HEALTH                               |        | 2      | 6      | 3      | 3      |
| SLEEP HEALTH                                |        |        |        |        | 3      |
| PROGRAM MOTIVATION                          |        |        | 1      | 1      |        |
| ACCESS TO HEALTH CARE AND HEALTH CONDITIONS | 6      | 1      | 23     |        |        |
| ANTHROPOMETRIC DATA                         |        | 2      |        |        |        |
| BEHAVIOR TRACKING                           | 3      |        |        |        |        |
| TOTAL                                       | 60     | 33     | 101    | 55     | 58     |

## Results

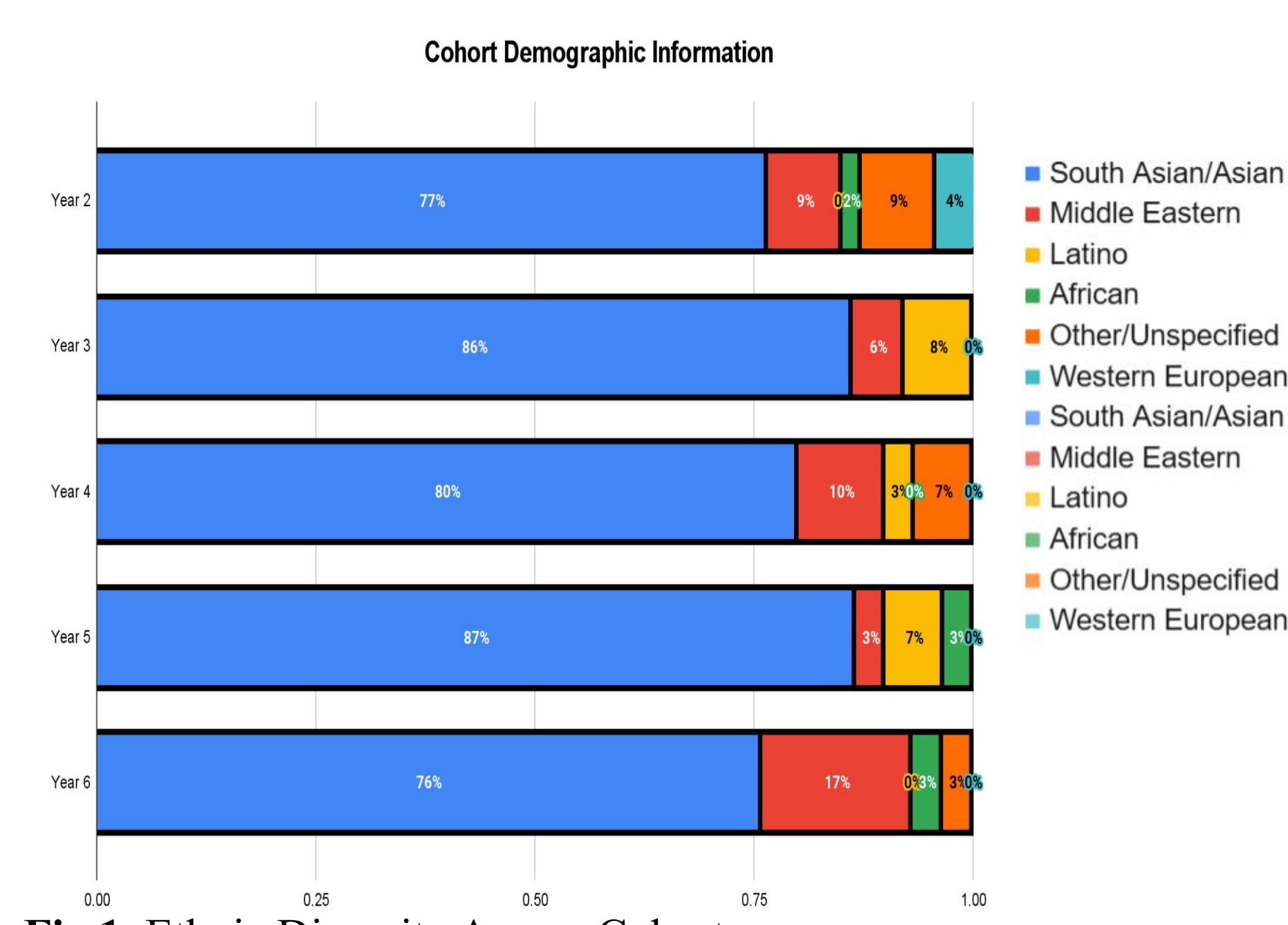


Fig 1. Ethnic Diversity Across Cohorts

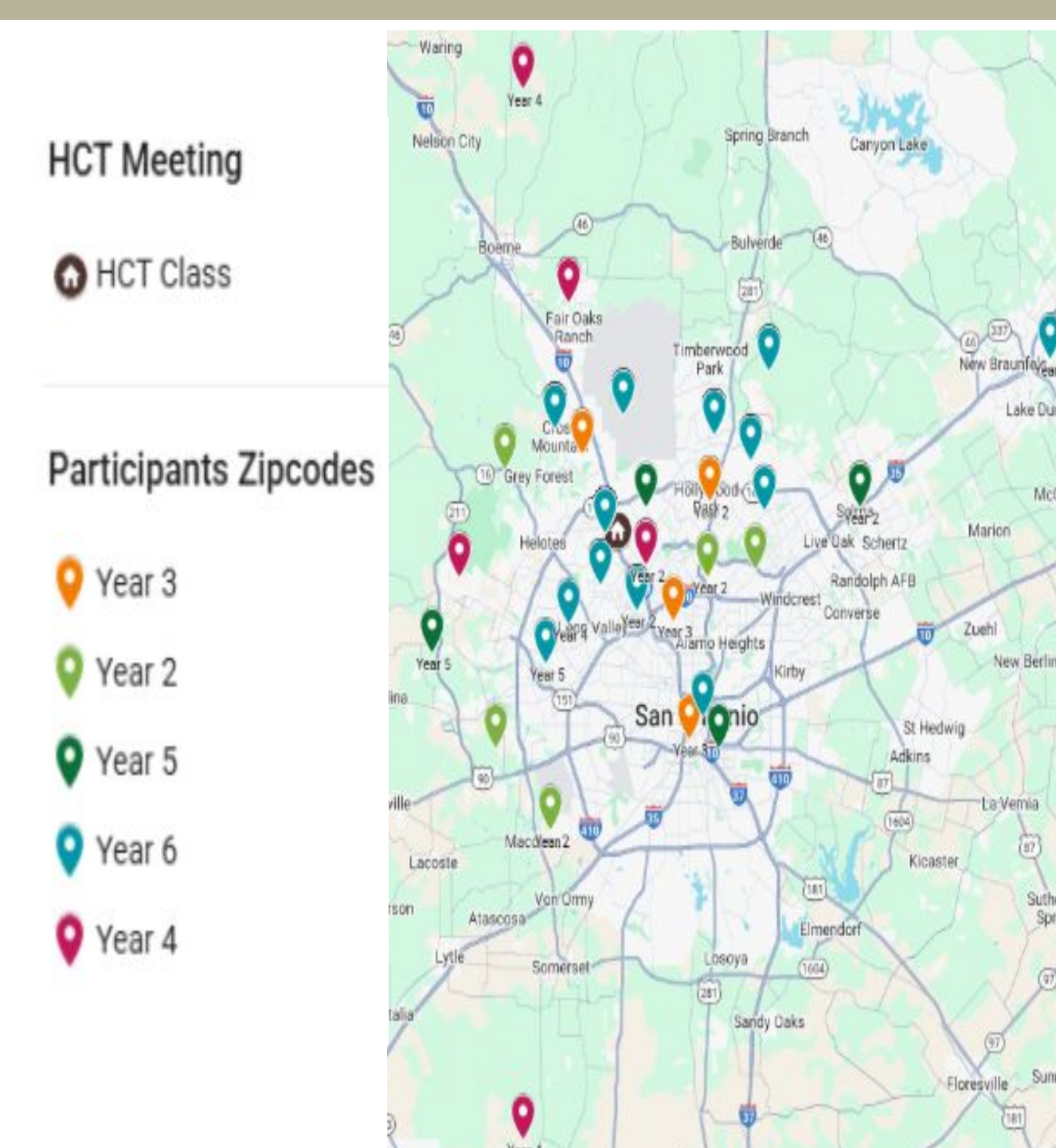


Fig 2. Participant Zip Codes Across Cohorts

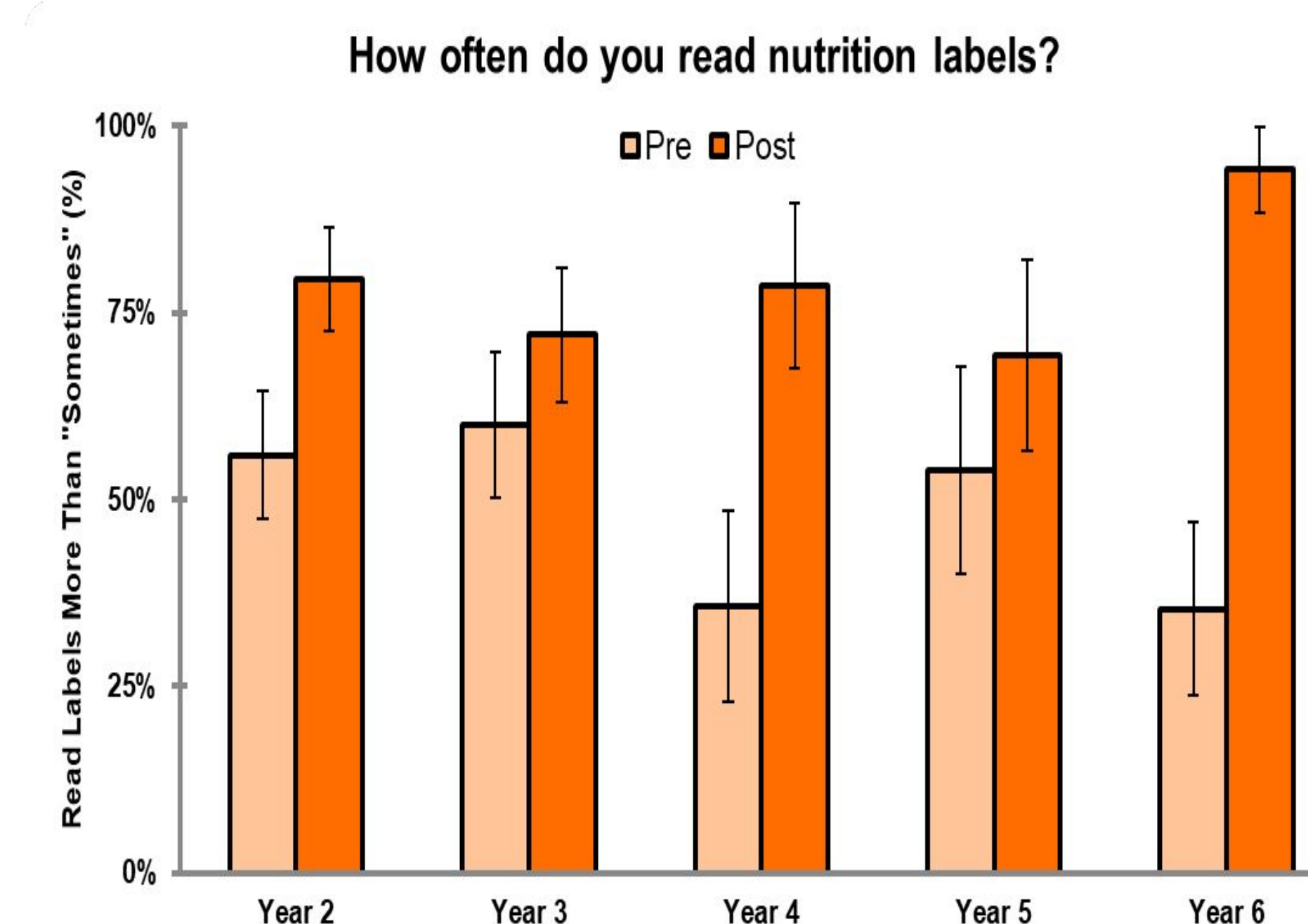


Fig 3. Self-reported responses of HCT participants regarding how frequently they read nutrition labels. Any response that was a higher value than "sometimes" was taken as a high reading frequency.

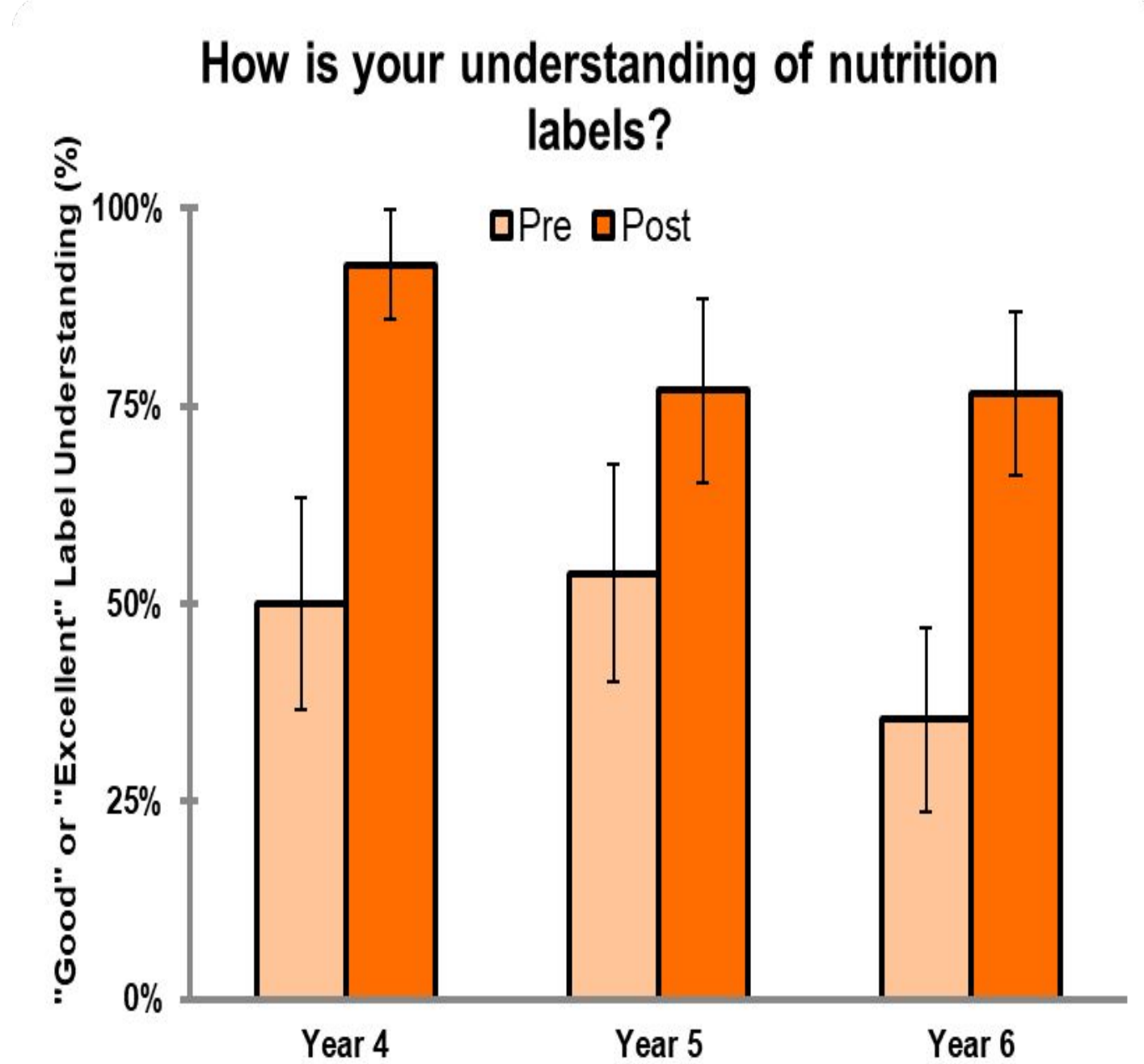


Fig 4. Self-reported responses of HCT participants regarding how well they understood nutrition labels. The responses "good" and "excellent" indicated high label comprehension.

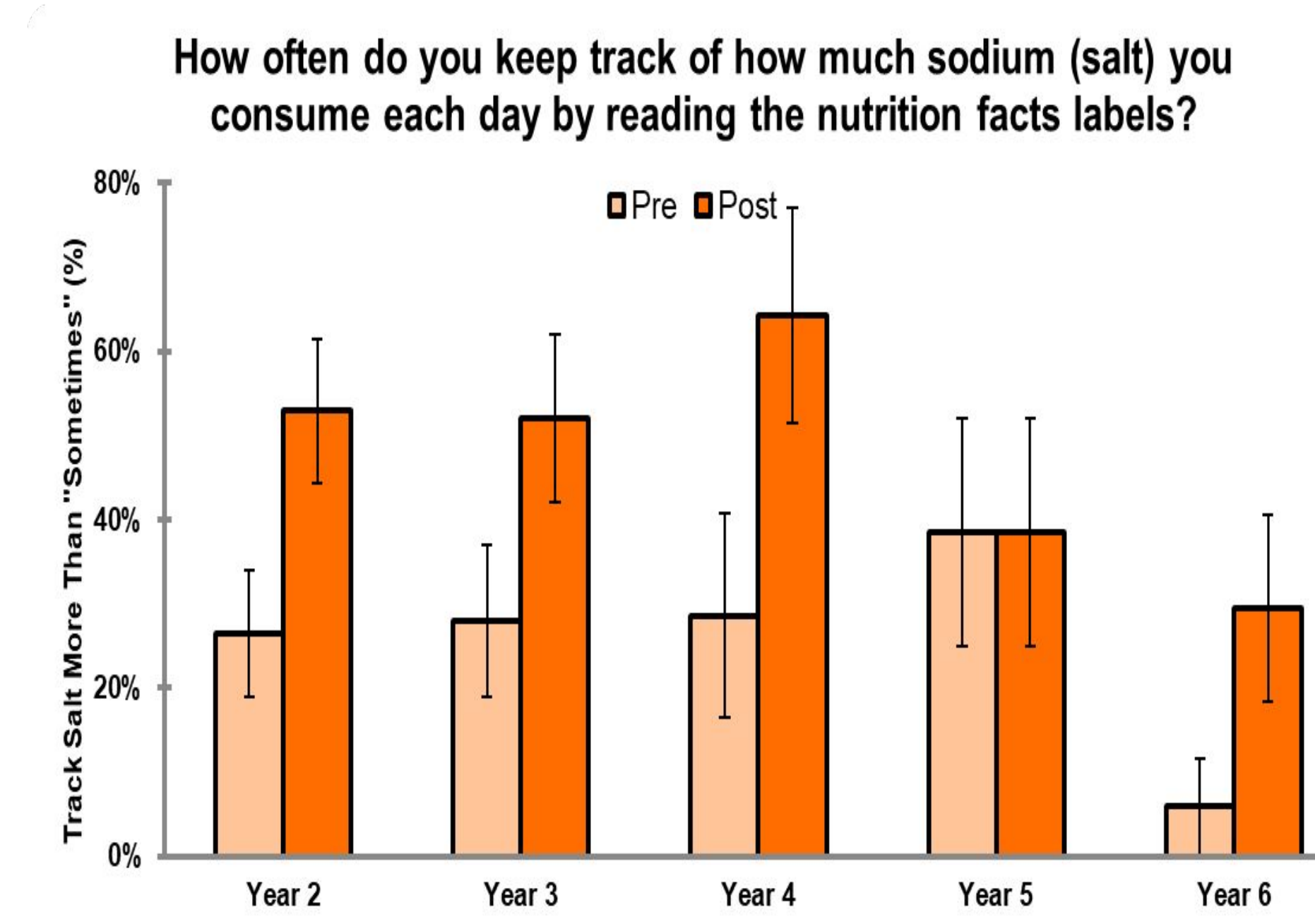


Fig 5. Self-reported responses of HCT participants regarding how frequently they tracked salt intake. Any response that was a higher value than "sometimes" was taken as a high tracking frequency.

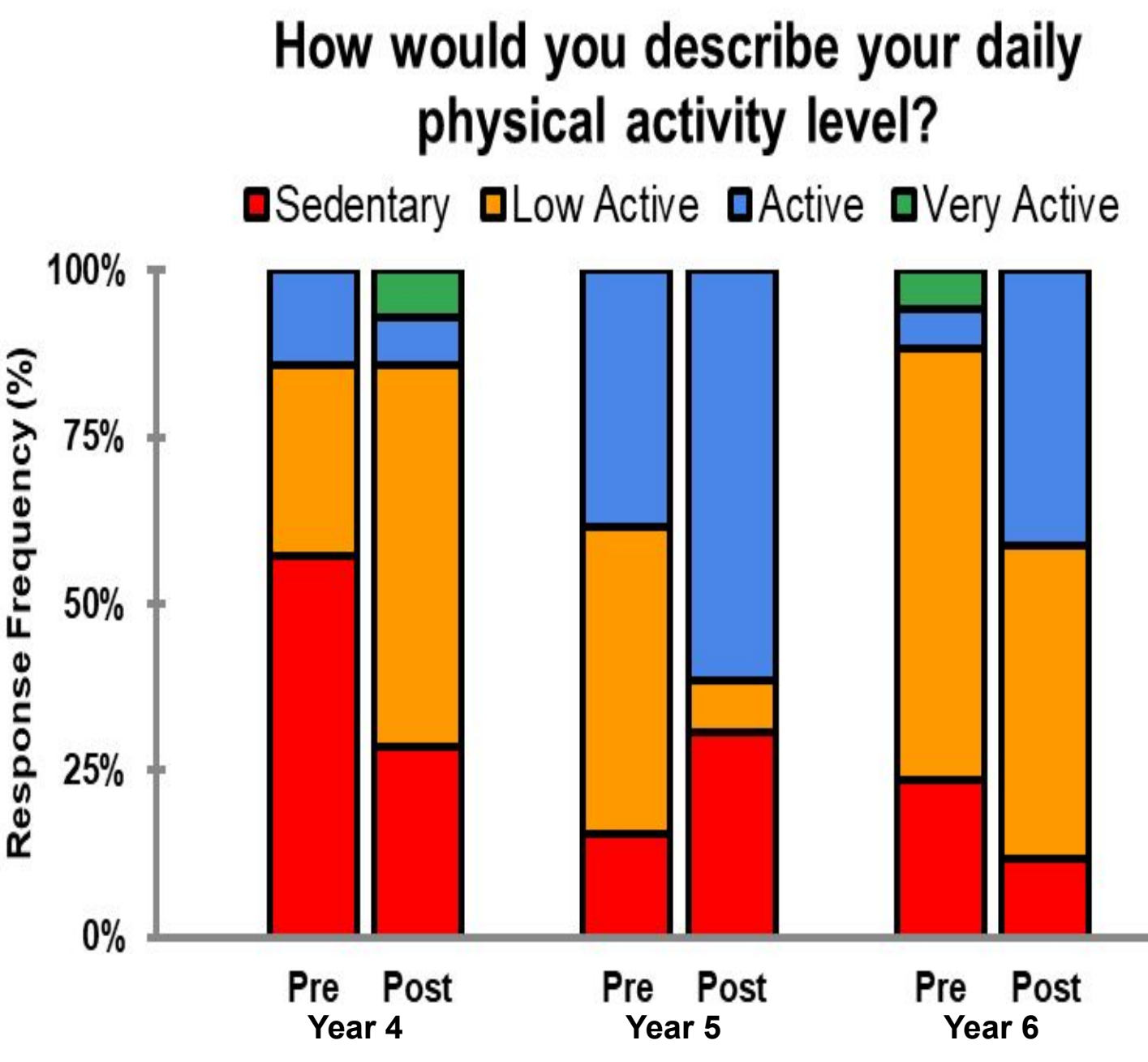


Fig 6. Self-reported responses of HCT participants regarding their daily physical activity, ranging from sedentary (< 30 minutes of intentional moderate exercise) to very active (vigorous exercise for about 2 hours).

Table 3. Heat map for self-reported social determinants of HCT participants. Percentages indicate how many responded with "agree" or "strongly agree," meaning that it was not a social determinant of health for that participant. Black boxes indicate questions that were not asked that year.

| Social Determinants of Health | NUTRITION   |  |   |   |  |  | PHYSICAL ACTIVITY   |   |   |  |  |  |
|-------------------------------|---|--|---|---|--|--|---|---|---|--|--|--|
|                               | I think that balanced eating with physical activity matters for my good health. | I have the budget to buy healthy grocery items | I have transportation to places that will carry healthy groceries and/or food items | I can read and understand the labels on food items, then make healthy decisions based on that | I know the healthy proportions and ingredients of cultural foods | I know where to obtain healthy meals, groceries, items, etc. | I have enough time to exercise and remain physically active | I know how to meet my physical activity goals | I have access to a place where I can do my physical activities at or near my home | I have the energy to do my physical exercise every day | I feel comfortable exercising in front of other people in public |  |
| Year 4 Pre                    | 100.00%   | 85.71%   | 64.29%  | 50.00%  | 35.71%   | 64.29%   | 71.43%  |   | 100.00%   |  |  |  |
| Year 4 Post                   | 100.00%   | 64.29%   | 64.29%  | 71.43%  | 85.71%   | 85.71%   | 50.00%  |   | 92.86%  |  |  |  |
| Year 5 Pre                    | 92.31%  | 100.00%  | 92.31%  | 100.00%   | 76.92%   | 100.00%  | 76.92%  | 61.54%  | 92.31%  | 84.62%   | 84.62%   |  |
| Year 5 Post                   | 100.00%   | 92.31%   | 92.31%  | 92.31%  | 84.62%   | 84.62%   | 92.31%  | 92.31%  | 100.00%   | 69.23%   | 69.23%   |  |
| Year 6 Pre                    | 88.24%  | 70.59%   | 94.12%  | 94.12%  | 58.82%   | 76.47%   | 41.18%  | 52.94%  | 76.47%  | 58.82%   | 64.71%   |  |
| Year 6 Post                   | 100.00%   | 88.24%   | 94.12%  | 94.12%  | 82.35%   | 94.12%   | 70.59%  | 88.24%  | 100.00%   | 70.59%   | 70.59%   |  |

## Discussion

- Total participants for years 2-6: 47, 51, 29, 30, 30 respectively. The graduation rate steadily increased from 38% in year 2 to 57% in year 6.
- Distribution of graduate ZIP codes highlights regional access limitations and high program valuation. Fig 2.
- Years 2-3's remote sessions led to minimal improvement in nutrition label comprehension but yielded a 26%\* and 24%\* increase in salt tracking, respectively. Participation in virtual sessions suggests high valuation of curriculum content.
- Year 4's in-person sessions saw increases in nutrition label reading (43%\*), comprehension (43%\*), and salt tracking (36%\*). There was a 50% increase in how many knew healthy proportions/ingredients of cultural food. While there was a 22% increase in how many knew where to obtain healthy groceries, there was an associated 22% decrease in how many had the budget for healthy groceries. No changes in high physical activity level (active + very active) were seen. 21% more people indicated time to be a limitation for physical activity.
- Year 5's discussion-based sessions had insignificant increases in nutrition label reading (15%\*), understanding (23%\*), and no changes in salt tracking. High physical activity also had an insignificant increase (23%\*). 30% more people knew how to meet their physical activity goals and 15% more people felt that they had more time to exercise, but 16% felt less comfortable exercising in public.
- Year 6's culturally-sensitive biopsychosocially conscious sessions had a significant increase in nutrition label reading (60%\*), comprehension (41%\*), salt tracking (24%\*), and high physical activity level (30%\*). Improvements in navigating social determinants of health were seen across the board. Increasing curriculum scope didn't adversely effect core education roles

## Conclusion

- The longitudinal assessment revealed that participants were most receptive to in-person, hands-on, participant driven, discussion focused sessions that addressed cultural and biopsychosocial barriers to evidence-based lifestyle modifications. This model allowed an incremental expansions of the curriculum scope without compromising core competencies and can act as a framework for other community based education programs. By forging new community partnerships, HCT can expand program reach, address access limitations, and extend program visibility to new demographic and belief-based groups.

## References

- [1] Betancourt, J. R., Green, A. R., Carrillo, J. E., & Ananeh-Firempong, O. (2003). Defining cultural competence: A practical framework for addressing racial/ethnic disparities in health and health care. Public Health Reports, 118(4), 293-302. [https://doi.org/10.1016/S0033-3549\(04\)50253-4](https://doi.org/10.1016/S0033-3549(04)50253-4)

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