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# RESEARCH BRIEF

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## BACKGROUND



RESEARCH QUESTIONS

- 1.) What has been the impact of AOPYO Programs?
- 2.) How could the process of managing and administering Tai Chi-rooted programs are improved?
- 3.) What are high school students and young adults attitudes regarding movement-based therapy in Communities of Color?

Located in Denver, Colorado, the Apprentice of Peace Youth Organization (AOPYO) plays an important role in making resources and support available to young people and helping them become more resilient, self-sufficient, and socially responsible. AOPYO's mission is to develop students through a whole-person approach by integrating mentoring, enrichment, and career pathway programs. In 2017, one out of every eight Denver residents age five and older indicated that they had experienced 8 or more days of poor mental health over 30 days. Well-being disparities are of great concern to Denver Metro Area youth.

AOPYO has identified a need for Tai Chi as a practice of movement-based therapy using a holistic approach to mentoring students and young adults who enrolled in the Career Pathways and Mentoring programs. Tai Chi is an embodied activity and when applied therapeutically, can have several specific and unspecific well-being benefits. In this research brief, we evaluated the effectiveness of Tai Chi as a framework for Movement Based Therapy (MBT) based programs as an intervention and psychological well-being outcomes

#### WHAT IS A WELL-BEING DISPARITY?

Well-being disparities, also known as Health disparities are preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations.

#### Why collect demographic data?

Collecting demographic data is important for a few central reasons. First, collecting this data helps us identify patterns where disparities may exist. AOPYO is increasingly collecting data to build a foundation for monitoring racial and ethnic disparities, as well as disparities in quality of care and support due to language barriers. Second, collecting this type of data helps to eliminate false positives. (Fig. 1).



## METHODS

To study how the practice of Tai Chi impacts students' well-being and career development, a mixed methods approach guided the examination of results from (1) student surveys and (2) a meta-analysis of existing AOPYO program data. After cleaning AOPYO's existing data, It was determined the data would not accurately represent a larger sample. Therefore, designing a web-based survey for students who are currently practicing Tai Chi was the next step. The survey questions were framed and organized around AOPYO's need to improve its performance and service delivery to efficiently address the underlying issues that lead to youth violence, such as racism, poverty, lack of connection with the community, and poor mental health. The data collected was organized and sorted to include only individuals that live in the Denver Metro area.

#### Three steps in data collection:

- Reviewed existing AOPYO program data but chose not to use it.
- 2 Designed a new survey
- Survey was distrubuted in-person and online to a random sample of current AOPYO participants who practice Tai Chi.

#### DATA COLLECTION

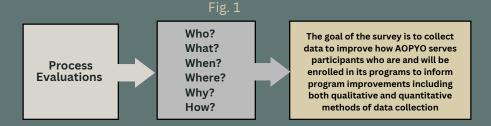
A random sampling of students was surveyed regarding AOPYO's Tai Chi-based programs to assess how their satisfaction and usefulness affect their career choices, academic progress, and social development. To learn about the demographic data being obtained by participants of AOPYO programs, a small group of 18 high school students and young adults ranging from ages 18-24 were surveyed. Basic demographic information was collected voluntarily from each applicant as a part of the survey process. Gender, income, and household size questions were omitted. The demographic data fell into five categories: age, race/ethnicity, education, employment, and neighborhood. Each participant was asked the same 22 questions during a 15-minute indirect survey taken between November 9-10, 2022. For race and ethnicity questions, the options for applicants to select were: White, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander, Hispanic or Latino, or Other (Fig 3).

The sampling pool consisted of 23 participants, reflecting the total number of complete surveys (Fig. 2). After the results were collected, the data was cleaned, and excluded respondents that skipped entire sections of the survey were. It was determined the rest of their answers should not be included. In the process, clearing all anomalous, incorrectly filled, or odd results that could skew the analysis. I applied the cross-tabulation method to analyze the nominal scale and ordinal data to effectively dive into the qualitative data, then try to find out how and why achievement gaps may exist between student demographics in Aurora and Denver. The hypothesis is that the race/ethnicity of students is a factor that impacts AOPYO's programs. Next, I performed a Chi-Squared test for each of the demographic categories in the survey to assess the statistical significance of race/ethnicity in satisfaction rates. I computed the significance level of ethnic-related differences level of satisfaction and usefulness of the AOPYO program among the two groups. The difference is considered to be not statistically significant, since the P-value is > 0.05, we can assume the probability that the null hypothesis is true. Students of Color are satisfied with AOPYO's Tai Chi-based programs and they find the practice useful. 72% of all participants say that Tai Chi as a Movement-Based Therapy effectively and relaxes them, putting them in a calm, spiritual state of mind. However, more than half of the participants say they do not like Tai Chi because it requires quieting the mind, patience, and stillness.

#### **METHODS**

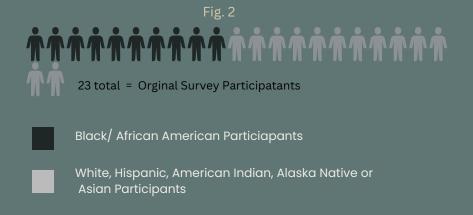
The steps taken to accurately clean the data involved removing all respondents that missed sections of the survey or those that were under the age of 18 and over the age of 24. Demographic and trauma information was collected voluntarily from each applicant as a part of an ethical data collection process. The data consists of responses from a three-part survey:

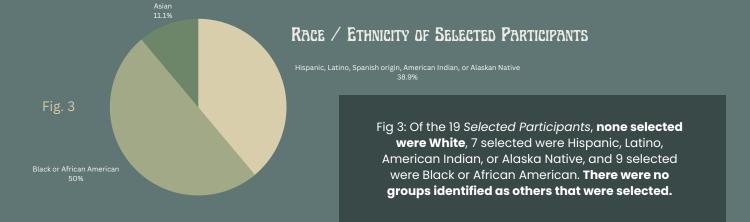
1.) Demographic 2.) Program evaluation, and 3.) Trauma history.



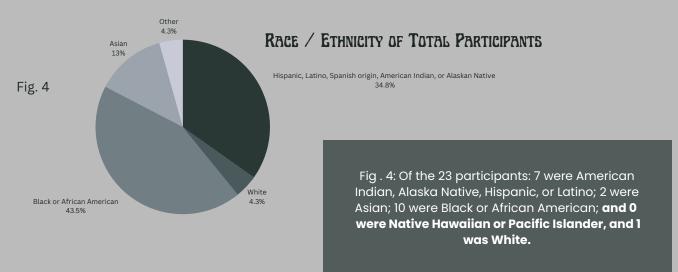
#### INTERVIEW PARTICIPANTS

- Students and young adults who are currently practicing Tai Chi
- Students and young adults who are enrolled in one of AOPYO's Tai Chi based programs (Mentorship and Career Pathway)
- Individuals ranging from ages 18-24
- Individuals who live in the Denver Metro Area
- No exclusions regarding gender or race





#### **METHODS**



## **FINDINGS**

The survey data consisted of a total of 18 Participants of Color (POC). There was a total of 23 participants who were surveyed during AOPYO's weekly sessions on Wednesday, November 9th resulting in a 78% survey response rate. There was no statistical significance between non-Hispanic and Hispanic participants and how helpful Tai Chi-based practices were in improving their well-being. There were no participants in the age 23 category during random selection.

40% OF ALL HISPANIC PARTICIPANTS AGREED THAT AOPYO'S TAI CHI-BASED PROGRAMS ARE VERY USEFUL AND 60% AGREED IT IS EXTREMELY USEFUL.

100%

100% of all Black/African American, Asian, Hispanic, American Indian, and Alaska Native participates say AOPYO Tai Chi Based Programs are very useful and helpful towards sustaining well-being

0%

0% of the participates say AOPYO Tai Chi Based Programs are not useful

80%

At least 80% of all participants were from outside of the Aurora Community.

88%

At least 88% of Black/African American students feel certain people, places, and things trigger fear and anxiety in them.

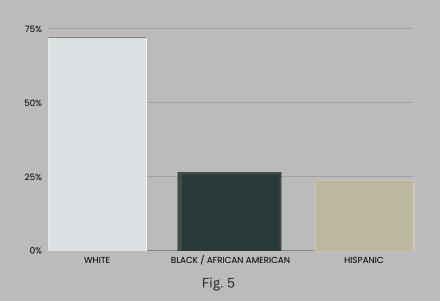


### SUMMARY

The data revealed strengths and opportunities in AOPYO's Tai Chi-based programs. The greatest strength is that 12 out of 18 students and young adults of color believe Tai Chi is a better practice than what they are currently doing to improve both physical and mental health. Well-being clinicians and community organizations should see this as an opportunity to implement Tai Chi into their existing programs. While some community agencies are taking on Movement-based Therapy, I can not say that there are noticeable trends in Tai Chi-based therapy programs. There exist a concerning gap in providing students living in Communities of Color with access to alternative forms of therapy and options to improve well-being. This study shows that at least 56% of all the participants between the age of 18-24 say they have experienced worry and anxiety, numbing out or feeling nothing, and some form of depression or grief. Most African American and Asian populations who live in Colorado are from the Aurora community. While 90% of Hispanic participants live outside of Aurora, 60% say they practice Tai Chi every day and at least 70% of Hispanic Participants say they are delighted with AOPYO's Mentorship and Career Pathways program. This Data can be used as either a rear-view mirror or as headlights. Does it present AOPYO with an opportunity to use it as a headlight? Yes, but the road ahead leads to Aurora, Colorado.

83% OF AOPYO'S PROGRAM PARTICIPATES LIVE OUTSIDE OF AURORA, IN DENVER

16.1% OF COLORADOS BLACK/AFRICAN AMERICAN POPULATION LIVES IN AURORA



Denver has wide gaps in test scores based on race and ethnicity

72% of white Denver students scored at or above grade level on state literacy tests

However, only 26% of Black and 24% of Hispanic students did.

Bars show the percentage of students who met or exceeded expectations for all grades on the CMAS test of English skills (Fig. 5)

AOPYO can meet this demand to help fill the gap that has increased since the Covid-19
Pandemic.



#### RECOMMENDATION

While this study identified no statistical significance between the satisfaction rates of Black students and Hispanic students, the study is inhibited by the small sample size. It is recommended to collect more data to illustrate AOPYO's program demand for those demographics over four years, as our data was limited to one year. Any existing cleaned data, if available, could possibly highlight trends in achievement and well-being disparities over a four-year period to measure improvement in test scores and career advancement.

Denver Public Schools has the largest test score gaps in all of Colorado between white and Black students, and between white and Hispanic students, in both literacy and math.

Data released in September 2022 from standardized tests Colorado students took in Spring 2022 shows that white students in Denver scored near the top in the state, while Black and Hispanic students scored near the middle. These gaps could indicate Denver is not serving the Black and Hispanic students who make up the majority of its population as well as it does white students. The challenges faced by Black students extend into the K-12 system. AOPYO has an opportunity to market its organization and its programs within the Aurora community to increase participation and awareness with Black/African-American and Asian students.

Additionally, while the differences in ethnicity for students of all ages and satisfaction of all races are not statistically significant, the study found only less than 8 percent of AOPYO's participants were from the Aurora community. Further qualitative research could potentially illuminate the causes of the well-being disparities, then identify and connect possible causes for achievement disparities. Some of the research should include both qualitative and quantitative studies that measure the performance progress of AOPYO's participants and demographics.

The four main categories represented in the achievement and well-being gap are ethnicity, socioeconomics, and neighborhood. AOPYO is already making an impact and implementing Interventions to serve the Hispanic and Native American student population, however, to sustain its impact it must continue to retain Hispanic Students who live in Denver and keep them engaged for up to 4 years. As a result, it is assumed AOPYO will help improve Denver's lowest National performance rating in the arena of educating Denver's Hispanic population.

Based on this study, the data display a need for change in community outreach efforts. This raises questions about how to create solutions that would impact the improvement of literacy rates and placement test rates for Denver Metro Youth. AOPYO may need to do more to bring awareness to its presence in Black and Asian American communities to diversify the population of students who bring differing perspectives into the AOPYO Circle, helping them achieve its mission.

In January 2023, I will work with AOPYO to develop new studies that will examine all facets of all four AOPYO programs. The data in this study did not include specific information about AOPYO's Career Pathway program and Mentorship program, including assistance with professionally certifying young people in skilled trades and one on one mentoring sessions, however, we encourage AOPYO to assess its own programs at each level of its implementation, particularly around marketing, development and community outreach so that they can better serve the students who need the most support. There is an urgent need to address not just achievement disparities but also well-being disparities in Communities of Color.