



## Playworks HSA-RSC Statistical Report: Overall Sample

The Holistic Student Assessment (HSA) Retrospective Self-Change (RSC) was administered to 710 Playworks youth in Fall 2021 – Spring 2022. This document provides results from statistical analyses conducted for the overall sample, as well as by region, program model, gender, grade, and race/ethnicity. For sample sizes greater than or equal to 20, parametric tests were performed. Statistical tests were not performed for any group with 19 or fewer responses.

### Statistical Analysis

On the Retrospective Self-Change format of the HSA, youth responded to items by selecting the degree of change they observed in themselves since the beginning of their program. Youth self-reported mean change scores were analyzed to see if they differed significantly from 3, a rating of “About the Same.” If the  $p$ -value of a given scale was below 0.05, its mean change score was significant and unlikely due to chance. Mean change scores greater than 3 indicate positive change; those less than 3 indicate negative change, and those equal to three indicate no change.

A one-sample  $t$ -test was conducted to analyze outcomes for the entire sample. Then, outcomes were analyzed by region. To analyze differences between regions, a one-way ANOVA  $f$ -test was conducted. To analyze differences within each region, a one-sample  $t$ -test was conducted. Next, outcomes were analyzed by program model. To analyze differences between program models, an independent two-sample  $t$ -test was conducted. To analyze differences within each program model, a one-sample  $t$ -test was conducted. Then, outcomes were analyzed by gender. To analyze differences between genders, a one-way ANOVA  $f$ -test was conducted. To analyze differences within each gender, a one-sample  $t$ -test was conducted. Next, outcomes were analyzed by grade. To analyze differences between grades, an independent two-sample  $t$ -test was conducted. To analyze differences within each grade, a one-sample  $t$ -test was conducted. Lastly, outcomes were analyzed by race/ethnicity. To analyze differences between race/ethnicity, a one-way ANOVA  $f$ -test was conducted. To analyze differences within each race/ethnicity, a one-sample  $t$ -test was conducted.

For scales in which significant mean scores were identified using one-sample  $t$ -tests, the direction of that difference was then checked. For independent two-sample  $t$ -tests, and one-way ANOVA  $f$ -tests, additional post hoc analyses would be required to identify the patterns of differences between groups.

### Findings

#### Overall Sample Results:

Youth reported statistically significant positive change (i.e., mean score greater than 3.0) on all 14 scales on this survey ( $p$ 's < 0.001). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

To visualize the overall findings, a graph (**Figure 1**) is included in the Appendix. Scales with significant differences are marked with asterisks. **Figure 1** represents the average retrospective self-change for all 14 HSA scales. A similar visualization is available on Playworks' “HSA Live RSC Dashboard” in Qualtrics.



## Region Analysis:

### *Between Group Results*

There were statistically significant differences between regions on 9 of the 14 scales of this survey ( $p$ 's < 0.05). These scales were: action orientation, assertiveness, emotion control, empathy, perseverance, reflection, relationships with adults, school bonding, and trust. Between regions, the following 5 scales did not demonstrate significant differences: academic motivation, critical thinking, learning interest, optimism, and relationships with peers.

**Figure 2** and **Figure 3** represent the average HSA retrospective self-change scores by region. Scales with significant differences are marked with asterisks.

### *Within Group Results*

California youth ( $n = 75$ ) reported statistically significant positive change on 12 of the 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with peers, and school bonding. The following 2 scales did not demonstrate significant differences: relationships with adults and trust.

Colorado youth ( $n = 22$ ) reported statistically significant positive change on 13 of the 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust. The following scale did not demonstrate significant differences: emotion control.

Indiana youth ( $n = 55$ ) reported statistically significant positive change on 13 of the 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust. The following scale did not demonstrate significant differences: emotion control.

Massachusetts youth ( $n = 165$ ) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.001). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

Michigan youth ( $n = 144$ ) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.001). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

New Jersey youth ( $n = 40$ ) reported statistically significant positive change on 13 of the 14 scales on this survey ( $p$ 's < 0.001). These scales were: academic motivation, action orientation, assertiveness, critical thinking, empathy, learning interest, optimism,



perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust. The following scale did not demonstrate significant differences: emotion control.

Pacific Northwest youth (n = 109) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.001). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

Pennsylvania youth (n = 69) reported statistically significant positive change on 12 of the 14 scales on this survey ( $p$ 's < 0.001). These scales were: academic motivation, action orientation, assertiveness, critical thinking, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, and school bonding. The following 2 scales did not demonstrate significant differences: emotion control and trust.

### Program Model Analysis:

#### *Between Group Results*

There were statistically significant differences between program models on 2 of the 14 scales of this survey ( $p$ 's < 0.05). These scales were: emotion control and school bonding. Between program models, the following 12 scales did not demonstrate significant differences: academic motivation, action orientation, assertiveness, critical thinking, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, and trust.

**Figure 4** represents the average HSA retrospective self-change scores by program model. Scales with significant differences are marked with asterisks.

#### *Within Group Results*

Youth in Coach programs (n = 321) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

Youth in TeamUp programs (n = 389) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

### Gender Analysis:

#### *Between Group Results*

There were statistically significant differences between genders on 11 of the 14 scales of this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust. Between genders, the following



3 scales did not demonstrate significant differences: emotional control, empathy, and learning interest.

**Figure 5** represents the average HSA retrospective self-change scores by gender. Scales with significant differences are marked with asterisks.

#### *Within Group Results*

Girls (n = 376) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

Boys (n = 277) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

Youth who preferred not to answer (n = 34) reported statistically significant positive change on 8 of the 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, empathy, learning interest, perseverance, and reflection. The following 6 scales did not demonstrate significant differences: emotion control, optimism, relationships with adults, relationships with peers, school bonding, and trust.

### **Grade Analysis:**

#### *Between Group Results*

There were significant differences between grades on 7 of the 14 scales of this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, optimism, perseverance, relationships with adults, school bonding, and trust. Between grades, the following 7 scales did not demonstrate significant differences: assertiveness, critical thinking, emotion control, empathy, learning interest, reflection, and relationships with peers.

**Figure 6** represents the average HSA retrospective self-change scores by grade. Scales with significant differences are marked with asterisks.

#### *Within Group Results*

Fourth graders (n = 363) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

Fifth graders (n = 265) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism,



perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

### **Race / Ethnicity Analysis:**

#### *Between Group Results*

There were statistically significant differences between race/ethnicity on 1 of the 14 scales of this survey ( $p$ 's < 0.05). This scale was: emotion control. Between race/ethnicity, the following 13 scales did not demonstrate significant differences: academic motivation, action orientation, assertiveness, critical thinking, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

**Figure 7** and **Figure 8** represent the average HSA retrospective self-change scores by race/ethnicity. The scale with significant differences is marked with an asterisk.

#### *Within Group Results*

African American, Black youth (n = 194) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

American Indian, Native American, or Alaskan Native youth (n = 28) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

Asian, Asian-American youth (n = 37) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

Latino or Hispanic youth (n = 163) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

White, Caucasian (non-Hispanic) youth (n = 82) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

Youth identifying as an unlisted race/ethnicity (n = 41) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy,



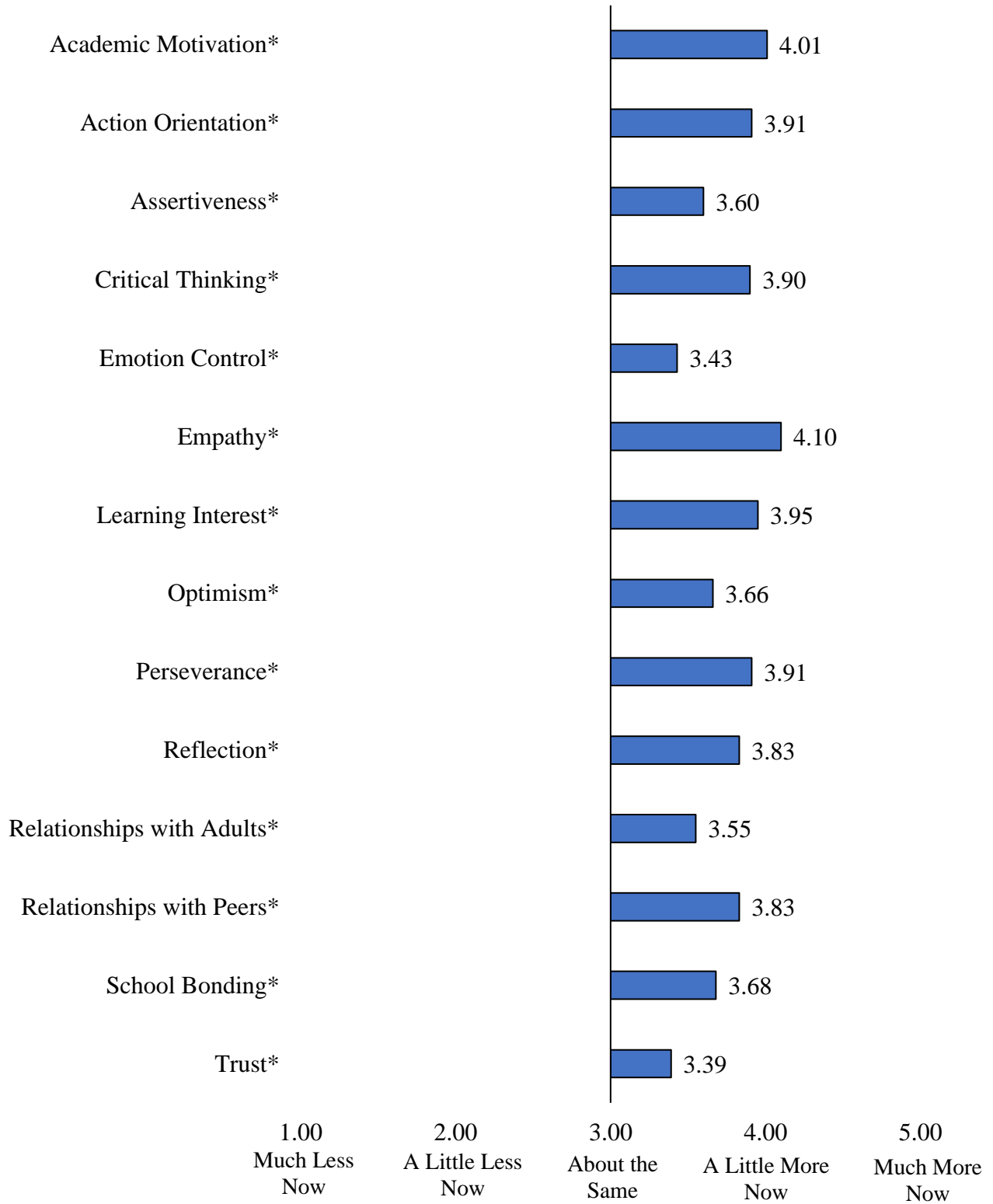
learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

Youth who preferred not to answer (n = 98) reported statistically significant positive change on all 14 scales on this survey ( $p$ 's < 0.05). These scales were: academic motivation, action orientation, assertiveness, critical thinking, emotion control, empathy, learning interest, optimism, perseverance, reflection, relationships with adults, relationships with peers, school bonding, and trust.

Please note that if you are considering reporting any of the above results on a website or in a grant proposal or manuscript, please refer to PEAR Inc.'s "[Guidelines for Citing and Distributing Findings.](#)"

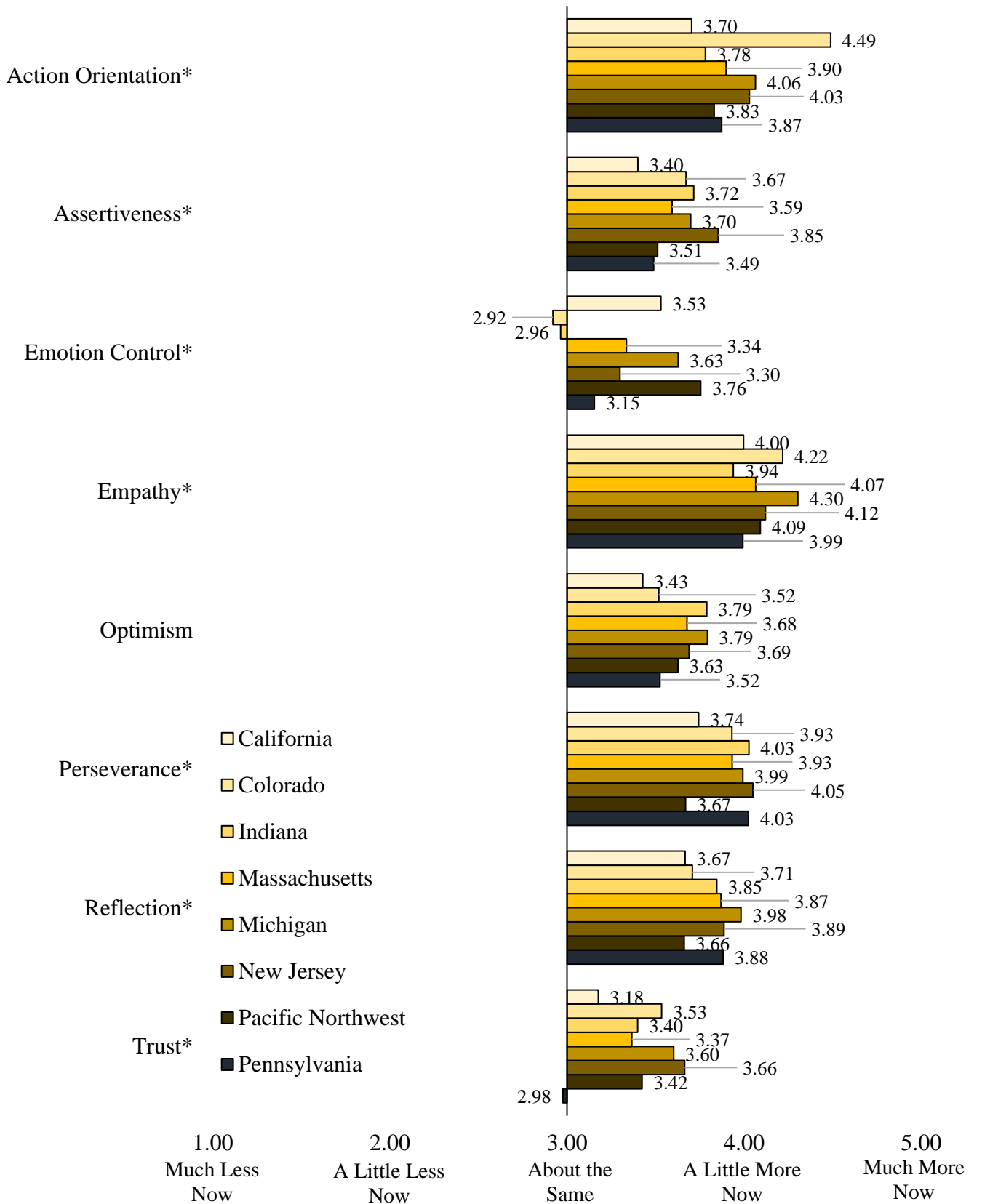
### Appendix

**Figure 1.** Playworks (N = 710 youth), Average HSA-RSC Outcomes, 2021–2022.





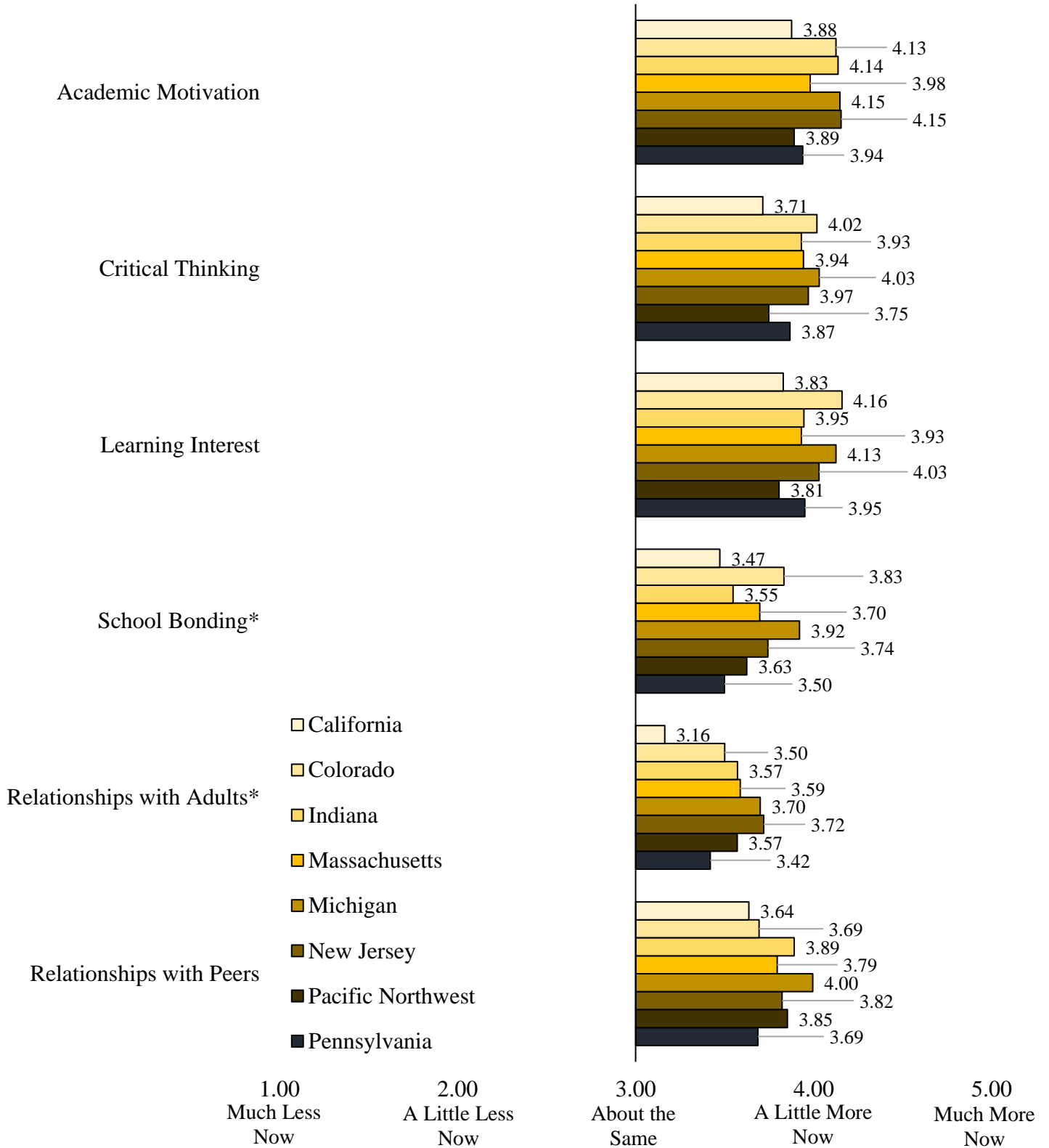
**Figure 2.** Playworks (N = 710 youth), Average HSA-RSC Resiliency Outcomes by Region, 2021–2022.





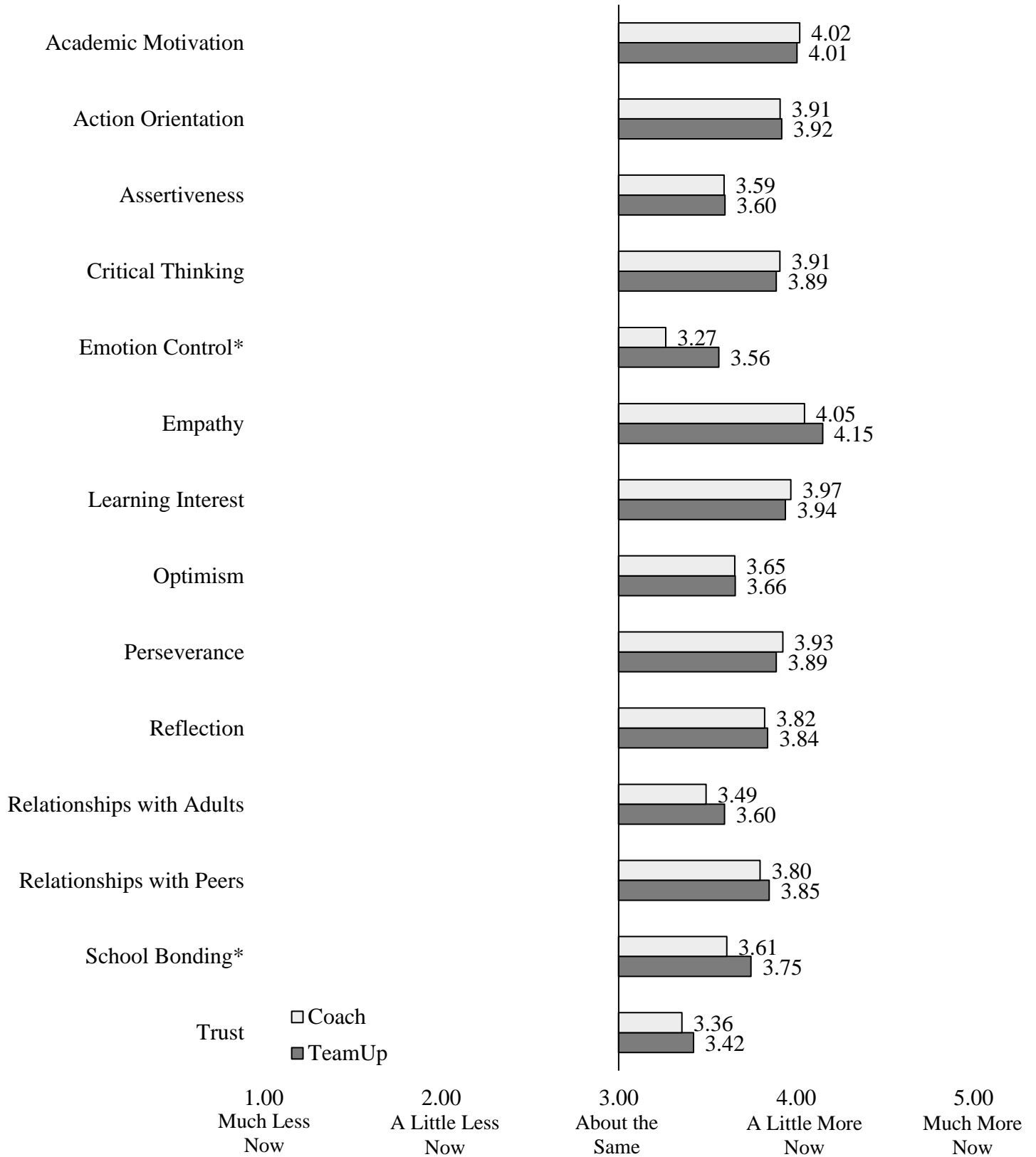


**Figure 3.** Playworks (N = 710 youth), Average HSA-RSC Relationships and Learning and School Engagement Outcomes by Region, 2021–2022.



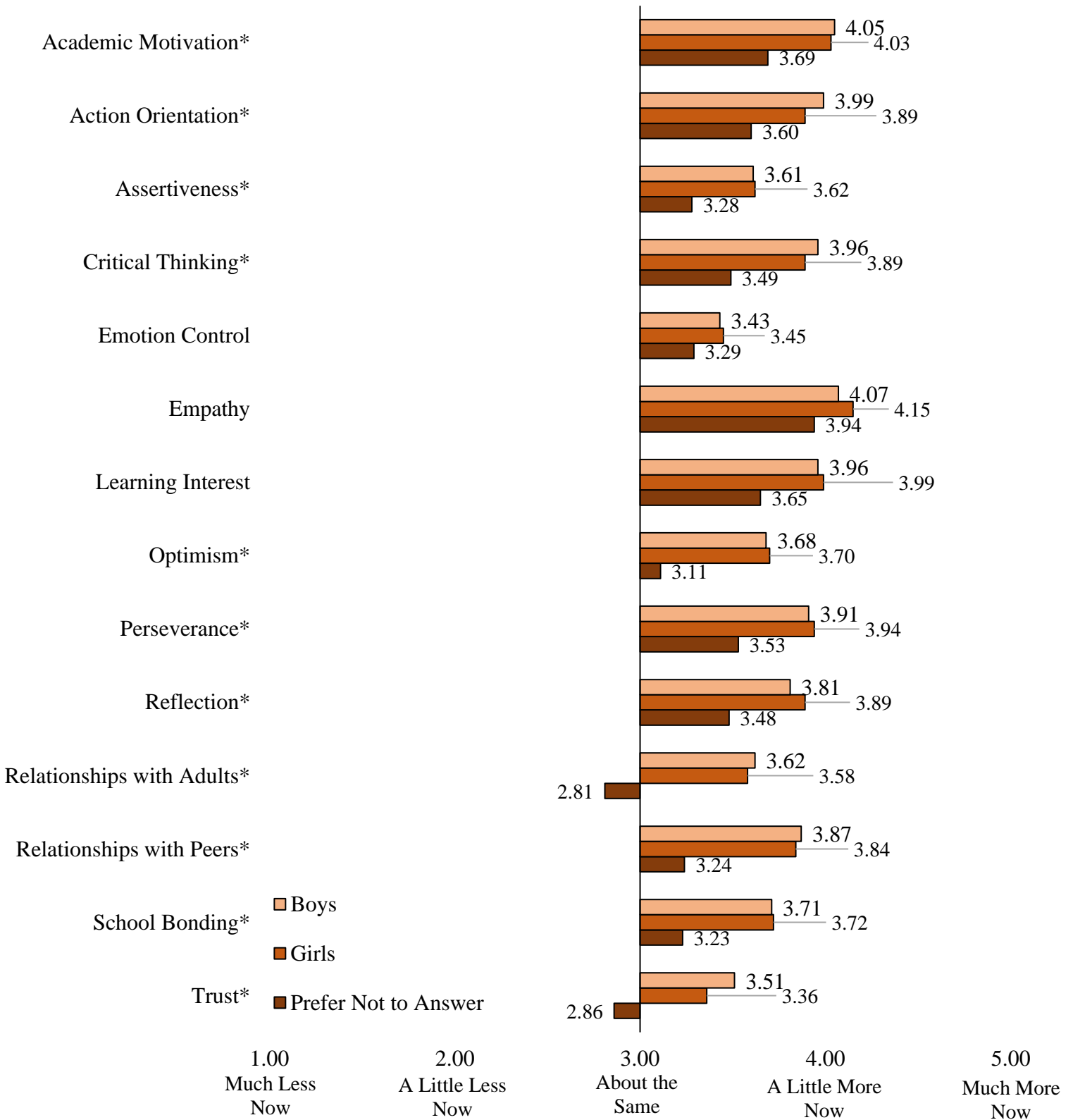


**Figure 4.** Playworks (N = 710 youth), Average HSA-RSC Outcomes by Program Model, 2021–2022.

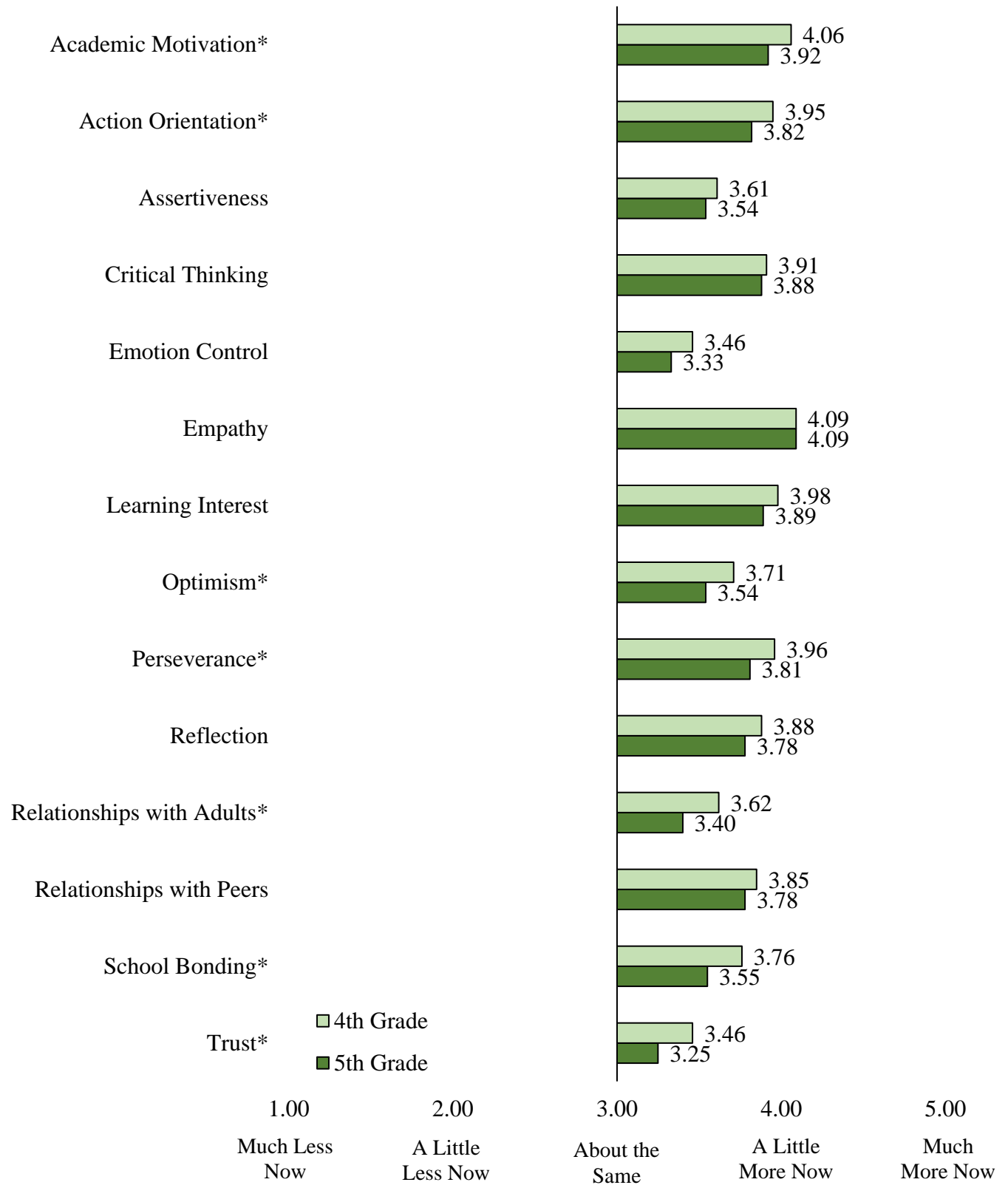




**Figure 5.** Playworks (n = 696 youth), Average HSA-RSC Outcomes by Gender, 2021–2022.

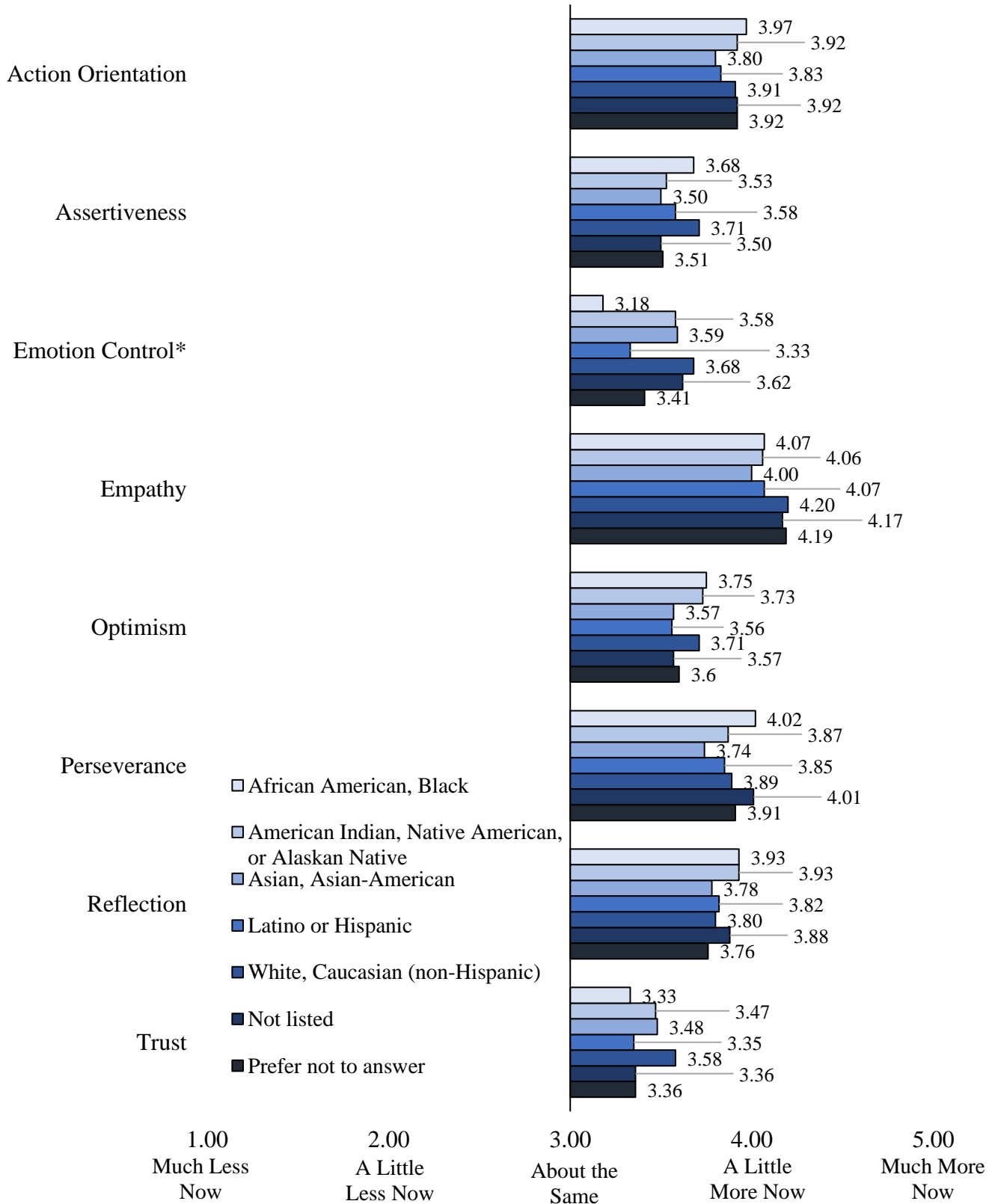


**Figure 6.** Playworks (n = 629 youth), Average HSA-RSC Outcomes by Grade, 2021–2022.





**Figure 7.** Playworks (n = 644 youth), Average HSA-RSC Resiliency Outcomes by Race/Ethnicity, 2021–2022.





**Figure 8.** Playworks (n = 644 youth), Average HSA-RSC Relationships and Learning and School Engagement Outcomes by Race/Ethnicity, 2021–2022.

