Results of the HIP Education Pilot Programs

In education, a well-constructed intervention utilizes limited time and resources to create lasting positive change in a psychological process critical to the academic or social success of students. Although a number of promising areas for intervention in educational settings have been extensively researched, few of these findings have been systemically integrated by schools into their curricula, or even translated into a form that teachers can use in the classroom and that students can use and benefit from in the course of their everyday lives.

Past research has demonstrated that psychological interventions on topics such as mindset, belonging, and values-affirmation can positively impact the academic performance of students and help close the achievement gap for minorities as well as women in scientific fields. The Heroic Imagination Project's education program pilots explored whether similarly effective interventions could be developed from Dr. Zimbardo's situational awareness model. These programs, centered on psychological processes critical to learning, healthy social interactions, well-being, and self-selected behavior and attitude change, have been designed to be able to be used in a regular classroom or youth development setting as a supplement to students' regular curricula across a broad range of ages and backgrounds. Over the 2010-2012 academic calendar years, four pilot intervention programs were conducted by the Heroic Imagination Project in three schools. These pilots centered on creating lasting positive change in students in two domains: situational awareness and mindset. The goal of these interventions was to help students identify and initiate positive change within key psychological processes critical to their long-term success in school, work, and interpersonal relationships and to encourage a pattern of wise and effective acts of everyday heroism. In all pilots, positive gains were observed in our students across a number of constructs in both domains, compared to students who had not received our materials. We have conducted numerous other programs across a diverse range of educational settings, but in these pilots we were able to collect full psychometric and evaluative data from our students as well as their teachers.

It is important to state that we do not in any way operate from a deficit model of students, educators, or youth workers and thus these interventions are not designed to somehow resolve something lacking in a child or teacher. Rather, they are designed to teach important skills and awarenesses that normally are not formally presented in school or popular culture, yet which help students to more successfully navigate the world of their everyday experiences, both in and out of the classroom. In this sense, an intervention can be thought of as an intrinsically motivating experience that creates a lasting positive change in students. Our interventions have been designed to increase students' chances of achieving positive outcomes and to be deliverable by any well-intentioned teacher in a regular learning environment.

This document will first describe each of the four pilot programs, then each of the constructs measured, and finally the resulting data from each pilot. Although in each of these pilots we spent a number of weeks with our students, our materials have since been designed to be deliverable in shorter blocks consisting of 90-120 minute segments. For a detailed description of our model and methods, as well as

complete references, see "Interventions to Transform Education" (Dickerson & Zimbardo, in peer-review).

Overview of our pilot programs

The Foothill Pilot

In the first pilot intervention conducted by HIP, we held a weekly class for 7 junior and senior high school students (5 females and 2 males) in the middle college program at Foothill College. All students were either 17 or 18 years old. Over the course of two academic semesters, we administered our interventions on mindset, situational awareness (conformity, situation blindness, outgroup prejudice, and the bystander effect), and empathy (our material on empathy in now diffused throughout the rest of our interventions). Our Foothill students also had the opportunity to teach 6th graders for 10 weeks about mindset, situation blindness, and conformity at the end of the pilot intervention.

Our survey package had not yet been developed at the beginning of the program. However, we were able to administer our measures to the pilot class at the midpoint of the intervention. We also obtained end of the year data from 28 students in the middle college program, approximately 1/2 of the total population, but who had not received our intervention as a control group. The pilot group postmeasure was compared against the control group postmeasure to provide a large enough sample size to analyze, however many significant gains were found even in the midpoint vs. endpoint data for the experimental group despite the small sample size. Contact Bryan Dickerson for the pilot premeasure vs. postmeasure ANOVA data if interested; the means for all groups are included in the results.

The ARISE Pilots

Our second and third pilots were conducted at ARISE high school in Oakland, California. ARISE serves a largely low-income Latino community. The second pilot was administered to one class of students over the course of a semester. The third pilot, the "HIP Club" was a voluntary afterschool program that ran for two semesters. The same questionnaires administered in the Foothill Pilot were used to assess students' mindsets, situational awareness, and empathy at the beginning and end of the semester in the ARISE Pilot. The survey was also given out to another class at the beginning and end of the semester, who received no intervention material. No significant gains were made in any area by the control group, and in fact, a number of scores were actually lower for them at the end of the semester than at the start. The psychometric questionnaires were also administered to the ARISE HIP Club at the end of the program (the composition changed greatly at first, but stabilized over time). As with the Foothill pilot, in to obtain large enough samples to analyze fully, the pilot group and HIP Club postmeasures were compared against the control group postmeasure. Contact Bryan Dickerson for the pilot and control groups premeasure vs. postmeasure ANOVA and means data if interested. We also interviewed our students' regular teacher as in the Foothill pilot, but were not able to formally interview the students themselves. However, we did employ several focus group sessions with our students at the end of the program.

The UC Berkeley Pilot

In our fourth pilot program, we taught a one semester course at the University of California, Berkeley. This course consisted of undergraduate students across a variety of majors and was titled "Cultivating heroic leadership." Participants received our interventions on mindset, situational awareness, outgroup prejudice, and empathy, with a special emphasis on how they could use the information in a leadership role. In this pilot, 12 students (we had several others who were not present for both pre and post surveys) filled out our questionaries' at the beginning and end of the pilot and the scores from each were compared.

Group	Sample Size	Length in Pilot
Foothill Pilot Control Group:	28	NA
Foothill Pilot Experimental Group:	7	2 Semesters
ARISE Control Group:	16	NA
ARISE Experimental Group:	9	1 Semester
ARISE HIP Club:	4	2 Semesters
UC Berkeley Pilot Group:	12	1 Semester

Table 2: Participants

Assessment Strategies

Student Interviews

We interviewed the Foothill students at the end of the program, using a semi-anonymous structured interview administered by a trained researcher, to determine what the students reported regarding their own personal growth and increased understanding of the material covered in the intervention. They were also asked to report any subsequent attitude or behavioral changes they noticed as a result. Several non-anonymous focus group sessions with the students were also utilized at each pilot.

Teacher Interviews

We also interviewed our partner-instructors; those individuals helping us facilitate the classes at both the Foothill and ARISE programs. Because these teachers observed our lessons and also saw our students every day, they were able to provide invaluable feedback on how students were internalizing and utilizing our materials.

Student Questionnaires

Finally, we gave our students psychometric questionnaires designed to see if they had experienced a positive internal shift in the psychological processes each intervention targeted. Each scale has been either associated with lasting positive outcomes in young people in previous research or sought to track changes on our original constructs (such as situational awareness).

Description of Psychometric Scales

Intelligence Mindset

Intelligence mindset was assessed using the eight-item, intelligence mindset measure developed by Levy and Dweck (1999). The scale consists of eight items: four growth mindset intelligence statements (e.g., ‘‘No matter who you are, you can significantly change your intelligence level.’’) and; four fixed mindset statements (e.g., ‘‘You can learn new things, but you can’t really change your basic intelligence.”). The fixed mindset items were reverse scored and a mean mindset score was calculated for the eight items, with the low end (1) representing a fixed mindset, and the high end (6), a growth mindset. The internal consistency of the intelligence mindset measure was .92 in the Foothill Pilot (internal consistency scores are only reported for the Foothill pilot, but were similar across pilots).

Personality Mindset

Personality mindset regarding other people, also known as implicit person theory (mindset), was assessed using the eight-item, domain-general “kind-of-person” mindset measure developed by Levy and Dweck (1997). The scale consists of eight items: four growth mindset domain general person statements (e.g., ‘‘All people can change even their most basic qualities.’’) and; four fixed mindset statements (e.g., ‘‘Everyone is a certain kind of person, and there is not much that can be done to really change that.”). The fixed mindset items were reverse scored and a mean personality mindset score was calculated for the eight items, with the low end (1) representing a fixed mindset, and the high end (6), with a growth mindset. The internal consistency of the theory measure was .96 in the Foothill Pilot. Self-personality mindset was also assessed using a four-item, domain-general “kind-of-person” self-mindset measure also developed by Levy and Dweck in 1997. The 8 item measure was shortened and consisted of four items: 2 growth mindset domain-general self-statements (e.g., “I can always substantially change the kind of person I am.”) and; 2 fixed mindset domain-general self-statements (e.g., “The kind of person I am is something very basic about me and it can’t be changed very much.”). Mean self-personality mindset scores were calculated in the same manner as the others-personality mindset scores described above. The internal consistency of the others-personality mindset measure was .96 in the Foothill Pilot.

Group Dynamics Mindset

Mindset regarding the ability of group dynamics to change was assessed using the newly-developed five-item, group dynamics mindset measure developed by Bryan Dickerson, (Dickerson & Zimbardo, in peer-review). The scale consists of five items: two growth mindset group dynamics statements (e.g., ‘‘Any group can greatly change the way it interacts.”) and; three fixed mindset group dynamics statements (e.g., ‘‘Groups act the way they do for a reason, you can’t really change them.”). One of the original six items was removed as it did not factor well with the other five items. (< 0.45). The fixed mindset items were reverse scored and a mean group dynamics mindset score was calculated for the five items, with the low end (1) representing a pure fixed mindset, and the high end (6), agreement with a growth mindset. The internal consistency of the group dynamics mindset measure was .78 in the Foothill Pilot.

Situational Awareness (Note: situational awareness contains conformity, situation blindness, outgroup prejudice, and the bystander effect. However this section refers to our measure regarding

situational awareness in general.)

General situational awareness was assessed using the three-item, situational awareness measure developed by Zimbardo & Dickerson (2011). The scale consists of three items: each regarding an awareness of the power of groups to impact the behavior and emotions of individuals ("To understand the behavior of an individual, it is important to understand the situation in which it occurs.", "A person's good or bad mood can easily spread to other members of their group.", and "Everyone's behavior is deeply affected by the situations and systems of which are a part."). A mean situational awareness score was calculated for the three items, with the low end (1) representing lack of situational awareness, and the high end (6), representing a high degree of situational awareness. The internal consistency of the theory measure was .64 in the Foothill Pilot.

Awareness of the Bystander Effect

Awareness of the psychological tendencies involved in the bystander effect was assessed using the four-item, awareness of bystander effect measure developed by Zimbardo & Dickerson (2011). The scale consists of four statements; Two positively scored statements: "It is easy to ignore someone who needs help if other people around are ignoring them too." and "Sometimes being in a crowd makes things less clear in an emergency." and, two negatively scored statements: "A crowd is more likely than one or two people to report an accident." and, "If enough people observe an accident, someone will help for sure." A mean awareness of the bystander effect score was calculated for the three four with the low end (1) representing the least level of agreement with the statements, and the high end (6), representing the highest level of agreement with statements. The internal consistency of the awareness measure was .64 in the Foothill Pilot.

Awareness of Conformity

Awareness of the psychological tendencies involved in conformity was assessed using the four-item, awareness of conformity measure developed by Zimbardo & Dickerson (2011). The scale consists of three positively scored statements: "Sometimes people keep their real opinions to themselves if it goes against the group.", "Sometimes people will conform to something they dislike, just because their group expected it." and, "The group someone is with has a big impact on their choices and feelings." and; one negatively scored statement: "The expectations of the group have little influence over people's actions." A mean awareness of conformity score was calculated for the three items with the low end (1) representing the least level of agreement with the statements, and the high end (6), representing the highest level of agreement with statements. The internal consistency of the awareness measure was .76 in the Foothill Pilot.

Awareness of Outgroup Prejudice

Awareness of the psychological tendencies involved in prejudice towards outgroup members was assessed using the four-item, awareness of outgroup prejudice measure developed by Zimbardo & Dickerson (2011). The scale consists of four awareness statements; two positively scored statements: "It is easy to assume things about someone, just because of the group to which they belong.", "People can learn to treat everyone with equal respect, regardless of the group they belong to.", and "People

naturally tend to give preferential treatment to members of their own group." and, one negatively scored statement: "People tend to treat everyone equally, regardless of to which they belong." A mean awareness of outgroup prejudice score was calculated for the four items with the low end (1) representing the least level of agreement with the statements, and the high end (6), representing the highest level of agreement with statements. The internal consistency of the awareness measure was .55 in the Foothill Pilot.

Empathy

Empathy was assessed using the six-item, empathy measure based on Johnson, 2009. The scale consists of six empathy statements; four positively scored statements (e.g., "I try to listen to other people and let them know that I understand what they are saying." and, two negatively scored statements (e.g., "I don't pay too much attention to another person's point of view if I think they are wrong about something."). A empathy score was calculated for the six items with the low end (1) representing the least level of agreement with the statements, and the high end (6), representing the highest level of agreement with statements. The internal consistency of the compassion for others measure was .87 in the Foothill Pilot.

Results

Our interviews revealed that students became more aware of the power of negative social influences and how vulnerable we all are to them, particularly the bystander effect and the influences of authority and conformity. Also of interest:

- Learning about social conformity and how to not to conform was the most common theme and was identified many times.

- Most students reported that they were more able to celebrate and learn from mistakes, challenges, and setbacks and to be more forgiving of themselves when things go wrong.

- At Foothill, most students also reported an increased understanding of group dynamics and development in their ability to engage in and navigate a collaborative group effort on a project, which included primarily dominant personality styles.

- Many students showed increases in empathy and situational awareness, and made more effort to initiate mindful self-reflection in order to better see the whole picture of social interactions.

- Several Foothill students emphasized an increase in empathy for sixth and seventh grade students and teachers as their group project required them to teach what they had learned to this low-income group of 6th graders through the Citizen Schools program. One student reported being surprised at the degree to which she had underestimated the 6th graders' ability to be articulate and even nuanced about the material they were learning.

- Most of the Foothill students experienced greatly increased confidence in public speaking and in their ability to teach what they learned, finding their teaching experience challenging, rewarding, and empowering.

- Students reported that what they had learned that they wanted to share with others was the power of a situation, social influence, and critical thinking in challenging situations.

- The teachers at both pilots reported that students experienced a general increase in their reflective tendencies.

The Foothill Pilot

Intelligence Mindset

As shown in Figure 1, significant differences [F (1, 34) = 5.21, p = 0.029] were found in the intelligence mindset of the Foothill pilot and control groups. Specifically, students in the HIP Pilot demonstrated a significantly higher growth mindset regarding their intelligence (M = 5.20, SD = 0.22) than did the students in the control group (M = 4.34, SD = 0.17). Foothill Pilot premeasure (M = 5.0, SD = 0.33).

Personality Mindset (Others)

As shown in Figure 2, no significant differences [F = (1, 34) < 1, p = 0.750] were found in personality-others mindset of the Foothill pilot (M = 4.07, SD = 0.33) and control groups (M = 3.91, SD = 0.17). Foothill pilot premeasure (M = 3.52, SD = 0.56).

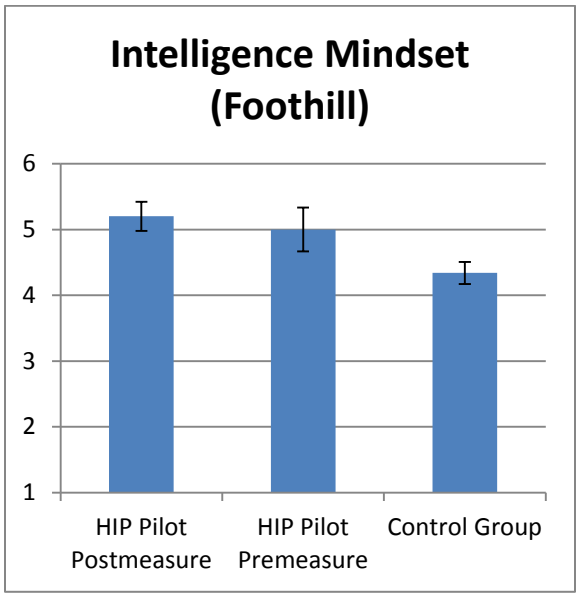

Figure 1: Intelligence Mindset (Foothill)

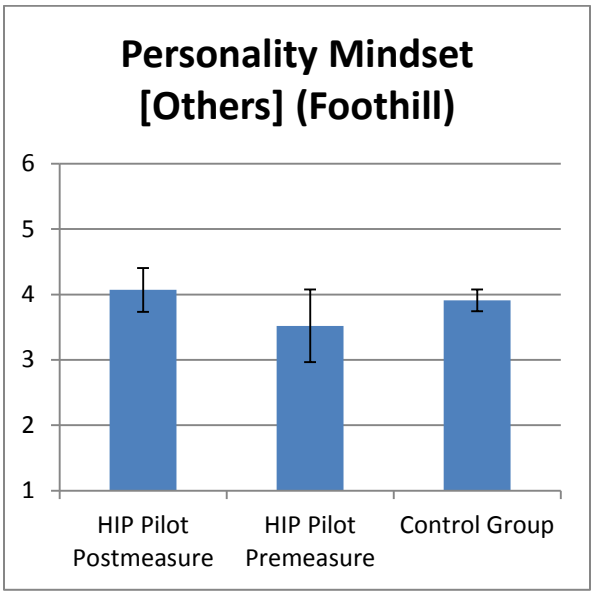

Figure 2: Personality Mindset [Others] (Foothill)

Personality Mindset (Self)

As shown in Figure 3, no significant differences [F = (1, 34) < 1, p = 0.402] were found in personality-self mindset of the Foothill pilot (M = 4.25, SD = 0.47) and control groups. (M = 3.80, SD = 0.24). Foothill pilot premeasure (M = 3.86, SD = 0.55).

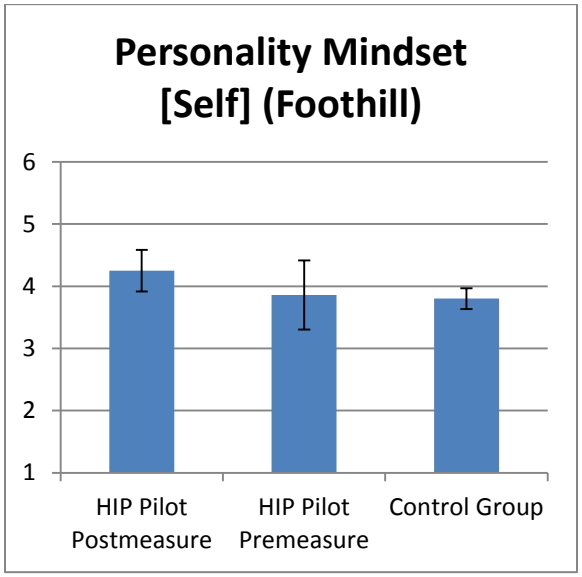

Figure 3: Personality Mindset [Self] (Foothill)

Group Dynamics Mindset

As shown in Figure 4, significant differences [F (1, 34) = 7.14, p = 0.012] were found in the group dynamics mindset of the Foothill pilot and control groups. Specifically, students in the HIP Pilot demonstrated a significantly higher growth mindset regarding group dynamics (M = 5.33, SD = 0.33) than did the students in the control group (M = 4.35, SD = 0.16). Foothill pilot premeasure (M = 4.60, SD = 0.26).

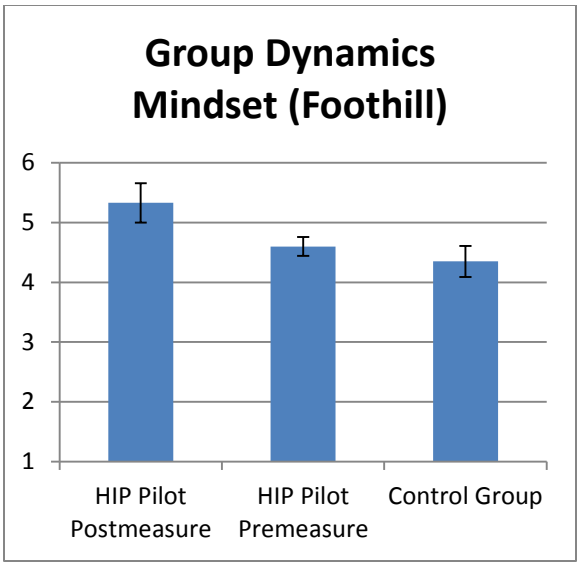

Figure 4: Group Dynamics Mindset (Foothill)

General Situational Awareness

As shown in Figure 5, significant differences [F (1, 34) = 4.21, p = 0.048] were found in the situational awareness of the Foothill pilot and control groups. Specifically, students in the HIP Pilot demonstrated a significantly higher level of general situational awareness (M = 5.81, SD = 0.17) than did the students in the control group (M = 5.42, SD =0.09). Foothill pilot premeasure (M = 5.48, SD =0.25).

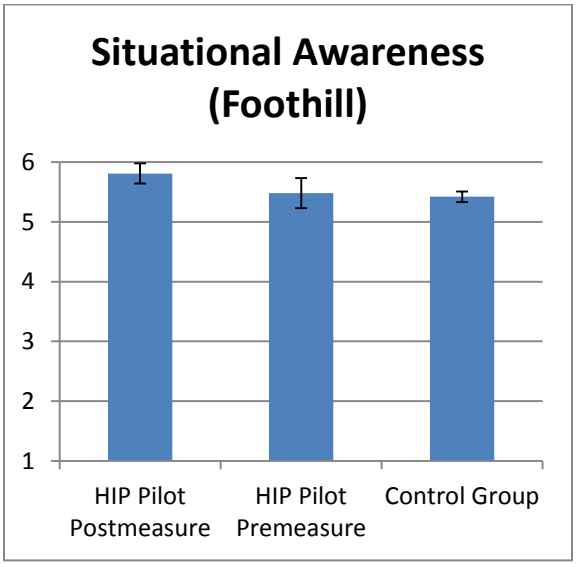

Figure 5: Situational Awareness (Foothill)

Awareness of the Bystander Effect

As shown in Figure 6, nearly-significant differences [F (1, 34) =3.87, p = 0.058] were found in the level of awareness regarding the bystander effect in the Foothill pilot and control groups. Specifically, students in the HIP Pilot demonstrated a nearly-significant higher level of awareness regarding this phenomenon (M = 5.39) than did the students in the control group (M = 4.60). Foothill pilot premeasure (M = 4.86).

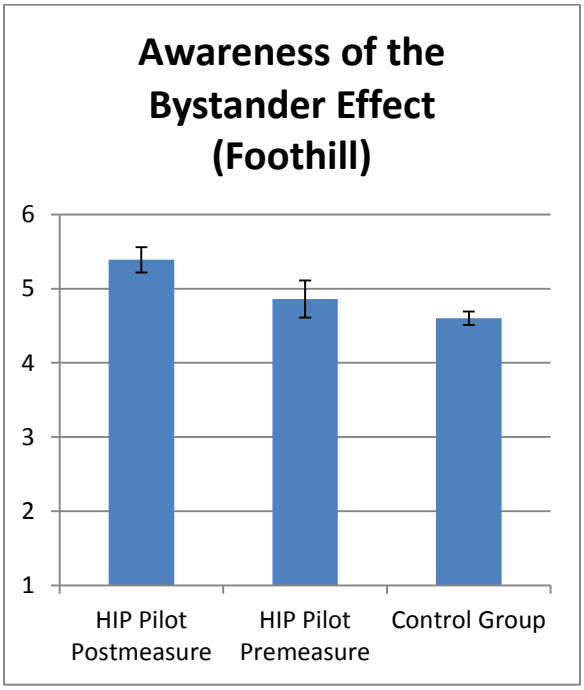

Figure 6: Awareness of the Bystander Effect (Foothill)

Awareness of Conformity

As shown in Figure 7, non-significant differences [F (1, 34) = 2.76, p = 0.106] were found in the level of awareness regarding conformity in the Foothill pilot and control groups. Specifically, students in the HIP Pilot demonstrated a higher level of awareness regarding this phenomenon (M = 5.71, SD =0.36) than did the students in the control group (M = 5.26, SD =0.18). Foothill pilot premeasure (M = 5.75, SD = 0.32).

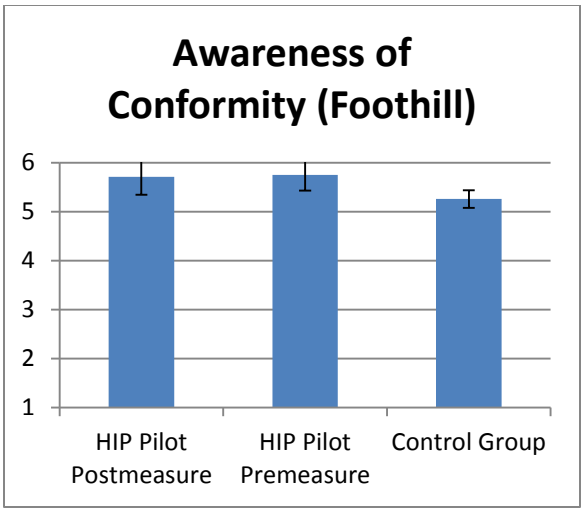

Figure 7: Awareness of Conformity (Foothill)

Awareness of Outgroup Prejudice

As shown in Figure 8, significant differences [F (1, 34) = 4.72, p = 0.037] were found in the level of awareness regarding the psychological mechanisms involved in outgroup prejudice in the Foothill pilot and control groups. Specifically, students in the HIP Pilot demonstrated a significantly higher level of awareness regarding this phenomenon (M = 5.43, SD = 0.27) than did the students in the control group (M = 4.79, SD = 0.13). Foothill pilot premeasure (M = 4.54, SD = 0.17).

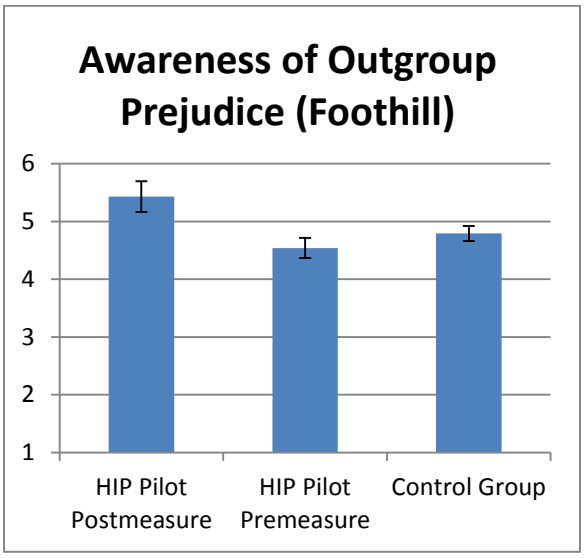

Figure 8: Awareness of Prejudice (Foothill)

Empathy

As shown in Figure 9, significant differences [F (1, 34) = 7.01, p = 0.012] were found in the level of empathy in the Foothill pilot and control groups. Specifically, students in the HIP Pilot demonstrated a significantly higher level of empathy (M = 5.60, SD = 0.29) than did the students in the control group (M = 4.71, SD = 0.15).

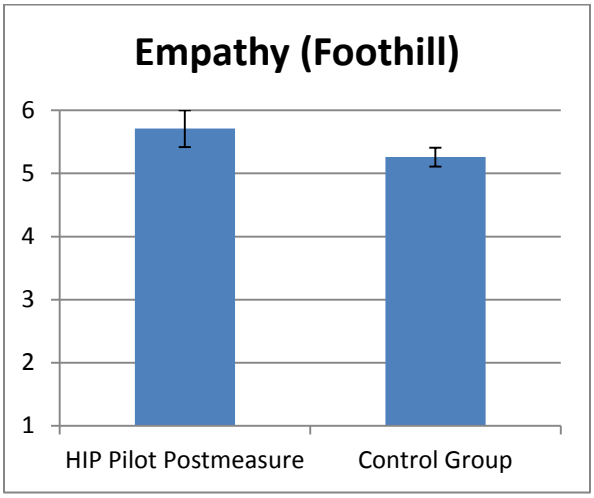

Figure 9: Empathy (Foothill)

The ARISE Pilots

Intelligence Mindset

As shown in Figure 10, significant differences [F (1, 24) = 7.99, p = 0.010] were found in the intelligence mindset of the ARISE pilot and control group postmeasures. Significant differences [F (1, 19) = 11.50, p = 0.003] were also found in the ARISE Club and control group postmeasures. Specifically, students in the HIP Pilot (M = 4.47, SD = 0.22) and HIP Club (M = 4.94, SD = 0.29) demonstrated a significantly higher growth mindset regarding their intelligence than did the students in the control group (M = 3.70, SD = 0.17).

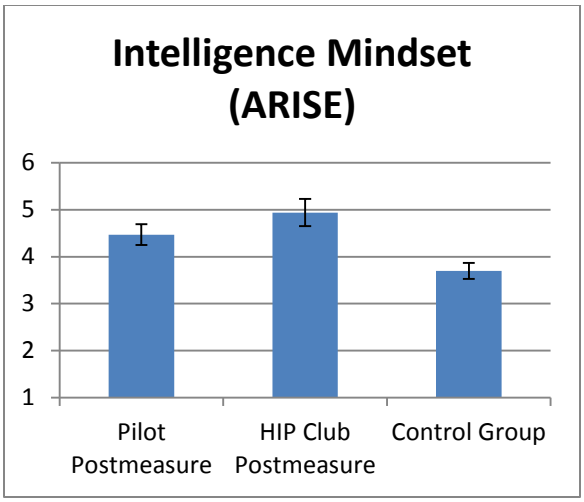

Figure 10: Intelligence Mindset (ARISE)

Personality Mindset (Others)

As shown in Figure 11, significant differences [F (1, 24) = 19.50, p < 0.001] were found in the personality-others mindset of the ARISE pilot and control group postmeasures. Significant differences [F (1, 19) = 19.23, p < 0.001] were also found in the ARISE Club and control group postmeasures. Specifically, students in the HIP Pilot (M = 4.44, SD = 0.16) and HIP Club (M = 4.78, SD = 0.25) demonstrated a significantly higher growth mindset regarding the general characteristics of others than did the students in the control group (M = 3.56, SD = 0.12).

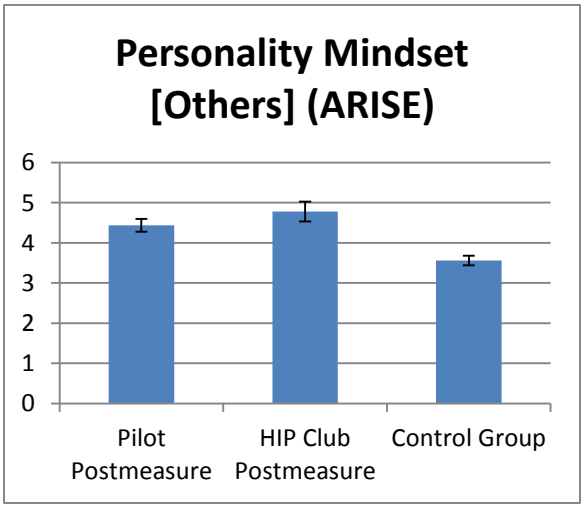

Figure 11: Personality Mindset [Others] (ARISE)

Personality Mindset (Self)

As shown in Figure 12, significant differences [F (1, 24) = 7.05, p = 0.014] were found in the personality-self mindset of the ARISE pilot and control group postmeasures. Significant differences [F (1, 19) = 28.30, p < 0.001] were also found in the ARISE Club and control group postmeasures. Specifically, students in the HIP Pilot (M = 5.22, SD = 0.22) and HIP Club (M = 5.19, SD = 0.28) demonstrated a significantly higher growth mindset regarding their own general characteristics than did the students in the control group (M = 3.50, SD = 0.16).

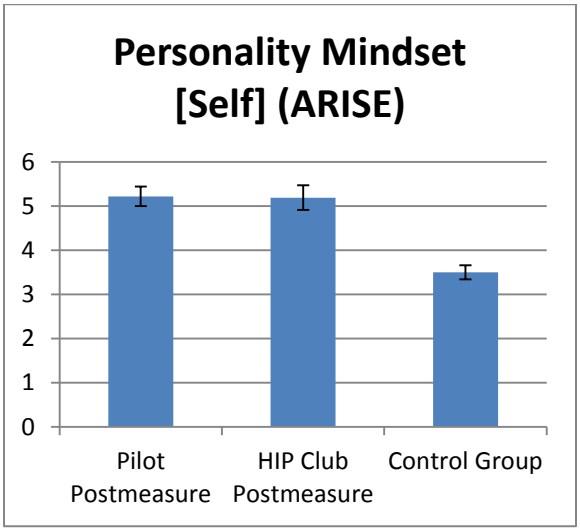

Figure 12: Personality Mindset [Self] (ARISE)

Group Dynamics Mindset

As shown in Figure 13, significant differences [F (1, 24) = 23.83, p < 0.001] were found in the group dynamics mindset of the ARISE pilot and control group postmeasures. Significant differences [F (1, 19) = 20.99, p < 0.001] were also found in the ARISE Club and control group postmeasures. Specifically, students in the HIP Pilot (M = 5.26, SD = 0.20) and HIP Club (M = 4.79, SD = 0.46) demonstrated a significantly higher growth mindset regarding group dynamics than did the students in the control group (M = 3.33, SD = 0.17).

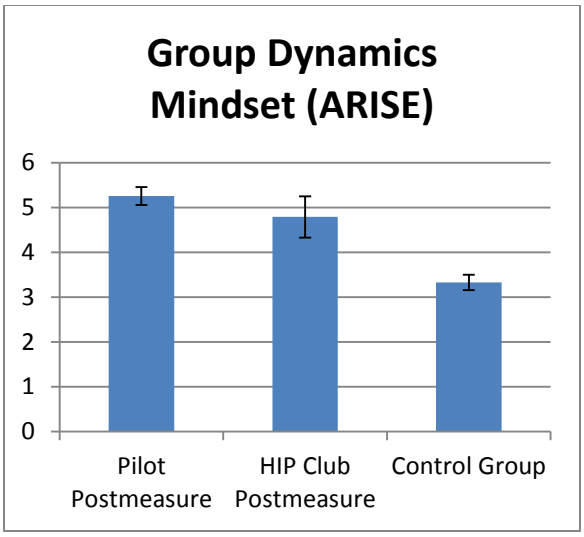

Figure 13: Group Dynamics Mindset (ARISE)

General Situational Awareness

As shown in Figure 14, significant differences [F (1, 24) = 16.10, p = 0.010] were found in the Situational Awareness of the ARISE pilot and control group postmeasures. Significant differences [F (1, 19) = 28.30, p =0.001] were also found in the ARISE Club and control group postmeasures. Specifically, students in the HIP Pilot (M = 5.26, SD = 0.30) and HIP Club (M = 5.33, SD = 0.43) demonstrated a significantly higher level of general Situational Awareness than did the students in the control group (M = 3.99, SD = 0.20).

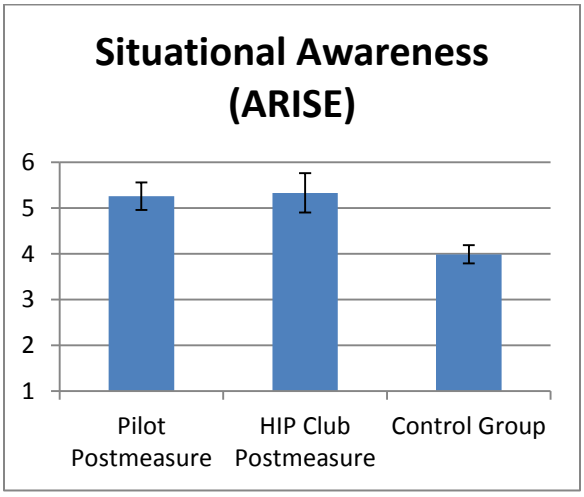

Figure 14: Situational Awareness (ARISE)

Awareness of the Bystander Effect

As shown in Figure 15, no significant differences [F (1, 24) = < 1, p = 0.398] were found the level of awareness regarding the bystander effect in the ARISE pilot and control group postmeasures. Significant differences [F (1, 19) = 5.99, p = 0.025] were found in the ARISE Club and control group postmeasures. Specifically, students in the HIP Club demonstrated a significantly higher level of awareness regarding this phenomenon (M = 4.75, SD = 0.49) than did the students in the in the HIP Pilot (M = 3.69, SD = 0.27) and control group (M = 3.41, SD = 0.20).

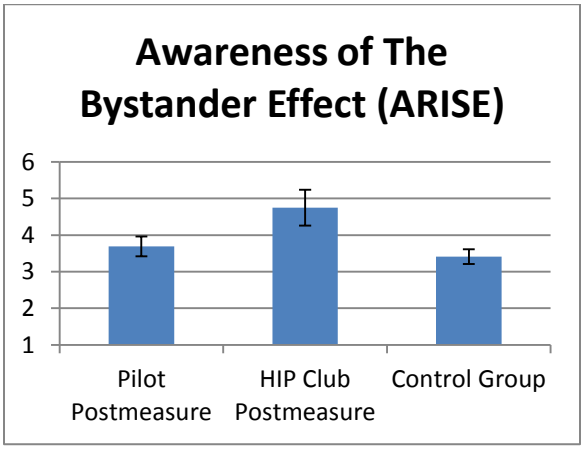

Figure 15: Awareness of the Bystander Effect (ARISE)

Awareness of Conformity

As shown in Figure 16, significant differences [F (1, 24) = 6.01, p = .022] were found the level of awareness regarding conformity in the ARISE pilot and control group postmeasures. Significant differences [F (1, 19) = 5.17, p = 0.035] were also found in the ARISE Club and control group postmeasures. Specifically, students in the HIP Pilot (M = 4.64, SD = 0.21) and HIP Club (M = 4.88, SD = 0.45) demonstrated a significantly higher level of awareness regarding this phenomenon than did the students in the control group (M = 3.73 SD = 0.16).

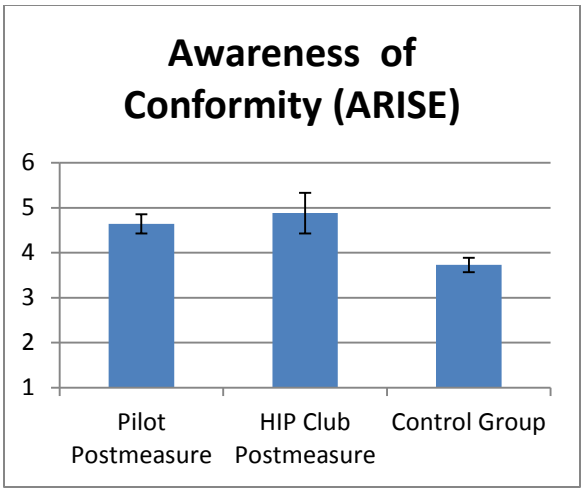

Figure 16: Awareness of Conformity (ARISE)

Awareness of Outgroup Prejudice

As shown in Figure 17, significant differences [F (1, 24) = 8.71, p = 0.007] were found the level of awareness regarding conformity in the ARISE pilot and control group postmeasures. Significant differences [F (1, 19) = 5.91, p = .026] were also found in the ARISE Club and control group postmeasures. Specifically, students in the HIP Pilot (M = 4.25, SD = 0.21) and HIP Club (M = 4.50, SD = 0.39) demonstrated a significantly higher level of awareness regarding this phenomenon than did the students in the control group (M = 3.56, SD = 0.15).

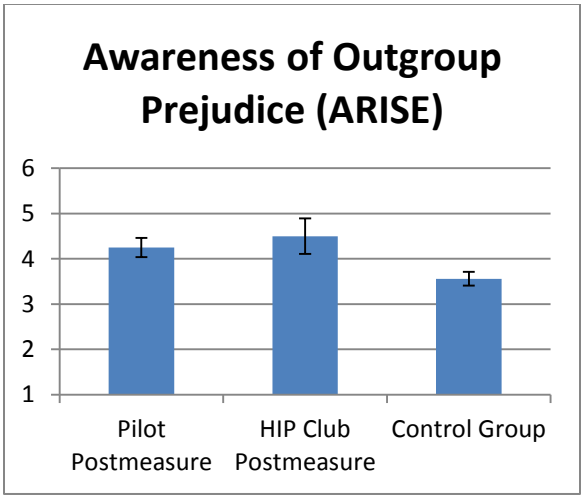

Figure 17: Awareness of Prejudice (ARISE)

The UC Berkeley Pilot

Intelligence Mindset

As shown in Figure 18, nearly significant differences [F (1, 23) = 3.45, p = 0.077] were found between the intelligence mindset of the Berkeley pilot premeasures (M = 4.59, SD = 0.25) and postmeasures (M = 5.25, SD = 0.25).

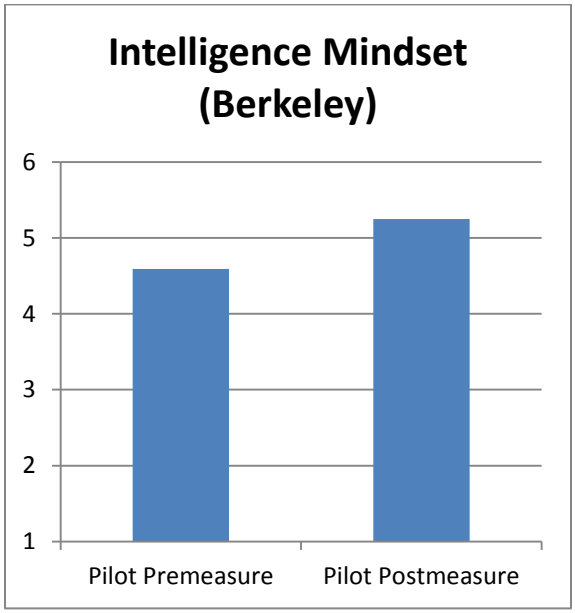

Figure 18: Intelligence Mindset (Berkeley)

Personality Mindset (Others)

As shown in Figure 19, significant differences [F (1, 23) = 5.54, p = 0.028] were found between the personality-others mindset of the Berkeley pilot premeasures (M = 4.34, SD = 0.19) and postmeasures (M = 4.98, SD = 0.19).

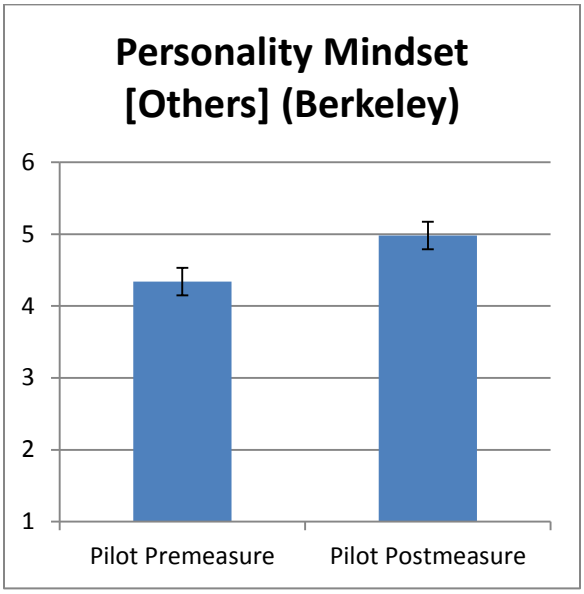

Figure 19: Personality Mindset [Others] (Berkeley)

Personality Mindset (Self)

As shown in Figure 20, significant differences [F (1, 23) = 6.71, p = 0.017] were found between the personality-self mindset of the Berkeley pilot premeasures (M = 3.65, SD = 0.33) and postmeasures (M = 4.85, SD = 0.33).

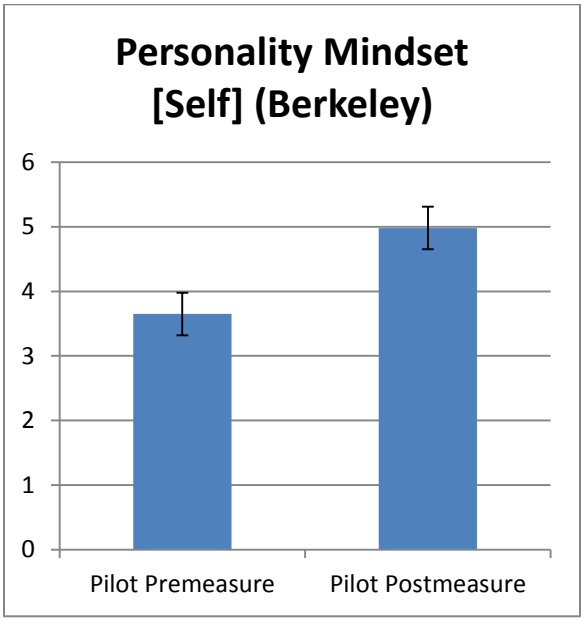

Figure 20: Personality Mindset [Self] (Berkeley)

Group Dynamics Mindset

As shown in Figure 21, significant differences [F (1, 23) = 8.89 p = 0.007] were found between the group dynamics mindset of the Berkeley pilot premeasures (M = 4.89, SD = 0.17) and postmeasures (M = 5.59, SD = 0.17).

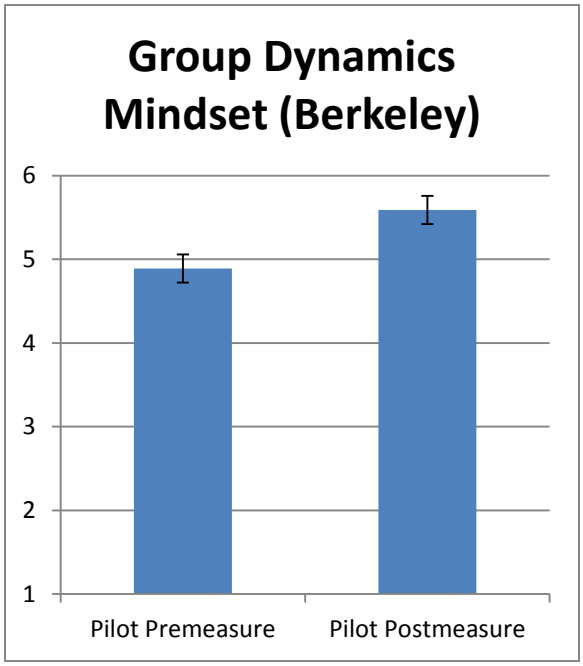

Figure 21: Group Dynamics Mindset (Berkeley)

General Situational Awareness

As shown in Figure 22, no significant differences were found between the general situational awareness of the Berkeley pilot premeasures (M = 5.56, SD = 0.15) and postmeasures (M = 5.67, SD = 0.15).

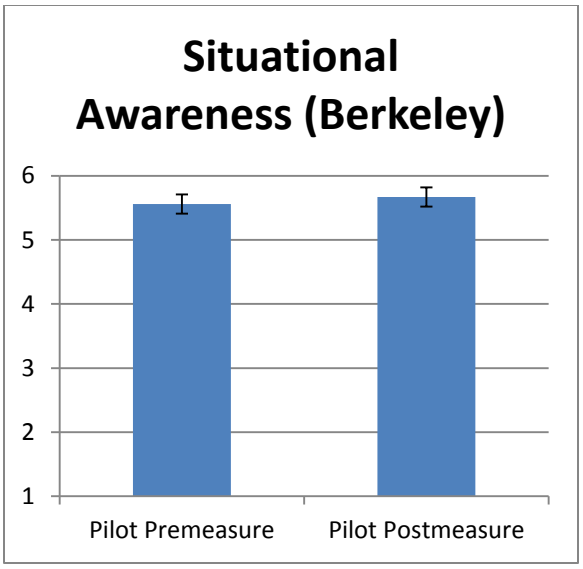

Figure 22: Situational Awareness (Berkeley)

Awareness of the Bystander Effect

As shown in Figure 23, significant differences [F (1, 23) = 4.90 p = 0.037] were found between the awareness of the bystander effect of the Berkeley pilot premeasures (M = 4.88, SD = 0.24) and postmeasures (M = 5.63, SD = 0.24).

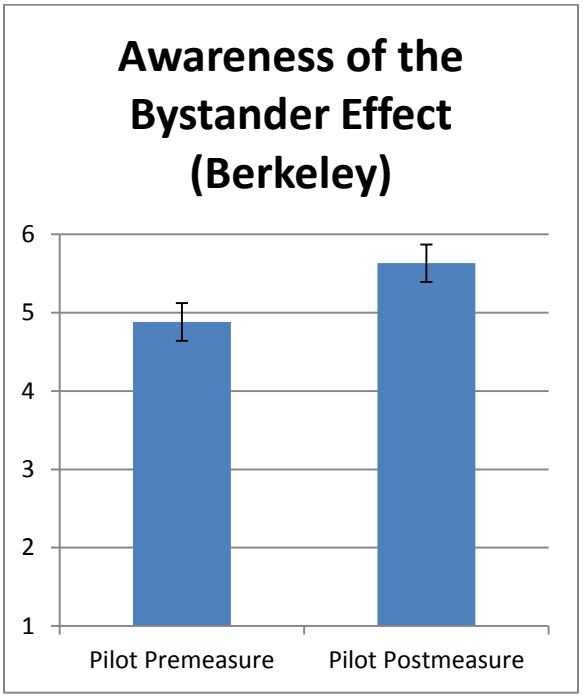

Figure 23: Awareness of the Bystander Effect (Berkeley)

Awareness of Conformity

As shown in Figure 24, significant differences [$F(1, 23) = 5.78$ $p = 0.025$] were found between the awareness of conformity of the Berkeley pilot premeasures ($M = 5.27$, $SD = 0.16$) and postmeasures ($M = 5.81$, $SD = 0.16$).

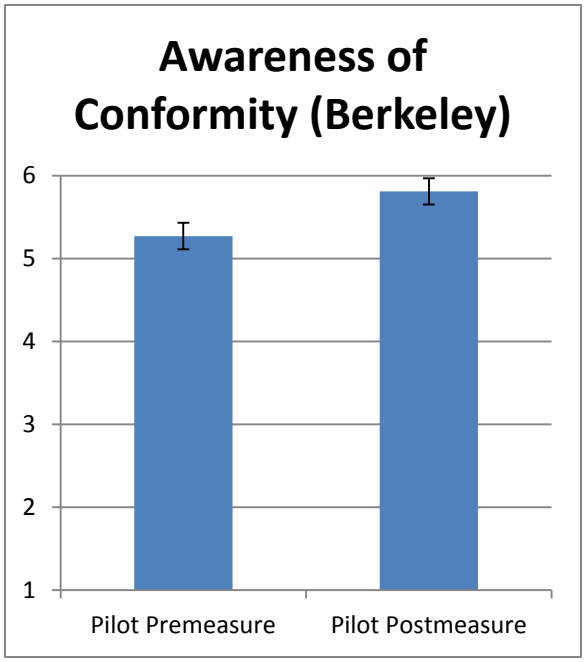

Figure 24: Awareness of Conformity (Berkeley)

Awareness of Outgroup Prejudice

As shown in Figure 25, no significant differences were found between the awareness of outgroup prejudice of the Berkeley pilot premeasures ($M = 5.35$, $SD = 0.15$) and postmeasures ($M = 5.62$, $SD = 0.15$).

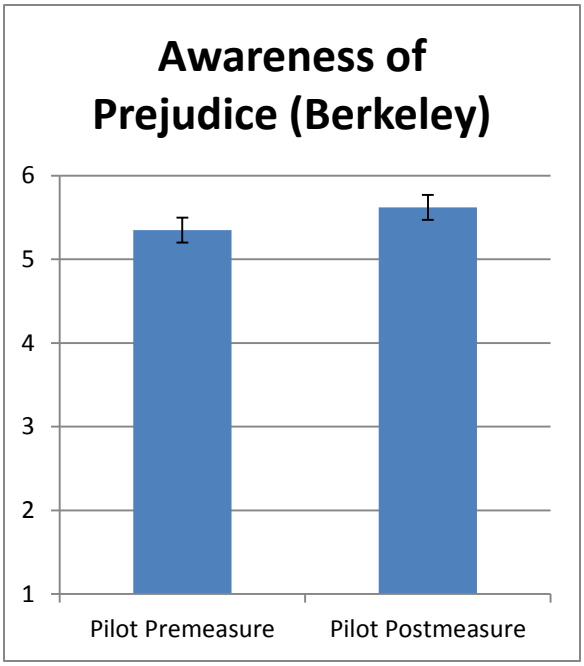

Figure 25: Awareness of Prejudice (Berkeley)

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