Race-based Intelligence Assessment among Southern Adventist University Students

Brienna R. Thompson

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Southern Scholars Honors Program
Senior Project Proposal Information Sheet

Name: Brienna Thompson Date: 8/7/08

Major: Psychology

A significant scholarly project, involving research, writing, or special performance, appropriate to the major in question, is ordinarily completed the senior year. The project is expected to be of sufficiently high quality to warrant a grade of "A" and to justify public presentation.

Under the guidance of a faculty advisor, the Senior Project should be an original work, should use primary sources when applicable, should have a table of contents and works cited page, should give convincing evidence to support a strong thesis, and should use the methods and writing style appropriate to the discipline.

The completed project, to be turned in in duplicate, must be approved by the Honors Committee in consultation with the student's supervising professor four weeks prior to the last day of class for the semester the project is turned in. Please include the advisor's name on the title page. The 2-3 hours of credit for this project is usually done as directed study or in a research class.

NOTE-Senior Project Proposal Due Date: The senior project proposal is due in the Honors Program Director's office two weeks after the beginning of the semester the project will be completed. The proposal should be a detailed description of the Honors Project's purpose and proposed methodology.

Keeping in mind the above senior project description, please describe in as much detail as you can the project you will undertake. Attach a separate sheet of paper.

Signature of faculty advisor: 

Expected date of completion: April, 2008

NOTE: An advisor's final project approval does not guarantee that the Honors Faculty Committee will automatically approve the project. The Honors Faculty Committee has the final vote.

Approval to be signed by faculty advisor when the project is completed:

This project has been completed as planned (date): April, 2008*

This is an "A" project: Yes

This project is worth 2-3 hours of credit: Yes

Advisor's Final Signature: 

Date: 08-07-08

Chair, Honors Committee: 

Date Approved: May, 2009

Dear Advisor,

(1) Please write your final evaluation on the project on the reverse side of this page. Comment on the characteristics that make this "A" quality work.

(2) Please include a paragraph explaining your specific academic credentials for advising this Senior Project.

* Project already completed. Call me at 2768 or
Southern Scholars Program
Project Evaluation
Brienna Thompson

1. Final Evaluation of Project
Brienna Thompson produced an “A” research project. There are seven major criteria on which I based this evaluation:

   1. The topic of racial bias in peer-peer interactions is researchable and has scientific merit since it can be falsified.
   2. Her repeated measures design is amenable to current research methods.
   3. The scope of the study, procedure, and data analyses and final project preparation was achievable given time constraints.
   4. The hypotheses and research questions allowed for symmetry of potential outcomes without bias toward a specific outcome.
   5. Brienna utilized and took advantage to available resources in the process and product of her report: SPSS, tutoring, one-on-one instructor conferencing, using General Psychology participant pool etc.
   6. Final report adhered to required APA style format for manuscripts.
   7. The results of her study contribute to our knowledge in the area of social cognition, cognitive processing, and social psychology.
   8. Brienna evidenced interest in and passion for topic.

2. Academic Credentials for advising Senior Project.
   - Ph.D Psychology with measurement cognate
   - 15+years of teaching research methods and statistics at three universities
   - On-going individual research program in areas of quantitative reasoning, adolescent well-being, effects of intercessory prayer.
Race-based Intelligence Assessment among Southern Adventist University Students
Research Report
by
Brienna R. Thompson

Senior Project-Research Design and Statistics II (PSYC 497A)
Dr. Ruth WilliamsMorris (Faculty Advisor)
April 30, 2008
Abstract

This study investigated levels of racial bias in peer to peer intelligence assessment using a sample of 26 students in a lower division psychology course at Southern Adventist University (SAU). Statistical analyses revealed no significant age, gender, ethnicity, or class standing differences in levels of racial bias and due to the small sample size, many results were inconclusive. Statistical significance was found in the relationship between academic discipline and racial bias. Results also show that college students tend to view both their African American peers and their Caucasian peers with nearly equal levels of bias. In fact, results revealed a generally positive view of peer intelligence for both racial groups.
Race-based Intelligence Assessment among Southern Adventist University Students

Brienna R. Thompson
Southern Adventist University
Race Based Intelligence Assessment among Southern Adventist University Students

Racial bias and stereotyping has long been an issue of intense study for researchers and other professionals. Researchers have studied everything from where racial stereotyping is most prevalent (Carpenter, Zárate, & Garza, 2007; Chang & Demyan, 2007; Edwards & Winfred, 2007; Helms, 2006; Huffcutt & Roth, 1998; Sacco, Scheu, Ryan, & Schmitt, 2003; Tenenbaum & Ruck, 2007; Wolsko, Park, & Judd, 2000) to how it affects the achievement of various racial groups (Fuligni, Witkow, & Garcia, 2005; Keith, 1999; Kranzler, Miller, & Jordan, 1999; Walton & Cohen, 2007), yet research still appears to be relatively unsuccessful in developing explanatory models that can be practically applied to correcting the problems brought about by the presence of racial bias. This is a key disparity that must be researched until an applicable solution can be discovered.

The following review of previous research addresses the research literature of racial bias and prejudice. These articles addressed many aspects and occurrences of racial bias. Some discussed racial bias within testing and education. Others addressed attitudes and speech toward racial minorities in relation to prejudice and prejudice reduction and/or reinforcement techniques among groups such as college students, interviewers, and teachers. One study approached the issue of individual ethnic identity and scholastic attitudes and achievement.

Racial Bias in Testing

Two studies reviewed discussed issues of racial and cultural fairness in testing, particularly standardized testing (Edwards & Winfred, 2007; Helms, 2006). Edwards and Winfred (2007) address the issue of ethnic and cultural insensitivity within typical assessments of knowledge or achievement by demonstrating that notable differences in scores exist between different ethnic groups, often putting minority groups at a disadvantage. The authors also note
that great care should be taken to account for and eliminate these confounding aspects of testing which produce inaccurate and unfair perceptions of many minority groups. Likewise, Helms (2006) asserts that testing dynamics that could be dependent on cultural or racial socialization cannot be universally used to accurately assess levels of achievement between various ethnic groups and further introduces models for eliminating such confounding dynamics from testing altogether.

Achievement among Racial Minorities

Several studies described issues of achievement as related to ethnic and racial diversity (Fuligni, Witkow, & Garcia, 2005; Keith, 1999; Kranzler, Miller, & Jordan, 1999; Walton & Cohen, 2007). Kranzler, Miller, & Jordan (1999) discuss a study assessing differences in achievement in reading skills based on reading curriculum measures that are used to determine whether students have special education needs. They discovered that scores differed both across race and gender and that the levels of differentiation were notably different for each grade level they examined. The authors concluded, based on the multiple factors involved in creating score differences in reading comprehension assessment, that curriculum-based measurements are not accurate indicators of actual reading comprehension, skills, or knowledge and therefore should be reconsidered as screening tools for special education placement.

Conversely, Keith (1999) asserts that specific skills and abilities are key to student achievement across the board and that improper evaluation methods play no role in differing levels of academic achievement. He holds rather, that the specific skills and abilities that students possess determine their levels of scholastic achievement and that the importance and magnitude of these skills is the same for all ethnic groups, but that differences are seen in the varying levels of education.
Walton and Cohen (2007) focused on achievement from a different perspective. They hold that a sense of social connectedness is the basis for achievement or non-achievement, thus concluding that the stigmatization of various ethnic groups could account for many of the disparities in achievement seen among these groups. Their findings intimate that if an individual, particularly one belonging to a negatively stigmatized ethnic group, has a low sense of belonging and social connectedness that their achievement will, therefore, be low as well and that the opposite is true for those individuals (those belonging to a non-stigmatized ethnic group) who possess a high sense of belonging.

Fuligni, Witkow, and Garcia (2005) propose that nearly the opposite is true. They claim that a person's mere identification with any particular ethnic minority group had more of an influence on their academic achievement than the stigmatizations assigned to the ethnic groups. They went further by implying that an individual's ethnic identification actually gave them more motivation to achieve at a level similar to that of individuals from non-minority groups.

**Racial Bias in Interviewing**

Two of the studies reviewed discussed the presence of racial bias in the interviewing process (Huffcutt & Roth, 1998; Sacco, Scheu, Ryan, & Schmitt, 2003). Both also reported similar results. Sacco, Scheu, Ryan, and Schmitt (2003) proposed that if highly structured interviewing processes are used in college admission interviews that racial bias and mismatch between the interview and the applicant should not be evident. Huffcutt and Roth (1998) reported similar findings, given the use of highly structured interviewing processes, for employment interviews. They also went further to note that racial disparities are more evident in ability tests for employment than in the actual interview process.
Presence of Racial Bias

Several studies described attitudes and prejudices held toward various ethnic groups (Carpenter, Zárate, & Garza, 2007; Chang & Demyan, 2007; Tenenbaum & Ruck, 2007; Wolsko, Park, & Judd, 2000). Both Tenenbaum and Ruck (2007) and Chang and Demyan (2007) discuss the expectations of teachers for their students based on students’ ethnic identities. They note that teachers hold higher expectations for European and Asian students than for Latino and African American students. Additionally, Carpenter, Zarate, and Garza (2007) note that taking some steps to address common racial focuses that produce prejudice can actually decrease stereotypical racial attitudes. Similarly, Wolsko, Park, and Judd (2000) produced a study that assessed the impact of emphasis being placed on not adhering to typical social categorization on the basis of race, but was unique in the fact that it focused exclusively on college students noting, as in the previous study, that social categorization encourages prejudice and therefore that process of categorization must be deemphasized.

Most of the studies reviewed address the presence of bias within testing, academic achievement, education, and interviewing. Some also broached the issue of generally held racial bias and prejudice. Only one study (Wolsko, Park, & Judd, 2000) discussed racial prejudice among college students. Most of these studies involved assessment of racial bias in an authority/subordinate type of relationship. While only one (Wolsko, Park, & Judd, 2000) actually used a peer to peer relationship assessment, yet they failed address the issue of prejudged intelligence and achievement potential through the lens of racial bias.

The research studies reviewed cover a wide selection of issues pertaining to the topic of racial bias and intelligence assessment. It also brought out some very pertinent information regarding various aspects of racial bias and measurement. Most importantly though, it helped to
underscore the areas of racial bias research that still need to be studied further and made key implications as to the direction that research should go.

In reviewing the research, it was observed that there is very little that deals with the issue of racial bias and intelligence assessment among peers, and thus an important aspect of racial bias research has been neglected. The purpose of this study was to evaluate how students at Southern Adventist University (SAU) assess the intelligence of their own peers in order to obtain a clearer understanding of what or if racial biases exist.

**Definition of Terms**

Four terms used in this study are operationally defined:

1. Ethnicity is defined as participants’ self report of their ethnicity as Caucasian, African American, Hispanic, Asian, other, or prefer not to disclose on the Thompson Social Inventory (TSI) instrument (see appendix).

2. Class standing is defined as participants self-report of their academic standing as freshman, sophomore, junior, or senior on the TSI instrument (see appendix).

3. Academic discipline is defined as participants’ self-report of their academic major within the categories of science, healthcare, business, art, history/English/modern languages, technology/technical, education, or other on the TSI instrument (see appendix).

4. Racial bias is defined as participants levels of racial bias based on their scores on the TSI (see appendix for copy of instrument).

**Null Hypotheses**

Three null hypotheses were tested in this study:

1. There will be no difference in levels of racial bias as a factor of age.
2. There will be no difference in levels of racial bias as a factor of gender.
3. There will be no difference in levels of racial bias as a factor of ethnicity.

Research Hypotheses

Three research hypotheses guided this study:
1. There will be age differences in levels of racial bias among college students.
2. There will be gender differences in levels of racial bias.
3. There will be ethnic differences in levels of racial bias.

Research Questions

Three research questions guided this study:
1. Are there ethnic differences in participants' levels of racial bias?
2. Is there a relationship between participants' class standing and their levels of racial bias?
3. Are there academic discipline differences in participants' levels of racial bias?

Method

Participants

Participants in this study were students at Southern Adventist University (SAU), both male and female, between the ages of 18 and 30 (\(M = 20.77, SD = 3.37\)) to form a sample of convenience of 26 students. This sample consisted of students currently enrolled in an entry level psychology at SAU. The sample was comprised of 12 males (46%) and 14 female (54%) participants. The majority of participants (21 or 81%) identified themselves as Caucasian; only three (11%) were identified as African American, and only one (4%) identified as Hispanic and one (4%) as Asian (see figure 1). Participants' class standing was more evenly distributed with 11 freshman (42%), 11 sophomores (42%), two juniors (8%), and two seniors (8%). Likewise, 6
participants (23%) identified their major as science, 5 (19%) as healthcare, 4 (15%) as business, two (8%) as art, two (8%) as either history, English, or language, one (4%) as technology, and 6 (23%) identified their major as being in another category (see figure 2). Participants were treated in accordance with the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2002).

**Materials**

The Thompson Social Inventory (TSI), created by the researcher, was used to assess the levels of racial bias possessed by participants in the study. Due to a lack of previously validated measuring instruments, the TSI was created by the researcher for the purposes of this study and was likewise piloted in this study therefore the validity and reliability have yet to be verified through use in multiple studies.

The TSI consists of 35 items total divided into two separate sections (demographic variables and bias variables) and is designed to address each of the seven variables being measured in this study: age, gender, ethnicity, class standing, academic discipline, and racial bias. Section 1 consists of the first five items of the TSI and assesses the demographic variables (age, gender, ethnicity, class standing, and academic discipline) of each participant and are based on participants’ self report of age or belonging to one of the demographic descriptors provided on the inventory (e.g. gender: male or female).

The second section of the TSI consists of two subsections of 15 items each and is accompanied by pictures of two average looking individuals, one Caucasian and one African American. Both 15 item subsections are identical so that one subsection will accompany each of the individuals shown to participants. The items in section 2 are statements to which participants respond when shown each accompanying picture. These items are based on a Lichert scale and
are designed to assess participants’ levels of racial bias toward each individual shown in the pictures (e.g. This individual is intelligent. 1 2 3 4 5). Scores for each subsection of Section 2 can range from 10 to 50, with lower scores indicating greater levels of racial bias and higher scores indicating lower levels of racial bias. A scoring guide describing how each item of the TSI is coded for statistical analysis is used by the researcher to aid in analyzing the data obtained on the TSI. A pen or pencil with which to complete the TSI may also be provided if necessary (see appendix for copy of instrument).

**Design and Procedure**

This study used a within-subjects repeated measures design. The researcher used participants from an entry level psychology course approved by the instructor. Students were asked if they would be willing to participate in a study. All students in the class consented to participate and were then given an informed consent form (see appendix) which was read out loud to the class. Then they were asked to sign the form and hand it back to the researcher to demonstrate their willing participation. Each participant was handed a copy of the TSI (see appendix) and were asked to fill out section one upon receipt of the measure. When all participants had completed section one, they were shown a series of two pictures (one of an African American and one of a Caucasian) (see appendix) and were asked to rate each individual pictured based on the measures outlined in the second section of the TSI.

Upon completion, the TSIs were returned to the researcher and reviewed. All participants in the study fell within the 18 to 30 year age range, therefore none of the measures had to be discarded and all data was statistically analyzed and used in determining the results of the study.
Data Analysis

The data obtained from the TSI included separate scores for each of the five demographic variables being studied and two scores for section two of the TSI (one for participants’ bias towards the African American individual and one for their bias towards the Caucasian individual). These scores were coded and entered into SPSS, the research hypotheses and questions were analyzed using a two-tailed analysis of variance (ANOVA) as well as Pearson’s product moment correlation in which each of the demographic variables was paired with scores from both sets of scores obtained from section two of the TSI. An alpha level $\alpha = .05$ was used for all analyses.

Results

Descriptive Statistics

The mean age of participants in this study was 20.77 with a standard deviation of 3.37 years. The mean age for male participants in this study was 21.33 with a standard deviation of 3.50 and the mean for female participants was 20.29 with a standard deviation of 3.32.

Age Differences

The null hypothesis that there is no relationship between levels of racial bias and age was tested using Pearson’s product moment correlation coefficient. Results show a positive but mutually non-existent linear relationship between age and racial bias ($r_{26} = .06, p = .78$). There was also a positive but insignificant relationship between age and participants’ scores for the Caucasian individual ($r_{26} = .10, p = .63$). Therefore the null hypothesis failed to be rejected and results were inconclusive.
Gender Differences

The null hypothesis that there would be no gender differences in levels of racial bias was tested using a two-tailed independent samples t-test. Male participants had a mean score of $M = 36.92$ ($SD = 6.36$) for the African American individual, while female participants had a mean of $M = 39.14$ ($SD = 8.96$). For the Caucasian individual, male participants had a mean score of $M = 36.33$ ($SD = 3.94$) and female participants had a mean of $M = 35.14$ ($SD = 6.95$). Analysis revealed a value of $t = -.72$ ($p = .48$) for gender differences in bias scores for the African American individual and $t = .53$ ($p = .61$) for gender differences in bias scores for the Caucasian individual. Therefore the null hypothesis failed to be rejected and results were inconclusive.

Ethnic Differences

A two-tailed independent samples t-test was used to test the null hypothesis that there are no ethnic differences in levels of racial bias. Due to the fact that there were less than five participants in some of the ethnic groups and the fact that t-tests only accommodate two levels, ethnicity was narrowed from four categories to two, Caucasian and other, in order to allow for statistical analysis. Caucasian participants had a mean score of $M = 38.33$ ($SD = 7.72$) toward the African American individual and other participants had a mean score $M = 37.2$ ($SD = 8.98$). Similarly, Caucasian participants had a mean score of $M = 35.19$ ($SD = 6$) toward the Caucasian individual and other participants had a mean $M = 37.8$, ($SD = 3.83$). T-test results revealed no ethnic differences in levels of racial bias toward the African American individual ($t = .29, p = .78$). Results also showed no ethnic difference in levels of bias toward the Caucasian individual ($t = -.93, p = .37$). Therefore, the null hypothesis failed to be rejected and results were inconclusive.
Class Standing Differences

A one way analysis of variance (ANOVA), was conducted to test class standing differences in levels of racial bias (see table 1 for means and standard deviations). Analysis of participants’ levels of bias toward the African American individual revealed $f(3,22) = .47, p = .33$ for freshmen, $f(3,22) = .47, p = .99$ for sophomores, $f(3,22) = .47, p = .42$ for juniors, and $f(3,22) = .47, p = .42$ for seniors. Participants’ levels of bias toward the Caucasian individual were similar $f(3,22) = .42, p = .33$ for freshmen, $f(3,22) = .42, p = .95$ for sophomores, $f(3,22) = .42, p = .78$ for juniors, and $f(3,22) = .42, p = .34$ for seniors. None of these results proved statistically significant and there for the null hypothesis failed to be rejected and results were inconclusive.

Academic Discipline Differences

A one-way analysis of variance (ANOVA) was used to test the null hypothesis that there are no academic discipline differences in levels of racial bias. As with ethnic differences, some academic discipline categories contained fewer than five participants and therefore groups were combined to form four categories, science, healthcare, arts/humanities, and other, in order to perform statistical analysis. Analysis revealed only one significant difference in levels of racial bias. There was a significant amount of variation between the healthcare and other categories (refer to table 2 for means and standard deviations of all disciplines). Participants in the other category tended to score significantly higher ($M = 39.5, SD = 4.64$) on the TSI and therefore show more positive levels of racial bias than participants in the healthcare ($M = 31.4, SD = 7.5$) category ($f(3, 22) = 2.15, p = .02$).

Other Interesting Findings

When nearly all results proved insignificant, a two-tailed paired samples $t$-test was used to compare the differences between the two separate scores obtained from section two of the TSI.
Results showed that participants’ mean score for bias toward the African American individual $M = 38.12$, $SD = 7.80$, and toward the Caucasian individual, $M = 35.69$, $SD = 5.68$ (see also table 3). T-test results revealed $t = 1.90, p = .07$ when comparing the mean levels of bias toward the two individuals, therefore it was concluded that overall, participants in this study showed no significant differences in levels of bias toward either the African American individual or the Caucasian individual. Furthermore, the means of 38.12 and 35.69 suggest that participants in this study showed more positive bias toward both individuals overall when considering that a negative bias would have been scores around 10 and positive bias would have been scores closer to 50. Rather than finding varied levels of bias within different demographic groups, it was found that participants in general viewed both their African American and their Caucasian peers with an overall positive bias.

Conclusions

This study revealed that there were no significant differences between participants’ various demographic descriptors and their levels of racial bias toward either an African American or a Caucasian individual, except in comparison between the healthcare discipline category and other discipline category. Further analysis revealed that overall, participants’ scores on the bias inventories for each individual were not significantly different and further that this sample of participants tended to assess their peers’ intelligence with a generally positive bias.

Discussion

The purpose of this study was to evaluate how students at Southern Adventist University (SAU) assess the intelligence of their own peers in order to obtain a clearer understanding of what or if racial biases exist. This study researched age, gender, ethnic, class standing, and
academic discipline differences in participants’ levels of racial bias and found that overall, there appear to be no significant demographic differences in participants’ levels of racial bias and that their levels of bias toward either an African American individual or a Caucasian individual were not significantly different. Although it may be reassuring to find that SAU students are not racially biased, there are also several other possible explanations for the findings of this study. These findings could be due to the fact that SAU students are not racially biased in their assessments of their peers’ intelligence. Another possible explanation may be that the measure, the TSI, was derived solely for the purposes of this study and therefore lacked validity and reliability and perhaps did not measure accurately participants’ actual levels of bias. The small sample size could have inhibited the results as well.

Several limitations should be noted in this study. First and most importantly, time constraints made it very difficult to lend complete and comprehensive treatment to this study, considering there were only two weeks allowed for gathering and analyzing data and writing results of the study. Also, due to the time constraints of the class that was used as a sample for this study, it was not possible to use proper counterbalancing procedures in order to account for possible ordering effects within the results of this study. The use of images as stimulus for measuring racial bias may have slightly skewed the results of the study. Though no past research was found regarding the use of images versus real people, the slight differences in the photographs used (e.g. one person wearing glasses and the other not and one person leaning slightly forward and the other not) may have had a slightly confounding effect on the data gathered. Another serious limitation is the number of participants obtained as a sample for this study. 26 participants is a small number on which to base research and it does not lend itself
well to accurate statistical analysis and prediction, thus many results were inconclusive and could perhaps be better understood through a repeated study using a larger sample size.

In terms of past research, this study is quite different. It looked mainly at peer to peer relationships and assessments while previous research focused on superior to inferior assessments. Also, most past research has revealed marked demographic differences in racial bias, but this study found none at all. None of the statistical analyses performed provided any significant results that would imply the presence of strong racial bias within the sample of participants. Although superiors might generally be racially biased towards their inferiors, it appears that the peers in this sample group interpret the intelligence of their racially diverse peer groups nearly equally.

This study is important in that it offers a unique outlook on the topic of racial bias assessment. It demonstrates the importance of looking at the many aspects and types of racial bias instead of just focusing on traditionally analyzed relationships (i.e. superior to inferior) for data and information about the presence and strength of racial bias. Further, it draws into question whether racial bias is really as prevalent in everyday society as some studies would make it appear.

Future research might center more on analyzing various types of relationships when assessing racial bias. It might focus more specifically on racial bias among peer groups and investigate differences in results between levels of bias within different relationships. Also, reliable and valid measures better suited to assessing various types relationships should be developed in order to lend a more dependable treatment to this subject.
References


Author’s Note

Brienna R. Thompson, Department of Education and Psychology, Southern Adventist University.

Correspondence concerning this study should be addressed to Brienna Thompson via e-mail at bmatter@southern.edu or to Dr. Ruth WilliamsMorris via e-mail at wmsmorris@southern.edu.
### Table 1

Means and Standard Deviations for Bias Scores by Class Standing

<table>
<thead>
<tr>
<th>Class Standing</th>
<th>Individual 1</th>
<th></th>
<th>Individual 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Freshman</td>
<td>38.82</td>
<td>9.37</td>
<td>37.18</td>
<td>7.69</td>
</tr>
<tr>
<td>Sophomore</td>
<td>38.82</td>
<td>5.58</td>
<td>34.64</td>
<td>3.91</td>
</tr>
<tr>
<td>Junior</td>
<td>36.5</td>
<td>6.36</td>
<td>35</td>
<td>4.24</td>
</tr>
<tr>
<td>Senior</td>
<td>32</td>
<td>14.14</td>
<td>34</td>
<td>1.41</td>
</tr>
</tbody>
</table>

*Table 3 shows means and standard deviations for levels of racial bias toward an African American and a Caucasian individual based on participants’ class standing (n = 26).*

### Table 2

Means and Standard Deviations for Bias by Academic Discipline

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Individual 1</th>
<th></th>
<th>Individual 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Science</td>
<td>40.17</td>
<td>6.46</td>
<td>35</td>
<td>5.37</td>
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<tr>
<td>Healthcare</td>
<td>34</td>
<td>12.33</td>
<td>31.4*</td>
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<tr>
<td>Arts</td>
<td>36.44</td>
<td>7.4</td>
<td>36</td>
<td>4.3</td>
</tr>
<tr>
<td>Humanities</td>
<td>42</td>
<td>2.83</td>
<td>39.5*</td>
<td>4.64</td>
</tr>
</tbody>
</table>

*Table 4 shows means and standard deviations for levels of racial bias toward an African American and a Caucasian individual based on participants’ academic discipline (n = 26).*
Table 3

Mean Differences in Bias Levels

<table>
<thead>
<tr>
<th>Score</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual 1</td>
<td>38.12</td>
<td>7.8</td>
</tr>
<tr>
<td>Individual 2</td>
<td>35.69</td>
<td>5.68</td>
</tr>
</tbody>
</table>

Table 2 shows means of bias scores toward individuals 1 and 2 and reveal no significant differences ($p=.06$)
Figure Captions

Figure 1 shows the distribution of participants across ethnic categories for $n = 26$.

Figure 2 shows distribution of participants across academic discipline categories for $n = 26$. 
Figure 1

Number of Participants (n = 26)

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>20</td>
</tr>
<tr>
<td>African American</td>
<td>3</td>
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<tr>
<td>Hispanic</td>
<td>1</td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 2

Number of Participants (n = 26)

<table>
<thead>
<tr>
<th>Academic Discipline</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>6</td>
</tr>
<tr>
<td>Healthcare</td>
<td>5</td>
</tr>
<tr>
<td>Business</td>
<td>3</td>
</tr>
<tr>
<td>Art</td>
<td>2</td>
</tr>
<tr>
<td>Hist/Eng/Lang</td>
<td>2</td>
</tr>
<tr>
<td>Technology</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
</tbody>
</table>
Appendix
INFORMED CONSENT FORM

My name is Brienna Thompson and I am a student in Research Design and Statistics II this semester. I am performing a research study as a requirement of that class.

You are being asked to participate in a study investigating social assessment on the campus of Southern Adventist University.

I am interested in determining how college-age students assess their peers in different ways. It is anticipated that the results of this study will be useful in gaining a greater understanding of how college students view their peers in different ways.

There is a reasonable amount of research available on the topic of peer assessment, but very little of this research focuses exclusively on college students. Your participation may help to add to this limited amount of research regarding college students and peer assessment. It may also help to clarify some of the common views held by college students on this topic. Although you may not directly benefit from this research, results from this study may be useful for future students and future research.

If you agree to participate in this study, you will complete a short survey, the Thompson Social Inventory (TSI). No personally identifiable information will be requested from you in this survey. You will not put your name on anything except for this form, which requires your signature. No attempts will be made to link your name with any of the information gathered in this study; only group results will be analyzed and reported because personal responses are not of interest.

In the first section of the TSI, you will be asked to give information in five different categories. The second section will consist of two groups of 15 questions each regarding intelligence assessment which you will respond to on a scale of 1 to 5. This part of the study should require only about 15 minutes of your time.

Although all studies have some degree of risk, the potential in this investigation is quite minimal, no more than you would encounter in a typical classroom setting. All performance is anonymous and you will not incur any costs as a result of your participation in this study.

Your participation is voluntary. If at any time during the study you wish to withdraw your participation, you are free to do so without prejudice.

If you have any questions prior to your participation or at any time during the study, please do not hesitate to ask the researcher administering the study for clarification.

AUTHORIZATION: I have read the above and understand the nature of this study. I understand that by agreeing to participate in this study I have not waived any legal or human right and that I may contact the Research Instructor at Southern Adventist University, Dr. Ruth WilliamsMorris at (423) 236-2758 at any time. I agree to participate in this study. I understand that I may refuse to participate or I may withdraw from the study at any time without prejudice.

Please sign on the following line to confirm that you have read and understand the previous information regarding this study and willingly consent to give your participation.

Participant's Signature: ________________________________  Date: __________

Researcher's Signature: ________________________________  Date: __________
Thompson Social Inventory (TSI)

Thank you for your participation in this study on social attitudes. Please, to insure confidentiality, do NOT write your name on any part of this survey. When you have completed the survey, please return it and any borrowed writing utensils to the researcher administering the survey.

Section 1:
Please write your age in the space provided, then, in the remaining parts of section 1, place a check mark in the boxes of the options that best describe you.

1. Age_____
2. Gender: □ Male □ Female
3. Ethnicity: □ Caucasian/White □ African American/Black □ Hispanic/Latino □ Asian □ Other □ Prefer not to disclose
4. Class Standing: □ Freshman □ Sophomore □ Junior □ Senior
5. Academic Discipline: □ Science □ Healthcare □ Business □ Art □ History/English/Modern Languages □ Technology/Technical □ Other

Section 2:
You will be shown pictures of 2 different individuals. For each picture please respond to the statements on the page of the TSI that corresponds to the title accompanying each picture. Please read each statement carefully and circle the number that best corresponds to your personal views. Please respond to all statements as quickly as possible based on your first impressions.

PLEASE TURN TO NEXT PAGE TO CONTINUE
Individual #1

Responded to the following questions based on a scale of 1 to 5 as follows:
1-Strongly disagree
2-Disagree
3-Not sure
4-Agree
5-Strongly agree

1. This individual is **intelligent**.  
   1 2 3 4 5
2. This individual is **successful**.  
   1 2 3 4 5
3. This individual is **attractive**.  
   1 2 3 4 5
4. This individual is **hard working**.  
   1 2 3 4 5
5. This individual is **honest**.  
   1 2 3 4 5
6. This individual is **wealthy**.  
   1 2 3 4 5
7. This individual is **trustworthy**.  
   1 2 3 4 5
8. This individual is **dishonest**.  
   1 2 3 4 5
9. This individual is **kind**.  
   1 2 3 4 5
10. This individual is **lazy**.  
    1 2 3 4 5
11. This individual is **respectable**.  
    1 2 3 4 5
12. This individual is **well educated**.  
    1 2 3 4 5
13. This individual is a **professional**.  
    1 2 3 4 5
14. This individual is **unintelligent**.  
    1 2 3 4 5
15. This individual is **valuable**.  
    1 2 3 4 5
Individual #2

Responded to the following questions based on a scale of 1 to 5 as follows:
1-Strongly disagree
2-Disagree
3-Not sure
4-Agree
5-Strongly agree

1. This individual is intelligent. 1 2 3 4 5
2. This individual is successful. 1 2 3 4 5
3. This individual is attractive. 1 2 3 4 5
4. This individual is hard working. 1 2 3 4 5
5. This individual is honest. 1 2 3 4 5
6. This individual is wealthy. 1 2 3 4 5
7. This individual is trustworthy. 1 2 3 4 5
8. This individual is dishonest. 1 2 3 4 5
9. This individual is kind. 1 2 3 4 5
10. This individual is lazy. 1 2 3 4 5
11. This individual is respectable. 1 2 3 4 5
12. This individual is well educated. 1 2 3 4 5
13. This individual is a professional. 1 2 3 4 5
14. This individual is unintelligent. 1 2 3 4 5
15. This individual is valuable. 1 2 3 4 5
Key to TSI

Age: Participants report of age (must be between 18 and 25).
Gender: Male=1, Female=2
Ethnicity: Cauc/White=1, Afr Am/Black=2, His/Latino=3, Asian=4, Other=5, PNTD=6
Class Standing: Freshman=1, Sophomore=2, Junior=3, Senior=4
Academic Discipline: Science=1, Healthcare=2, Business=3, Art=4, His/Eng/Lan=5, Tech=6, Other=7

The questions in the second section of the TSI for each individual are answered on a scale measurement and are coded as follows:

1-Strongly disagree
2-Disagree
3-Not sure
4-Agree
5-Strongly agree

Questions 1, 2, 4, 5, 6, 8R, 10R, 12, 13, and 14R measure levels of racial bias.
Questions 3, 7, 9, 11, and 15 will be omitted from measurement because they are filler items and are not necessary in assessing levels of racial bias.
Scores for each section can range from 10 to 50 with lower scores reflecting more negative racial bias and higher scores reflecting more positive racial bias.