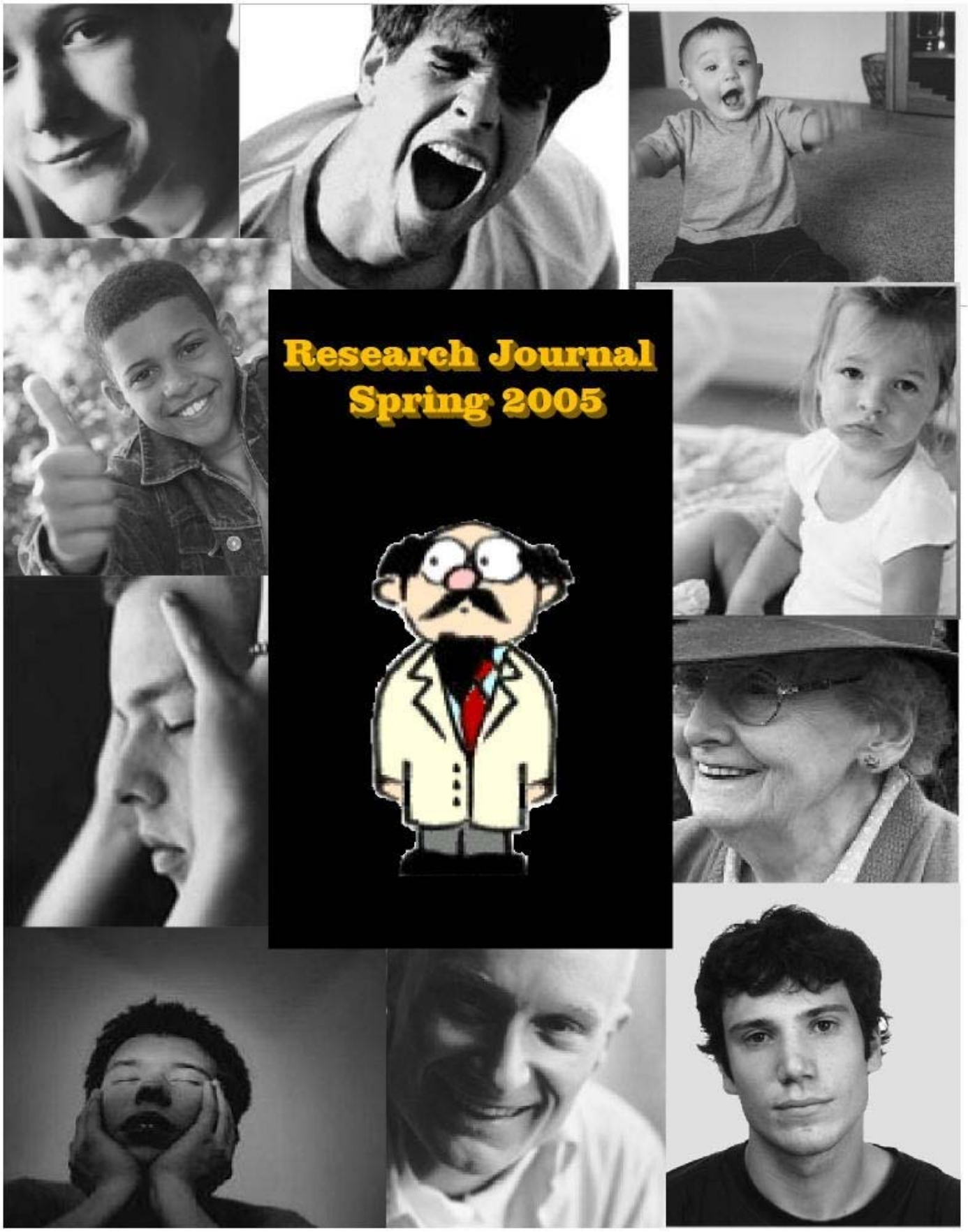

Cover Design: Tim Panek

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About the Journal

It is with great pride that we present this third issue of the Research Methods Journal. The students in this year's class had to jump over several additional hurdles compared to students in past semesters in order to get to this point.

First, the Lindenwood University Institutional Review Board was established since the last publication of the Research Methods Journal. Hence, the students had to have their research proposals in good shape, ready to submit to the board within the first three weeks of the semester. Furthermore, we had the highest enrollment in this course in recent years so students elected to work either in groups of up to three or alone. Even still, 16 different projects were being conducted by the students enrolled in this class and many of them had to compete with each other for access to adequate research space as well as participants through the Human Subject Pool. Finally, because of the unprecedented number of seniors in this year's class, the deadlines for significant coursework such as the project presentations and the final revised paper had to be pushed up, which gave the students even less time to complete their work.

Despite all of these constraints, the students of this year's class did an outstanding job at meeting some very high expectations both as successful researchers as well as helpful reviewers of their fellow-classmates' manuscripts. At this time, I would like to congratulate my students for all of their fine accomplishments and only hope that they are as proud of their work as I am.

On behalf of the class, I would like to thank Tim Panek for taking the time to design the cover of this year's journal and our course tutor, Katy Black, for her competent tutoring services as well as for playing a major role as co-editor for this journal.

Finally, if you are interested in finding out more information about any of the studies, or would like to borrow ideas from any of these projects, please contact me so that we may consult with the original author(s).

Dr. Michiko Nohara-LeClair
Course Professor and Co-Editor of Journal

Consumer Perception and Food Packaging

Dana Agnew, Patti Nibert, and Shawna Wells

Lindenwood University

Color in food packaging may influence consumer perception of various factors of health of the food product. If lighter colored food packages are seen as healthy, people who are concerned about health will purchase these products. In this study, fifty participants were asked to answer questions about food products based on the packaging color. There were four trials of products, all of which contained three packages that were colored red, green, or light blue. Ultimately, products that were lighter in color, i.e. light blue, were indicated as being the healthier products.

The purpose of this study was to determine whether the colors used in food packaging alter consumer's conceptions about food products. Previous researchers have shown that specific colors may affect consumer's expectations of the food or drink product. According to this research, changing the color of the package could change the desirability of a product. In a study conducted by Tom, Barnett, Lew and Selmants (1987), color was found to indicate such things as temperature, weight, and flavor of food or drink. Consumers also used color cues to identify the brands of products. The conclusion of this study was that marketers should consider the importance of color-choice in the packaging of their food products in order to promote the sale of their products.

According to a study done by Kaya and Epps (2004), certain colors have been associated with different meanings. For example, black is the color of power, white of

purity and cleanliness, red the color of energy, blue exudes calmness and green is the color of nature, growth and money. Putting this color psychology to use, marketers can send a positive or a negative message about their product by the color used in their packaging.

An example of this phenomenon was cited in a paper written by Gorn, Chattopadhyay, Yi and Dahl (1997) in which they stated that although it is known that color choice is important, managers do not always take that into account. They cite an example in which the color of the packaging used for Nabisco's Honeycomb Graham Snacks was blamed for the poor sales of the product and that the company changed the coloring of the packaging and re-launched the product with greater success.

In a study conducted by Alley and Alley (1998), there was some evidence that the color red may increase the perceived sweetness of a product whereas green and yellow may have the opposite effect. A study done by Koch and Koch (2003), suggests that few colors are associated with preconceptions of taste, however red and green did show patterns of associations with taste.

The hypothesis in our study was that food products packaged in light blue would be selected as healthier food choices than those food products that are packaged in the darker colors, red and green. This research may benefit the food marketers and product manufacturers when they are marketing products that they want to be perceived as a healthy choice. Forty subjects from Lindenwood University and ten subjects from outside sources were given six questions concerning their perceptions of the healthiness of food products based on the color of the package. They each answered the same six questions for four different sets of packages.

Method

Participants

In this experiment thirteen subjects from the Lindenwood University Human Subject Pool (HSP) were used, twenty-five subjects were from Dr. Kelly's Human Sexuality class, and the remaining twelve subjects were all from various undergraduate institutes. All of the subjects that were allowed to participate were at least eighteen years of age and undergraduate students. The participants from the HSP were recruited from introductory psychology, sociology, and anthropology classes through a description and signup sheet located on the HSP bulletin board on the fourth floor of Young Hall across from the restrooms. The HSP subjects were given bonus points in their respective courses for participating in the experiment, and the other subjects were not given any compensation for their participation. All of the researchers were female and participants were tested by two female researchers.

Materials

This experiment required the use of a desk, three chairs, pen, pencil, eraser, data sheet, interview questionnaire, and generated stimuli. The desk was used to display the generated stimuli and separate the participants from the researchers, allowing the researchers to record data on the data sheet without the participants directly viewing the data sheet. The three chairs were used for the experiment, two on one side of the desk for the researchers to sit on, and one on the opposite side, for the participant to sit on. A pen, pencil, and eraser were all used by the researchers to record data on the data sheets. A data sheet and interview questionnaire was used for each individual participant. The questionnaire and the data sheet can be found in Appendix A and B. The subjects that

were not a part of the HSP were all given a questionnaire that they completed individually upon presentation of the stimuli, which can be found in Appendix C.

There were two categories of generated stimuli: boxes and cans. These two categories were further separated into two subcategories of large and regular. Cereal boxes of the same height and weight (17oz.) were used as large boxes, cracker or snack food boxes of the same size, width, and weight (11oz.) were used as small boxes. Family size vegetable and soup cans, approximately 24 ounces, were used as large cans while regular soup or vegetable cans, approximately 15 ounces, were used as the small cans. There were three containers in each category; these containers were colored red, green, or light blue. These containers were not used in their original packaging colors; each container was painted with an acrylic based paint across the front or on the paper label. The fronts of the boxes were the only part painted as the sides were not directly visible to the participant.

Procedure

In this experiment, participants were recruited from the HSP through the bulletin board posted on the fourth floor in Young Hall on the campus of Lindenwood University. After signing up for the experiment, participants were expected to show up to the experiment at their allotted time. The researchers checked the sign up sheets daily to ensure that there were going to be participants for the experiment and to record the names of all participants signed up in case they were absent or needed to be reached.

Once the participants arrived at the designated research site (assigned to them in a room booking through Lindenwood University), they were instructed to sit down across from the researchers. Three objects were presented at a time. To counterbalance the order

in which the generated stimuli were placed across the desk or table was determined by the use of a Latin Square configuration. The order in which the different categories was presented was also determined by the use of a Latin Square. This meant that every other participant began with cans then boxes and vice versa, small or large, as well as the different order of stimuli displayed. With each category displayed, the participants were asked to verbally answer six questions (see Appendix A). The researcher marked each response on the data sheet (see Appendix B). The same procedure was followed for the participants from the other varying universities. However, the participants from Dr. Kelly's Human Sexuality class were all presented with the stimuli at the same time. The same counterbalancing techniques were used in the presentation of the stimuli, but they answered the questions on an individual questionnaire.

Results

Each of the fifty subjects participated in four trials, and for the purpose of this analysis each of the trials are treated as separate data. Therefore, there are two hundred responses. Upon analysis of data frequencies, light blue was chosen by the participants as the healthiest product 46.4% of the time, as compared to red which was chosen 23.7% of the time and green which was chosen 29.9% of the time. These frequencies suggest that there is a significant difference in the perception of the healthiness of products based on the color of the packaging.

For further analysis of the data, a non-parametric chi-square test was used for each of the questions on the survey (see Table 1). Red was chosen as the product that contained the most fat, $\chi_2^2 = 51.103, p < .001$. Blue was chosen as the product with the

least amount of fat, $\chi_2^2 = 45.969, p < .001$. There was no statistical difference between red, blue, and green concerning the product with the most sugar, $\chi_2^2 = .814, p = .666$. There was no statistical difference between red, blue, and green concerning the product with the least sugar $\chi_2^2 = 9.938, p = .007$. Red was chosen as the least healthy product, $\chi_2^2 = 34.464, p < .001$. Blue was chosen as the healthiest product, $\chi_2^2 = 16.00, p < .001$. Blue was also chosen as the product that would be purchased given the choice between red, blue or green packaging. $\chi_2^2 = 14.857, p = .001$.

Table 1. Results of the Chi-square tests

	most fat	least fat	most sugar	least sugar	least healthy	most healthy	purchase
Chi-Square(a,b)	51.103	45.969	.814	9.938	34.464	16.000	14.857
df	2	2	2	2	2	2	2
Asymp. Sig.	.000	.000	.666	.007	.000	.000	.001

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 64.7.
b 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 65.3.

Table 2. Chi-square analysis showing relationship between perceived healthiest product color and frequency of purchase

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.592(a)	4	.000
Likelihood Ratio	25.856	4	.000
Linear-by-Linear Association	10.819	1	.001
N of Valid Cases	194		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.43.

In a cross tabulation chi-square analysis of question 5b and question 6 showed that the product color that was perceived to be the healthiest was most frequently the product color chosen to purchase, $\chi_4^2 = 27.592, p < .001$ (see Table 2).

Discussion

As hypothesized, the food products packaged in light blue were perceived by the majority of participants to be the healthiest food products when compared to green and red packaged food products. Red packaged food products were perceived as the least healthy. The data also showed that people are more likely to purchase the product that they perceived as the healthiest.

As mentioned earlier, color can be associated with temperature, flavor, and weight of food. The results from this study may show evidence of an association between weight of the product and perceived healthiness. An example can be seen in the results obtained regarding light blue packages and red packages. The lightness of the blue packages may have given a perception of lightness in the weight of the product, which would be perceived as healthy. The darker color of red may have been perceived as a heavy product, which may have been why those packages were perceived as the least healthy products.

Further research may want to include information regarding gender differences. It would be interesting to explore gender differences in food purchase preferences based on perception on healthiness of the products. Another difference that would be interesting to examine is the cultural differences that exist. Different cultures are likely to have different perceptions of the features in food products that make them healthy choices. Also, color preference and perception may culturally based. The student population at Lindenwood University is diverse enough to support an experiment examining cultural differences in relation to color and health perceptions.

The arbitrary labels that were placed on the packages may have affected the participant's perceptions. The boxes that were labeled as cereal may have offered a preconceived notion of healthy or unhealthiness; as would the boxes and cans labeled snack and the large cans labeled soup. If further research on this topic is conducted these labels may be left off in order to reduce preconceived images of certain foods. More interview questions may be needed to find out if people purchase all foods based on healthiness or if healthiness is only looked for in certain products. It is difficult to say if the color light blue was selected as the healthiest food product because of the perceptions that the color gave, or if previous experience with buying healthy food products that were packaged in light blue influenced the participant's choices in this study. Further research using different combinations of colors would be necessary to explore this possibility.

In conclusion, the alternative hypothesis that light blue would be perceived as the healthiest product was supported by the data that were collected. Statistical significance was found in all questions asked in the interviews or questionnaire, except for the question regarding most sugar. The most unexpected conclusion that can be reached from this data was that participants were most likely to purchase the product that they perceived as the healthiest product. This finding could be encouraging to marketers who specifically target health conscious consumers and also to professions in the medical field who put effort into promoting healthy eating as a means of obtaining improved healthfulness.

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Appendix A

Interview Questionnaire

1) Which product has the most fat?

2) Which product has the least amount of fat?

3) Which product has the most sugar?

4) Which product has the least amount of sugar?

5) Rank products in order from least healthy to most healthy.

6) Which product would you purchase?

Appendix B

Data Sheet

Partcipant	M/F	Q1	Q2	Q3	Q4	Q5	Q6
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							

Effects of Anti- and Pro-Smoking Campaigns on the Prevalence of Smoking in College Students

Jennifer Campbell, Pamela Newcombe, and Angela Radford

Lindenwood University

This study sought to show relationships between anti- and pro-smoking advertisement campaigns and the prevalence of smoking among college students. A total of 102 undergraduate students from Lindenwood University participated in the survey, which contained questions regarding family, friends, personal non-smoking and smoking habits, and the number and type of anti- and pro-smoking ads viewed. The researchers obtained informed consent, distributed the survey, and debriefed each participant after completion of the survey. The statistical analysis of the data did not show any relationships between exposure to ads and the prevalence of smoking. However, exposure to pro-smoking advertisements did affect brand preference. More research is needed to indicate any other relationships.

The American public has been exposed to pro-smoking advertisements—ads in magazines and newspapers or ads that used to run on billboards, the radio, and on television, and show advertisements that are meant to persuade the viewer to smoke—for many years. The pro-smoking advertisements worked well for the 'big' tobacco companies (i.e. R.J. Reynolds, Phillip Morris), increasing both sales and product recognition. However, due to the medical advances of the late 20th century and pure statistical data dealing with deaths due to smoking, tobacco is now seen as unhealthy. According to a 2002 report by the American Public Health Association (APHA), pro-

smoking advertisements have been completely removed from television and radio since 1992. The 'big' tobacco companies countered this by running anti-smoking advertisements—ads in magazines and newspapers or ads that run on billboards, the radio, and on television, and show advertisements that are meant to persuade the viewer not to smoke. These advertisements were designed to keep people, especially the young, away from tobacco. However, recently 'big' tobacco companies have been challenged on whether their anti-smoking ads actually decrease the prevalence of people who smoke. As a matter of fact, these anti-smoking ads have been blamed for the increase in the number of youths (18 to 25 years old) smoking today (APHA, 2002). Many studies have been done to show that smoking prevalence does not vary systematically with viewing these anti-smoking ads.

In an article by Nancy Zuckerbrod (2002), a study done by an anti-smoking foundation said tobacco giant Phillip Morris' campaign to discourage teenagers from smoking was having the opposite effect. In this study, 12 to 17 year olds were surveyed after the 'truth' campaign began in 1998. Most of the results were associated with an increase in the chance that adolescents intended to smoke in the next year. The study found that 28.5% of high school students surveyed reported smoking a cigarette in the previous month; this number has increased from 16.4% surveyed 5 years prior to this study. This study intended to show a decrease in adolescent's intention to smoke after seeing the anti-smoking ads. Instead, the results showed that many of the adolescents did intend to smoke and many were currently smoking. When Phillip Morris was confronted on the potential opposite effect of their campaigns, they were encouraged to reconstruct their campaigns and air less dramatic examples (Zuckerbrod, 2002).

According to a study done by Schooler and Feighery (1996), the rate of young people beginning to smoke was increasing in 1994. The researchers surveyed a representative sample of eighth graders and found that after exposure to anti-smoking ads, there was an 11% increase in the number of youths smoking. In this study, 41% of the participants admitted to experimentation with cigarettes, which was defined as having ever tried cigarette smoking. The participants were surveyed on their exposure to smoking advertisements, whether anti- or pro-smoking, in magazines, billboards, stores, events, mail distribution, and anywhere else the participants may have encountered an smoking advertisement of any type. The results indicated that the participants were more likely to smoke after seeing any type of smoking advertisement whether anti- or pro-smoking. In addition, participants with peers or family members who smoked were more likely to smoke. The advertisements did not have a significant effect in the subjects' intention to smoke (Schooler & Feighery, 1994).

The APHA (2002) article stated that Phillip Morris' anti-smoking ads, 'Think Don't Smoke,' decreased anti-tobacco sentiments amongst 12 to 17 year olds. The research found that non-smoking 12 to 17 year olds exposed to Phillip Morris's ads were also more likely to state that they intended to smoke in the future. The study showed that only 10 months after being exposed to the campaigns, the teens' anti-smoking attitudes were weakened; this in turn increased the likelihood of their smoking in the future. The percent of teens that agreed to take a stand against tobacco decreased 11% and the percent of teens that wanted to be involved in anti-smoking campaigns decreased 17% (APHA, 2002).

Russ Kirk, a reporter for the LA Weekly Times (2003), researched some of the anti- smoking ads, particularly the 'lie detector' ad produced by the 'truth' campaign (2005). Phillip Morris forced this ad off the air because it portrayed the individual attitudes of their own corporate employees. The 'lie detector' campaign featured teens going inside a major tobacco company and asking to administer a lie detector test to personnel in the advertisement department in order to clear up any confusion over whether smoking was addictive. The commercial was not constructed in a way that portrayed a clear anti-smoking message and was pulled off the air due to the fear that teenage smoking would increase (Kirk, 2003).

An elaborate study completed by Ellen R. Gritz (2002) showed that experimentation with cigarette smoking and the development of regular smoking activity typically occurred during adolescence. The 1994 Surgeon General's report, mentioned by Gritz, summarized a wide range of factors associated with adolescent smoking initiation. These factors were later investigated further in several subsequent studies. Psychological risk factors within this study were observed when the subjects were exposed to anti- and pro-smoking ads. In this study, 23% of the participants that smoked were not influenced after seeing anti-smoking ads and continued to smoke. Another 19% were influenced after seeing anti-smoking ads, but they disregarded the ads and continued smoking (Gritz, 2002).

All of this can seem a little confusing. 'Big' tobacco companies have done studies that show the effect they expect, while anti-tobacco industries have done studies that are complimentary to their expected results. This survey allowed the researchers to make inferences about a relationship between anti-and pro-smoking campaigns and the

prevalence of smoking among college students. The researchers hypothesized that anti-smoking campaigns do not have a significant impact on smoking in college students. However pro-smoking campaigns do have a significant impact on smoking in college students. In this study participants were surveyed on their personal, peer, and family history of smoking; brand preference; type and frequency of exposure to any kind of smoking campaign. The participants' answers were statistically calculated to see if any significant findings could be determined.

Method

Participants

The experimenters recruited 102 participants from Lindenwood University's Human Subject Pool (HSP) and from undergraduate psychology classes for this study. The HSP consists of undergraduate students at Lindenwood University who are participating in experiments in order to earn bonus points for their participating classes. If the students do not want to participate in or decline to finish an experiment, they are offered alternate ways to earn bonus points. When the HSP did not yield enough participants, the experimenters recruited participants from 100-level psychology courses with the permission of the instructors. The participants were 18 years of age or older and received bonus points from their instructors.

Materials

Using a computer, the experimenters created a survey based upon the experiment's hypothesis (See Appendix A). The researchers brainstormed for survey question ideas that could yield results that either supported or disproved their hypothesis. The questions looked at family, friends, and personal non-smoking and smoking habits of

the participants, and the viewing of anti- and pro-smoking campaign ads. The survey questions selected were formatted in alternate choices and rating scale responses, such as:

> Have you ever seen (check all that apply):
>
> *Pro-smoking campaigns are ads in magazines and newspapers or ads that used to run on billboards, on the radio, and on television, and show advertisements that are meant to persuade the viewer to smoke.*
>
> ___ a pro-smoking advertisement on TV?
> ___ a pro-smoking advertisement in a magazine?
> ___ a pro-smoking advertisement on a billboard?
> ___ a pro-smoking advertisement anywhere else?
> ___ Have never seen a pro-smoking advertisement
>
> Does your father know you smoke?
>
> ___ No
> ___ Yes
>
> To what extent does your father approve?
>
> |----------|----------|----------|----------|
> Does Not Approve Somewhat Does Not Approve Neutral Somewhat Approves Does Approve

The experimenters used a computer to prepare two informed consent forms. They also prepared and distributed two feedback forms to each participant. A sheet with information to stop smoking was printed off a computer (See Appendix B). The experimenters supplied participants with black pens to mark their responses on the survey. Lindenwood University's HSP supplied the experimenters with participant receipt forms, sign up sheets, and a HSP participant list form.

The experiment took place at Butler Library on Lindenwood University's campus in one of the large conference rooms on the second floor of the library, and in three

classrooms. The room in Butler Library had gray walls with one large rectangular table and four chairs. On the wall to the right of the door was a chalkboard on which the experimenters wrote "Smoking Survey" and two windows were located on the back wall. The classrooms were located in the basement of the library and in Young Hall on the first and fourth floors. The classroom in the basement of the library had rows of tables with chairs behind them facing a dry erase board and overhead projection screen. It had white walls and the door was centered at the back of the classroom. The classroom in Young Hall on the first floor had stadium-style seating with desks. The front of the classroom had a chalkboard and an overhead projection screen. It had white walls and the door was located in the front of the classroom to the right of the blackboard, there were no windows in this room. The classroom in Young Hall on the fourth floor and had desks facing a dry erase board and an overhead projection screen; the opposite wall contained windows. It had white walls and the door was located in the front of the classroom to the left of the dry erase board, the opposite wall contained windows.

Procedure

Sign up sheets were posted on the fourth floor of Young Hall. HSP subjects were required to sign up, two at a time, in 15 minute intervals in order to take the survey. When the experimenters could not obtain enough participants from the HSP, they administered the survey to three 100-level psychology courses with the permission of the instructors.

Upon entering the library conference room, the experimenters wrote "Smoking Survey" on the chalkboard. They sat behind the table, in front of the windows, and placed the following papers across table in the corresponding fashion: HSP participant

list form, informed consent forms, surveys, feedback letters, and the information sheet to quit smoking closest to the participants; pens, participant receipt forms, completed surveys, completed informed consent forms, and completed feedback forms closest experimenters.

Each participant filled out the HSP participants list form as well as two informed consent forms, one of which was kept by the experimenters. Prior to the experiment, the experimenters explained to each participant that he or she would be answering questions about his or her smoking or non-smoking habits, the smoking or non-smoking habits of his or her friends and family, and his or her views of anti- and pro-smoking campaign ads. The participants were told that their answers would not be looked at individually, but instead would be combined and compared with the answers of other participants.

Pens were made available to the participants to be used on the survey. If the participants had any questions about the survey items, the researcher instructed the participant to answer the question to the best of his or her ability. The participants were each given at least ten minutes to complete the survey and were asked to place their survey face down on a pile next to the experimenter.

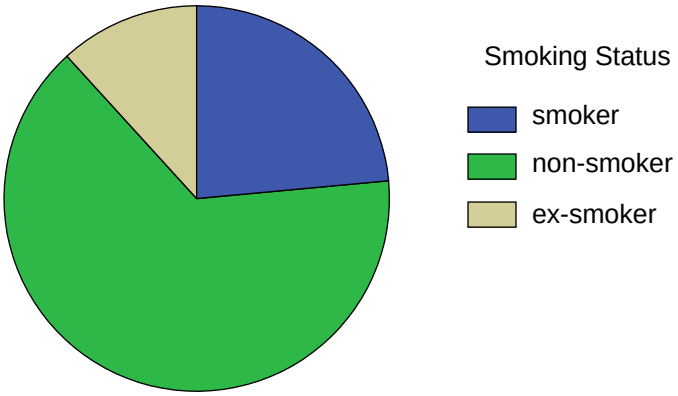
After the participants had completed the surveys, the experimenter had them fill out their information the participant receipt forms, which the participants would turn in to Young 407 for their bonus points. The experimenter thanked each participant and gave him or her two feedback forms indicating that, should the participant wish to view the results of the study, they could contact any of the experimenters involved in the study. The experimenter informed each participant of the hypothesis and method of the study

and had him or her fill out both copies of the feedback form and return one copy to the researcher.

Results

The researchers conducted chi-square analyses to see if there was a relationship between viewing anti- and pro- smoking ads and the prevalence of smoking. The effect of pro-smoking ads on the prevalence of smoking was not significant, $\chi^2_{(12)} = 5.276, p = .948$. The significance of anti-smoking ads and the effect on prevalence of smoking did not support the hypothesis, $\chi^2_{(12)} = 10.319, p = .588$.

Figure 1. Distribution of smoking status of subjects



The smoking status and gender items on the survey tabulated on a nominal scale resulted in 23.5% reported smokers, 64.7% non-smokers and 11.8% ex-smokers (see Figure 1). The gender breakdown of the respondents was 46.1% male and 53.9% female. Out of the 23.5% reported smokers, the male to female ratio was 1:3. Within the combined total of non- and ex-smokers (76.5% of respondents), the male to female ratio was an equal distribution, 50% female and 50% male (see Figure 2). The smokers

reported 83.3% smoked less than one pack of cigarettes a day, 8.3% smoked one pack of cigarettes a day, and 8.3% smoked more than one pack of cigarettes a day.

Figure 2. Gender distribution of subjects in regards to smoking status

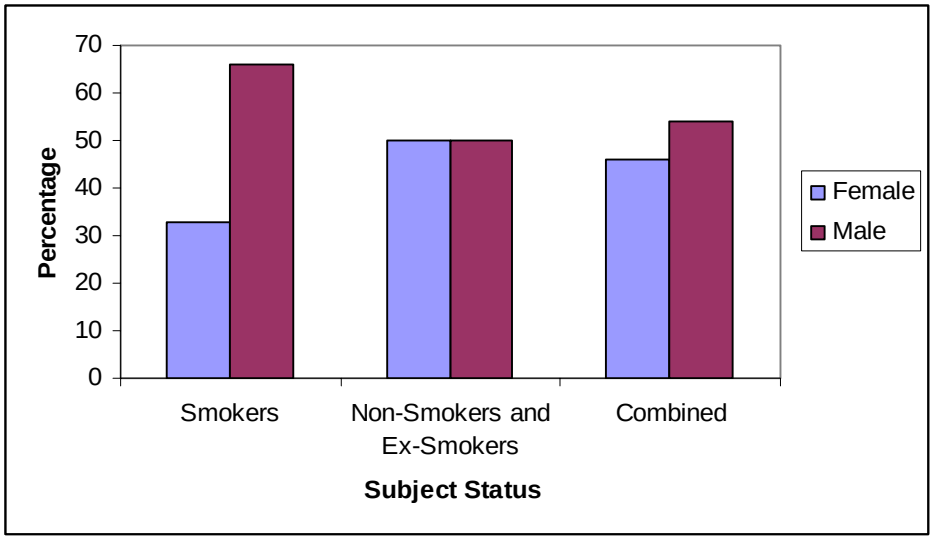
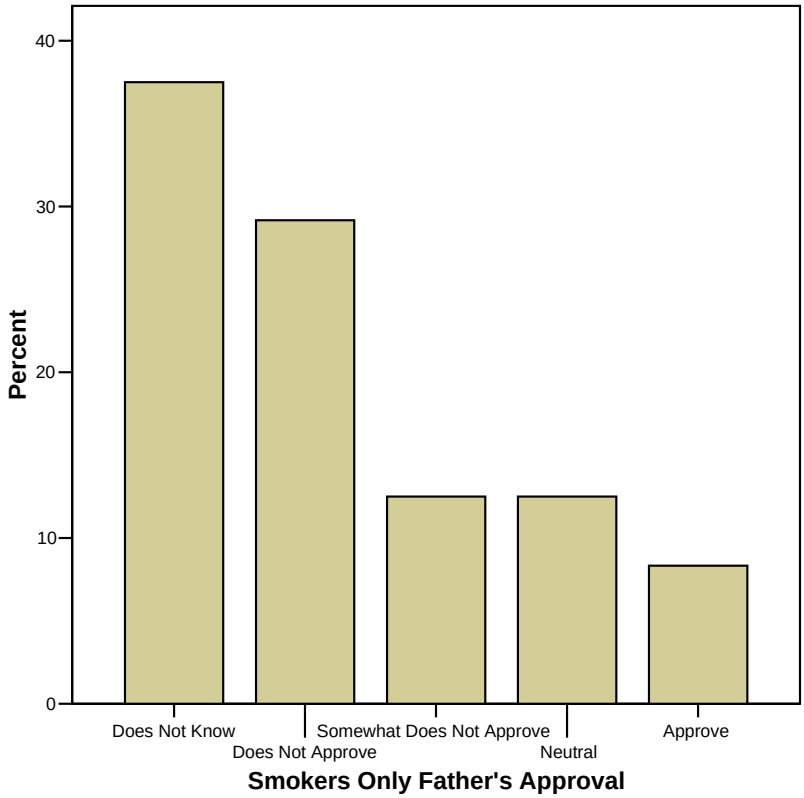
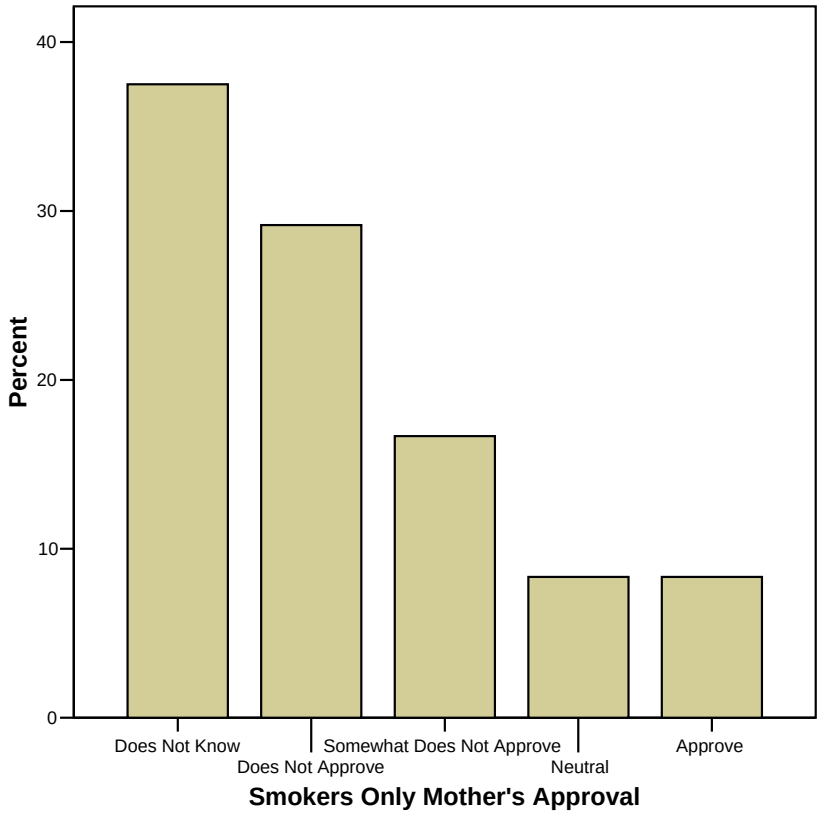


Figure 3. Smoker's father's approval ratings



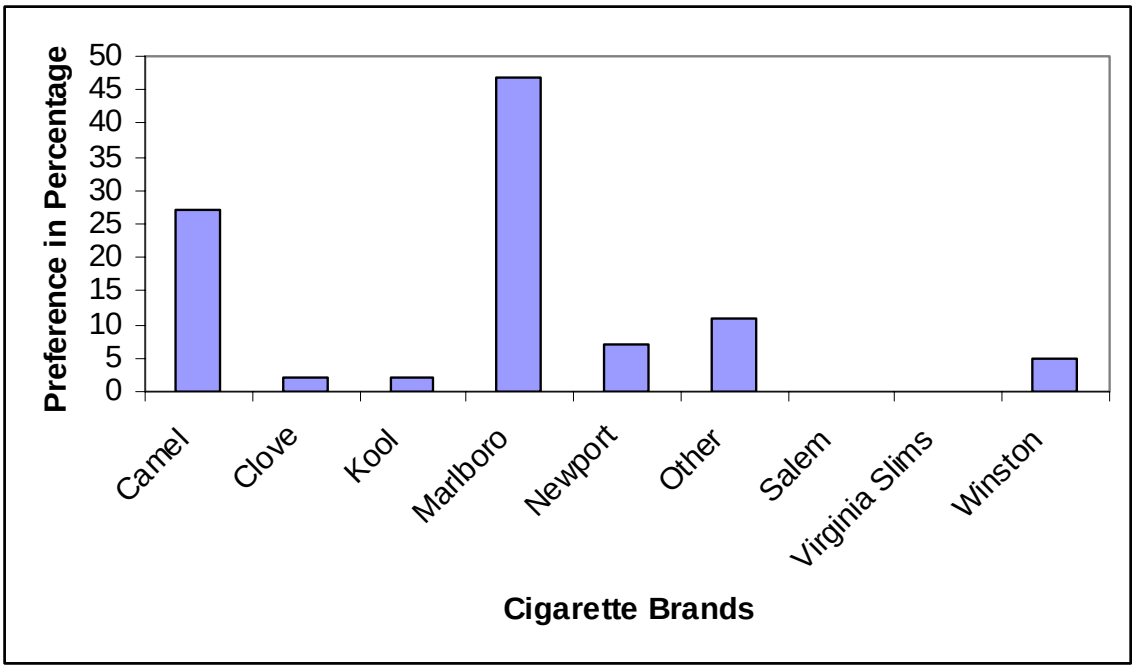
The survey asked smokers to rate their parent's approval (both father's and mother's) on a 5-point Likert scale ranging from 'does not know' to 'approves' (See Figures 3 and 4). The frequencies of mother's and father's approval ratings were identical, with 8.3% reporting approval, 12.5% neutral, 12.5% somewhat does not approve, 29.2% does not approve. The remaining 37.5% reported their parents had no knowledge of their smoking habits. This could be due to the traditional family relationship in which both parents are aware of their children's behavior and do not keep the information from each other.

Figure 4. Smoker's mother's approval ratings



Preferences among brands used by the smokers was examined with 47% naming Marlboro®, 27% Camel®, 7% Newport®, 5% Winston®, 2% Kool®, and 2% Clove. The remaining 10.9% reported using a brand not listed (see Figure 5). When smokers were asked to rate the influence of their preferred brand's advertisements on their choice of brand, 87.5% said they were not influenced, 2% were somewhat influenced, and 1% was neutral. Data was missing for this variable therefore the percentages do not add up to 100%.

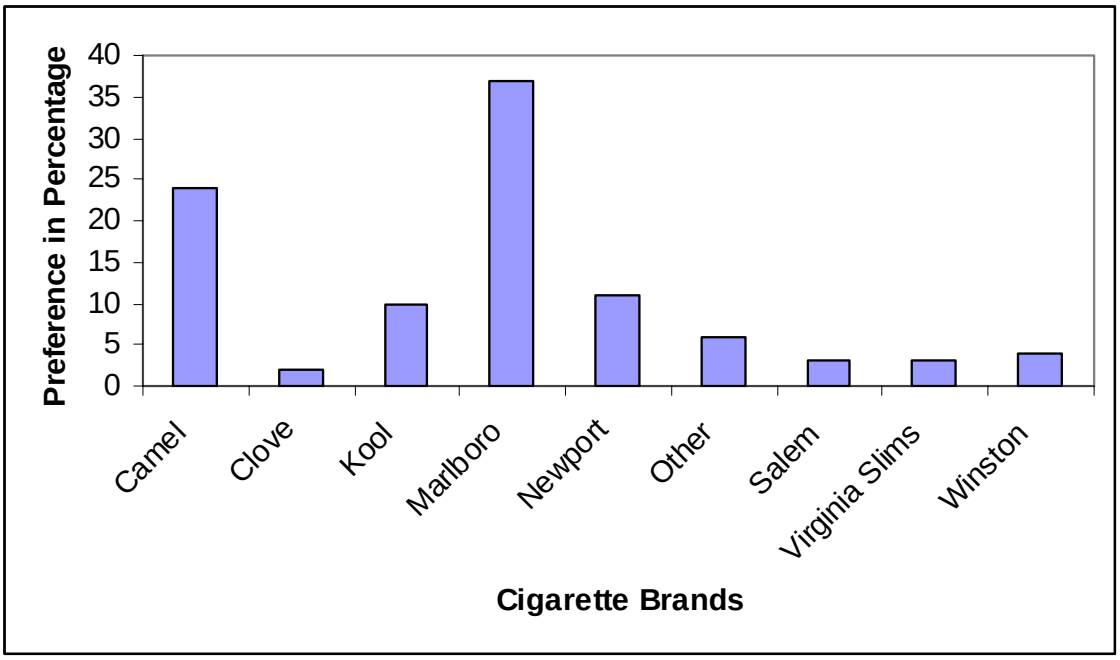
Figure 5. Smoker's brand preferences



The study asked the respondents to indicate the number of their friends who smoked and their friends' brand preferences. Of the smokers, 21.6% reported knowing more than three friends who smoked, and 1% knew only one person. Among the non- and ex-smokers, 38.2% knew more than three friends who smoked and 4.9% knew only

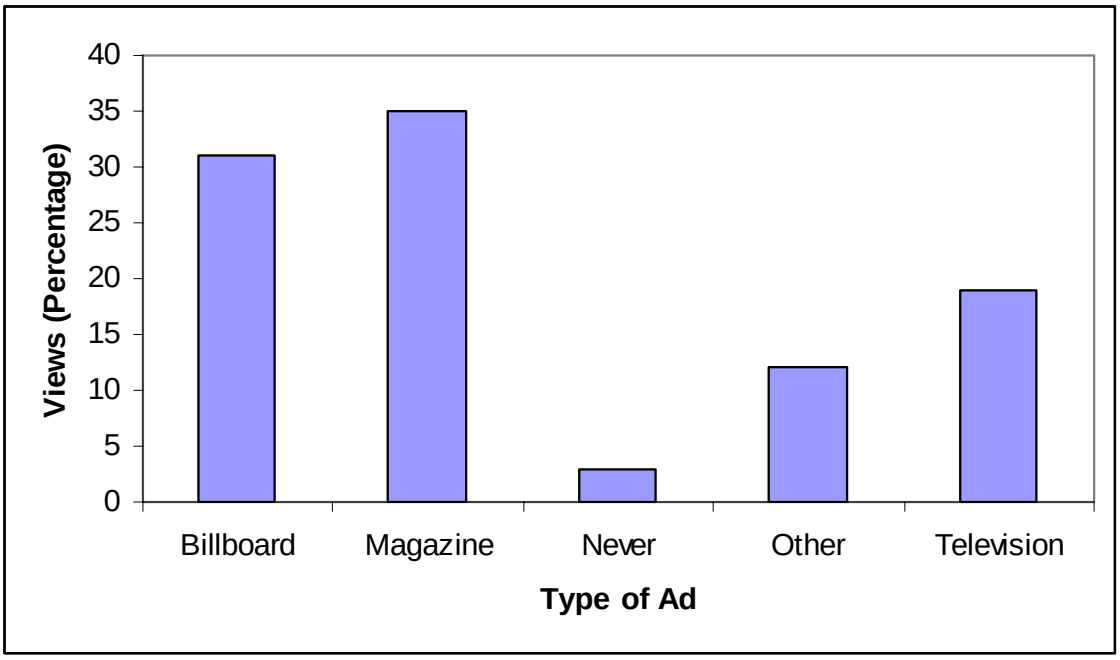
one person. Of all respondents combined, only 15.7% indicated they knew no one who smoked. An examination of the friends' brand preferences resulted in 37% naming Marlboro®, 24% Camel®, 11% Newport®, 10% Kool®, 4% Winston®, 3% Virginia Slims®, 3% Salem®, 2% Clove, and 6% Other (see Figure 6).

Figure 6. Friend's brand preferences



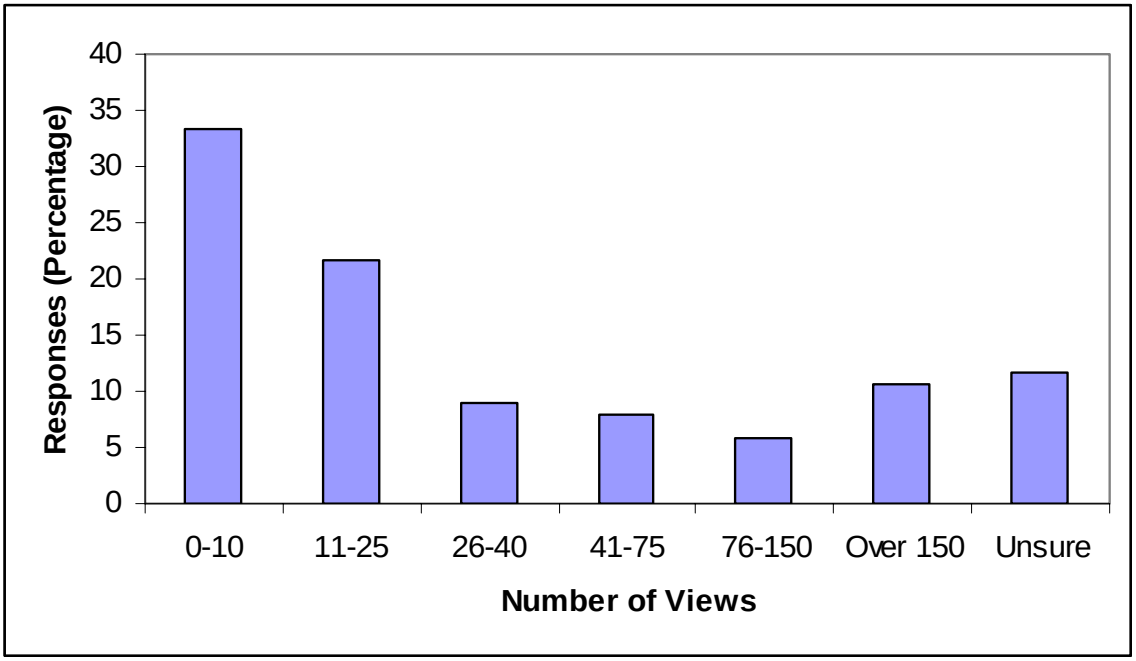
The study also examined where the pro- and anti- smoking advertisements were viewed and the frequency of exposure to such ads. Participants were able to select multiple responses and of the 257 responses, 35% had seen a pro-smoking ad in a magazine, 31% on a billboard, 19% on television, 12% anywhere else, and 3% reported never seeing a pro-smoking ad (see Figure 7).

Figure 7. Types of pro-smoking ads viewed



The frequency of viewing pro-smoking ads broke down as follows: 33.4% had seen a pro-smoking ad 0-10 times, 21.6% 11-25 times, 8.9% 26-40 times, 7.9% 41-75 times, 5.9% 76-150 times, and 10.6% over 150 times, with 11.7% unsure (see Figure 8).

Figure 8. Frequency of pro-smoking ad views.



The data revealed 93.1% of the respondents viewed an anti-smoking ad on television, 65.7% in a magazine, 46.1% on a billboard, 55.9% in a location not listed, and only 4.9% had never seen an anti-smoking ad (see Figure 9).

Figure 9. Types of anti-smoking ads viewed

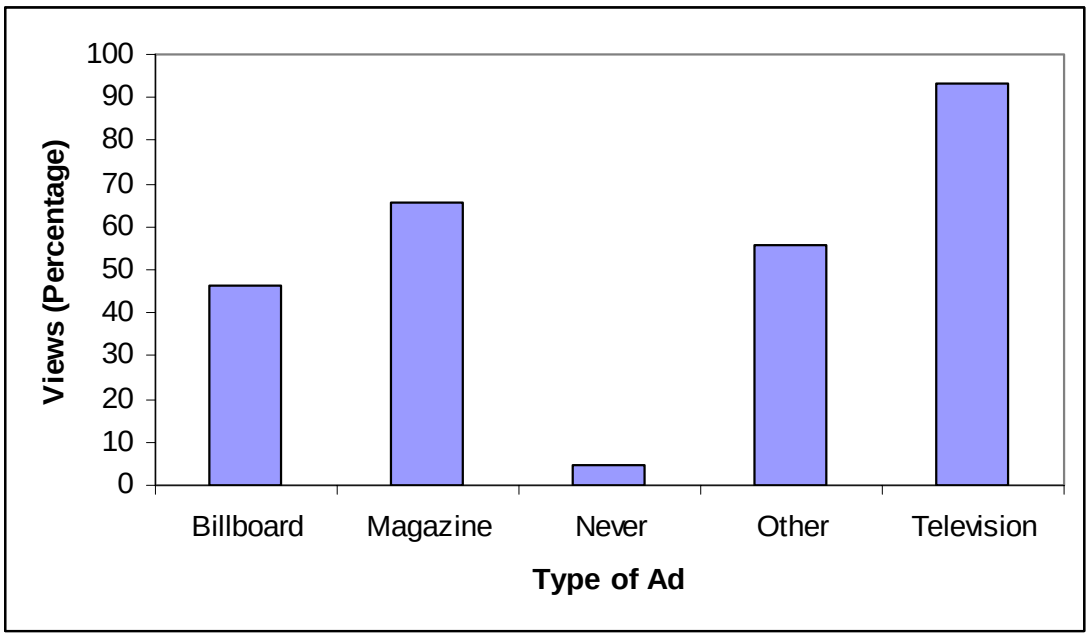
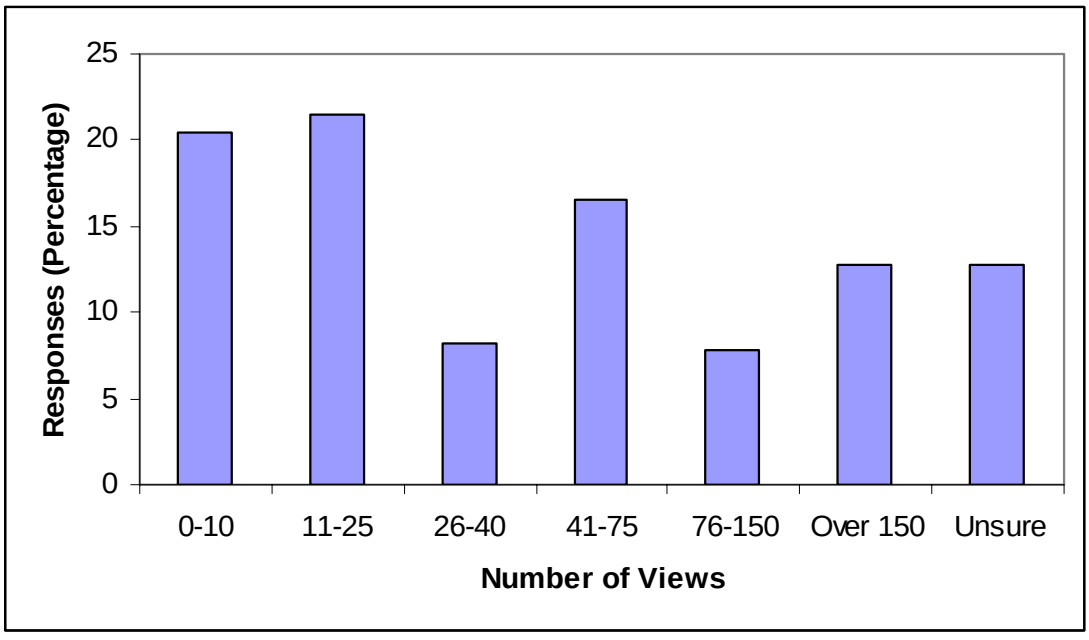


Figure 10. Frequency of anti-smoking ad views



When asked the number of times they had viewed an anti-smoking ad, 20.5% reported 0-10 times, 21.5% 11-25 times, 8.2% 26-40 times, 16.6% 41-75 times, 7.8% 76-150 times, 12.7% over 150 times, and 12.7% were unsure (see Figure 10).

Discussion

Analysis of the data did not yield a significant effect of anti-smoking advertisements on the prevalence of smoking among college students. Two Center for Disease Control (CDC) fact sheets from 1990 and 2000 reported a decrease of adult smokers between the years 1985 and 1995. The CDC study conducted in 1985 showed 30.1% of the young adults in the United States were currently smoking (CDC, 1990). In 1995, the CDC repeated the study and showed a decrease of 7.6% in the number of young adults smoking (CDC, 2000). The data collected for this research project showed 23.5% of the respondents to be young adult smokers. This slight variance in prevalence can be attributed to the small sample represented in this study and is not statistically significant. As the percentages did not change significantly, the researchers must conclude anti-smoking advertisement campaigns have had little to no effect on the actual prevalence of smoking. The expected decrease in the prevalence of smoking due to exposure to anti-smoking ads hypothesized was not observed.

The CDC (2000) reported cigarette smoking as more common among men (25.2%) than women (20.0%). This study did not support this finding. Conversely, the data obtained showed 66.6% of the smokers surveyed were female. This is surprising due to the medical advances made in the last decade. More, now than ever, women are told of the health risks associated with smoking especially with regards to the effects on unborn children. The participants in this study were all within the child-bearing age.

As predicted, pro-smoking advertisements had an effect on the prevalence of smoking among college students. The effect was not as expected, directly influencing the prevalence of smoking; however data showed an effect on brand preference that the researchers expected. Analysis of these data revealed 77.4% preferred the Marlboro® and the Camel® brands of cigarettes (37% and 24% respectively). Phillip-Morris and R.J. Reynolds are the two major tobacco companies who produce and advertise these two brands of cigarettes, correspondingly. These 'big' tobacco companies equally spend more money, on both anti- and pro-smoking ads, than all of the other tobacco companies combined spend (truth, 2005). With such big advertising budgets at their disposal, it is a small wonder their brands are the most popular. Pro-smoking advertising has been banned from radio and television since 1992. Most of the participants in this study were between 5 and 12 years of age the last time they could have been exposed to such an ad, even though 19% reported seeing such an ad on television. Obviously, the pro-smoking ads in magazines and on billboards are working just fine for the tobacco companies.

The study sought to find relationships between anti- and pro-smoking ads and the prevalence of smoking. The lack of significance found can be attributed to both the lack of participants and the experimental error. With the number of variables in this study, more than 102 surveys would have to be collected and analyzed in order to get a representative sample; a survey of this size should have thousands of participants. Error in this study came from many different directions. The rooms used for the survey were not held constant; room assignments changed twice, used classrooms instead of assigned rooms, lack of information for participants to find the rooms, etc. Using participants from the HSP only provided 36% of the data; the rest was collected in classroom

situations, quite different from the HSP settings. The survey itself needs revision. If more time had been available for planning, the researchers would have found a standardized survey. There were errors in the survey itself; not all possible answers were made available, typographical errors, participants did not follow directions, etc. Experimenter error was apparent in the differing ways the survey was presented and collected; some participants were alone, some took the survey with another person in the room, others in large classrooms of over 24 people; the survey could not and was not presented the exact same way every time.

These data indicated clearly that the tobacco industry has been successful over the past decade in recruiting new smokers among young people. The increased smoking prevalence among young adults has partially offset the successes of smoking cessation programs and anti-smoking programs. Further reductions in adult smoking prevalence will require increased efforts to prevent smoking initiation among adolescents and young adults, as well as smoking cessation efforts to help heavier smokers quit.

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Appendix A

Questionnaire

Smoking and Non-Smoking Habits Among College Students

Please answer the following questions to the best of your ability.

1. Are you:
___ Male ___ Female

___ Smoker: *I am currently smoking.*
(Smokers, please turn to Part I and answer only the questions in this section)
___ Non-smoker: *I have never smoked.*
(Non-smokers, please turn to Part II and answer only the questions in this section)
___ Ex-Smoker: *I have smoked before but am not currently smoking.*
(Ex-Smokers, please turn to Part II and answer only the questions in this section)

Part I: Smokers Only

Family

1. Does your father know you smoke?
___ No
___ Yes
To what extent does your father approve?

Does Not Approve	Somewhat Does Not Approve	Neutral	Somewhat Approves	Does Approve

2. Does your mother know you smoke?
___ No
___ Yes
To what extent does your mother approve?

Does Not Approve	Somewhat Does Not Approve	Neutral	Somewhat Approves	Does Approve

3. Does anyone in your family smoke?
___ No
___ Yes
If yes, who (check all that apply):
___ Father: What Brand(s): _____
___ Mother: What Brand(s): _____
___ Sibling(s): How Many? ____ What Brand(s): _____
___Other: How Many? ____ What Brand(s): _____

Friends

4. Do any of your friends smoke?
   ___ No
   ___ Yes
   If yes, How many?
      ___ One
      ___ Less than 3
      ___ More than 3

5. What Brand(s) do your friends smoke (check all that apply)?
   ___ Camel
   ___ Clove
   ___ Kool
   ___ Marlboro
   ___ Newport
   ___ Salem
   ___ Virginia Slims
   ___ Winston
   ___ Other: Please list: _____

Personal

6. Have you ever seen (check all that apply):
   Pro-smoking campaigns are ads in magazines and newspapers or ads that used to run on billboards, on the radio, and on television, and show advertisements that are meant to persuade the viewer to smoke.
   ___ a pro-smoking advertisement on TV?
   ___ a pro-smoking advertisement in a magazine?
   ___ a pro-smoking advertisement on a billboard?
   ___ a pro-smoking advertisement anywhere else?
   ___ Have never seen a pro-smoking advertisement

7. Please estimate how many times have you seen any form of pro-smoking ad in the last two years?
   ___ 0-10
   ___ 11-25
   ___ 26-40
   ___ 41-75
   ___ 76-150
   ___ Over 150 times
   ___ Unsure

8. Did the pro-smoking advertisement(s) influence your decision to smoke?
___ No
___ Yes
To what extent?

| ---------- | ---------- | ---------- | ---------- |

Not Influenced	Somewhat Not Influenced	Neutral	Somewhat Influenced	Did Influenced

9. Have you ever seen (check all that apply):
Anti-smoking campaigns are ads on billboards, in magazines and newspapers, on the radio, and on television, and show advertisements that are meant to persuade the viewer not to smoke.
___ an anti-smoking advertisement on TV?
___ an anti-smoking advertisement in a magazine?
___ an anti-smoking advertisement on a billboard?
___ an anti-smoking advertisement anywhere else?
___ have never seen an anti-smoking advertisement

10. Please estimate how many times have you seen any form of anti-smoking ads in the last two years?
___ 0-10
___ 11-25
___ 26-40
___ 41-75
___ 76-150
___ Over 150 times
___ Unsure

11. What Brand(s) name of cigarettes do you smoke (check all that apply)?
___ Camel
___ Clove
___ Kool
___ Marlboro
___ Newport
___ Salem
___ Virginia Slims
___ Winston
___ Other: Please list: _____

12. Do you smoke your brand based on the Brand's advertisements?
___ No
___ Yes
To what extent?

| ---------- | ---------- | ---------- | ---------- |

Not Influenced	Somewhat Not Influenced	Neutral	Somewhat Influenced	Did Influenced

13. How much do you smoke per day?
___ Less than one pack
___ One pack
___ More than one pack
___ More than two packs

14. Would you like information about how to stop smoking?
___ No
___ Yes (Please talk with experimenter for resources to stop smoking)

Part II: Non-Smokers and Ex-Smokers Only

Family

1. Does anyone in your family smoke?
   ___ No
   ___ Yes
   If yes, who (check all that apply):
   ___ Father: What Brand(s): _____
   ___ Mother: What Brand(s): _____
   ___ Sibling(s): How Many? ____ What Brand(s): _____
   ___Other: How Many? ____ What Brand(s): _____

Friends

2. Do any of your friends smoke?
   ___ No
   ___ Yes
   If yes, how many friend(s)?
   ___ One
   ___ Less than 3
   ___ More than 3

3. What Brand(s) do your friends smoke (check all that apply)?
   ___ Camel
   ___ Clove
   ___ Kool
   ___ Marlboro
   ___ Newport
   ___ Salem
   ___ Virginia Slims
   ___ Winston
   ___ Other: Please list: _____

Personal

4. Have you ever seen (check all that apply):
   Pro-smoking campaigns are ads in magazines and newspapers or ads that used to run on billboards, on the radio, and on television, and show advertisements that are meant to persuade the viewer to smoke.
   ___ a pro-smoking advertisement on TV?
   ___ a pro-smoking advertisement in a magazine?
   ___ a pro-smoking advertisement on a billboard?
   ___ a pro-smoking advertisement anywhere else?
   ___ Have never seen a pro-smoking advertisement

5. Please estimate how many times have you seen any form of pro-smoking ad in the last two years?
___ 0-10
___ 11-25
___ 26-40
___ 41-75
___ 76-150
___ Over 150 times
___ Unsure

6. Have you ever seen (check all that apply):
Anti-smoking campaigns are ads on billboards, in magazines and newspapers, on the radio, and on television, and show advertisements that are meant to persuade the viewer not to smoke.
___ an anti-smoking advertisement on TV?
___ an anti-smoking advertisement in a magazine?
___ an anti-smoking advertisement on a billboard?
___ an anti-smoking advertisement anywhere else?
___ have never seen an anti-smoking advertisement

7. Please estimate how many times have you seen any form of anti-smoking ads in the last two years?
___ 0-10
___ 11-25
___ 26-40
___ 41-75
___ 76-150
___ Over 150 times
___ Unsure

8. Did the anti-smoking advertisement(s) influence your decision to smoke?
___ No
___ Yes
To what extent?

| ----------|----------|----------|----------|

Not Influenced	Somewhat Not Influenced	Neutral	Somewhat Influenced	Did Influenced

9. Why are you currently a nonsmoker?
___ I think it is unhealthy.
___ I think it is gross.
___ I have watched others suffer due to smoking
___ I have never been exposed to smoking
___ Other: Please describe: _____

10. Have you ever tried smoking and then quit?
___ No
___ Yes
If yes, Please tell us when, and if possible, why:

_____

_____

_____

11. Have you ever quit smoking and then started again?
___ No
___ Yes
If yes, please tell us how long you quit, and if possible why you started again:

_____

_____

_____

Appendix B

Resources to Quit Smoking

Need Help to Stop Smoking?

Here are a couple of websites to get you started:

www.sheffield-ha.nhs.uk/**stopsmoking**/links.html

www.tobaccofree.org/quitting.htm

www.tobaccofree.org/

www.medic8.com/healthguide/ articles/**stop**ping**smoking**.html/

www.helpself.com/directory/**stopsmoking**.htm

www.quit4good.com/quit_**smoking**_products.html

www.mc3.edu/sa/health/tips/**stopsmoking**.html

www.supportpath.com/sl_s/**smoking**_cessation.htm

www.torbay-pct.nhs.uk/publicInfo/ infoAdvice/**smoking**/furtherSupport.htm/

www.givingup**smoking**.co.uk/

www.sunderland.nhs.uk/**smoking**/

If you need other access to smoking cessation information, please contact R.J. Reynolds, Inc. or Phillip Morris, Inc. Both companies have wonderful programs to help people quit smoking.

Stress and the Common Cold

Nicole Kinman and Angela Vincent

Lindenwood University

Stress is very common among people especially in today's world. People also seem to be getting colds much more often than they used to. Does stress cause people to get sick more often? In the present study 40 participants, all Lindenwood University students ages 18 to 29 years old took a stress test and a health questionnaire in an attempt to determine whether or not the more stressed a person is the more often they will get sick. The participants were asked to spare five minutes of their time to complete the two surveys. This study determined that there is a link between the levels of stress a person is under and how often they encounter symptoms of a cold. This study lets further experimentation take place to find a way to decrease stress in the people of today's society.

Stress is mental tension that occurs when the mind is overloaded with information or things to do. When people are very busy and they have a lot of things to do, they often get stressed. It seems that people who experience a lot of stress have a tendency to get colds or symptoms of colds more often. If people know more about what is causing their illness, they will have a lesser chance of getting sick. There have been many studies conducted in order to come to some kind of conclusion about stress and the physical health of a person.

In one study a relationship was found between stress and health. They had two groups, one group that had an exam and one group that did not have an exam. They

tested levels of sIgA in both groups prior to the exam and after the exam in the first group and what would be the same times in the control group. It showed that sIgA levels were lower in the group that had to take the exam. This shows that there were health problems (Deinzer & Schuller, 1998).

The the next study, researchers tested leisure-generated social support, and mental and physical health. Increased life stress was associated with enhanced depression and increased chances of health problems. Students from Tae Kwon Do classes were randomly selected and completed a self-report questionnaire about physical and mental health (Chun & Iso-Ahola, 1996).

In another study, results showed that there was a significant relationship between stress and illness. A health questionnaire was distributed to undergraduate students from an unspecified Midwestern liberal arts college. This questionnaire consisted of common campus illnesses and participants were asked to state how many times they had suffered from these symptoms in the past twelve months. The participants were also asked to complete a Life Experiences Survey with 57 questions about events experienced by participants during the past year. The correlational analysis supported the initial hypothesis that there is a positive relationship between stress and illness (Rawson, Bloomer & Kendall, 1994).

The last study examined the effects of social support on the mental and physical health of university students. They used a questionnaire with four levels about various different stressors to get their data. The results showed that there is a linear correlation to all four levels of the questionnaire. This proved that stress is correlated to mental and physical health (Jou & Fukada, 2002).

The researchers of the current study believe that participants with higher levels of stress will have lower levels of health than those participants with less stress. The researchers first debriefed each participant and asked them to sign two informed consent forms, then gave each participant a packet consisting of a stress test taken from www.arc.sbc.edu/stressquiz.html that was re-typed (see Appendix A), and a health questionnaire designed by the researchers that asked the participants to recall the number of times that they had experienced symptoms of the common cold in the past year (see Appendix B). After they finished these questionnaires, participants were given a feedback form and thanked for participating in the experiment. The researchers are trying to demonstrate that the more stress someone has the more likely he/she is to get sick.

Method

Participants

The forty participants were recruited for this experiment through the Human Subject Pool (HSP) as well as other students at Lindenwood University who volunteered to participate. The HSP is a program created at Lindenwood University to give undergraduate students an opportunity to earn extra credit points to put towards their classes. Students that are enrolled in Principles of Psychology, Sociology, and Anthropology are all members of the HSP. The participants that were not a part of the HSP were recruited in Dr. Tillinger's art history class and in the Butler Library. These participants were not compensated for their participation. Each participant was asked to verify that they were 18 years old or older.

Materials

The experimenters used a computer program, SPSS, to make a data sheet that they used to record the results of their experiment. A stress test was taken off of the web site, www.arc.sbc.edu/stressquiz.html, which was retyped. A health questionnaire was made up by the experimenters and typed on the computer. This questionnaire consisted of symptoms that are often felt by sick people. These would include: runny nose, sore throat, fever, vomiting, sinus pain and headaches. The participants were asked to state how many times they have had each symptom in the past twelve months. They were also asked to state how many times they have had more than one symptom at a time and rate on a scale of one to ten their overall health.

The experimenters used a computer to type informed consent forms and feedback letters that were given out to the participants. A black pen was provided for participants to use when signing the two informed consent forms and to complete the stress test and health questionnaire. A black pen was also used by the experimenters to record the data

The experiments took place in two different locations, depending on the day. One room was Y105 lab D and the second place was located in Butler Library. Y105 lab D was located on the first floor of Young hall in the psychology lab. The room had cream walls with a desk and chairs. It also had florescent lights. The room in Butler Library was small with a table and chairs. It also had florescent lights with white walls.

Procedure

The first step in the experiment was having the participant's fill out two informed consent forms, one for the participant to keep and the other for the experimenters' records. Before the actual experiment started the experimenters debriefed the

participants. The experimenters told the participants that they would be given a stress test followed by a health questionnaire and that this information was going to be used to see if there is any correlation between stress levels and the amount of times or severity of sickness.

Each participant was given the stress test and health questionnaire in the same order. The participants were given ten minutes to complete both items. After the participants finished each item they were given a feedback letter which gave them more information about the experiment and it also gave them information on when and how they can find out what the results of the experiment were. The experimenters then graded the stress test by adding up the participants ratings on each question and writing it down on the bottom of the stress test. After the experimenters did this they recorded the scores from the stress test and the participants' answers from the health questionnaire in the SPSS program.

Results

The experimenters hypothesized that the participants who scored higher on their stress test would be more prone to sickness. The results of this experiment were computed by using the computer software SPSS for Windows. The results of the data collected showed that the null hypothesis was rejected because the researchers supported their hypothesis. The data revealed that the higher the stress level the more often people experience symptoms of the common cold. A one-tailed Pearson Correlation was preformed on the participants' stress test score and their overall health rating. With the alpha level being .05 and the significance computed at .011 the researchers found

statistical significance. With r = -.361, it shows that the relationship is negatively correlated., because as stress increases, health decreases.

Discussion

The purpose of this study was to see if there is a relationship between stress levels and the number of times people have symptoms of the common cold. By giving the participants a stress test and a health questionnaire, the researchers were able to support their hypothesis that the more stress someone has, the less healthy they will be. The researcher's findings in the studies mentioned in the introduction are similar to the findings in this study.

With this information, people could start trying to manage their stress in order to keep illness at a minimum, as well as taking precautions to keep from getting stressed over illnesses. The researchers cannot confirm that one variable causes another, but can say that health and stress, at least, do influence one another. It would be impossible to say whether or not one causes another without further studies. More intensive research is needed to see if one variable causes another (i.e., stress causing illness).

The experiment could improve if the researchers would have been able to obtain participant's health history from a physician instead of a self-report. In addition, conducting a more intense stress test that would get more personal information about the stressors in the participants' life could be helpful. Also, more specific questions on the health questionnaire could improve the quality of answers received.

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Appendix A

Stress Test:
How Stressed Are You?

Rate yourself as to how you typically react in each of the situations listed below. There are no right or wrong answers.

4 = Always
3 = Frequently
2 = Sometimes
1 = Never

1. Do you try to do as much as possible in the least amount of time?
2. Do you become impatient with delays or interruptions?
3. Do you always have to win at games to enjoy yourself?
4. Do you find yourself speeding up the car to beat the red light?
5. Are you unlikely to ask for or indicate you need help with a problem?
6. Do you constantly seek the respect and admiration of others?
7. Are you overly critical of the way others do their work?
8. Do you have the habit of looking at your watch or clock often?
9. Do you constantly strive to better your position and achievements?
10. Do you spread yourself "too thin" in terms of your time?
11. Do you have the habit of doing more than one thing at a time?
12. Do you frequently get angry or irritable?
13. Do you have little time for hobbies or time to yourself?
14. Do you have a tendency to talk quickly or hasten conversations?
15. Do you consider yourself hard-driving?
16. Do your friends or relatives consider you hard-driving?
17. Do you have a tendency to get involved in multiple projects?
18. Do you have a lot of deadlines in your work?
19. Do you feel vaguely guilty if you relax and do nothing during leisure?
20. Do you take on too many responsibilities?

TOTAL: _____

Appendix B

Health Survey

In the past 12 months, how often have you had:

1. a sore throat?
2. a runny nose?
3. sinus pressure/headache?
4. vomiting?
5. a fever?

In the past 12 months, how often have you had 2 or more of these symptoms occurring together?

On a scale of 1-10, how would you rate your overall health in the past 12 months (1 being least healthy and 10 being the most healthy)?

Suicide As Covered in the Media

Jamie Gonzalez

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The media plays an important role in shaping the public about suicide. The media has a professional and moral obligation to report incidents of suicide in an appropriate manner. The Center for Disease Control has set forth requirements for the media; making recommendations about how incidents of suicide are best reported. In 1989, the CDC established these guidelines, yet many national newspapers are not following these requirements. This study explained that the media has not made any progress in this area since the CDC's recommendations. Thirty-six articles from three national, daily newspapers were critiqued with questions from the CDC's requirements. The study's hypothesis was not established, as there was minimal progress made since the 1989 recommendations, it is clear and evident that much progress is yet to be made.

The question of why people commit suicide has been asked for many years. Something to consider is how the media covers incidents of death by suicide. Understanding how the media reports incidents of suicide can be important in saving people's lives. By studying how people respond to reports of suicide, we will understand motives, intentions and methods for suicidal people. With this information, we can gain insight in order to prevent these tragic events.

The media plays an important role in informing and educating the public about suicide. Stories of suicide can provide insight to causes of suicide, warning signs, suicide rates and treatments. Media coverage can assist in preventing suicide; however, it also

has the ability to do harm. Media coverage on suicide has sparked a phenomenon called "suicide contagion."

Suicide contagion is a process by which exposure to the suicide or suicidal behavior of one person influences others to commit or attempt suicide. (Gould, 2001) Non-fictional articles, printed in national newspapers have been linked to a significant increase in suicides. In November, 1989, The Center for Disease Control, known as the CDC, endorsed a national workshop to address concerns and specific recommendations for reducing the possibility of media related suicide contagion. Many suicidologists, public health officials, researchers, psychiatrists, and psychologists assisted the CDC in establishing requirements for all media reports (see Appendix A). Even though this information has been provided to media institutions, newspaper reporters and the media establishments that they report for are not following the recommendations that the CDC has set forth.

Method

Materials

This study was performed from data gathered from various national newspaper articles. The articles were written about people who died due to suicide. These randomly chosen articles were retrieved from several databases and search engines, including 'NexisLexis' and 'America's Newspapers'. Articles were from three daily newspapers: *The St. Louis Post Dispatch, The Los Angeles Times, and the Chicago Tribune*. Articles retrieved were published from January 1, 1988 through February 28, 2005 (see Appendix C).

Procedure

Each article was critiqued by the researcher, with criteria determined by the Surgeon General's National Strategy for Suicide Prevention. For the purpose of this study, a 'critique sheet' was created with select 'categories' and 'questions' relevant to the criteria set forth. Six articles were chosen from each of the three newspapers before the CDC requirements. Six articles were also chosen from each newspaper after the CDC requirements. Two researchers evaluated each article to ensure there was as little bias as possible. Scores were taken from the second researcher, as there were more controls in the process. Scores were almost identical for both researchers. The critique sheet was created with consideration to the recommendations and requirements set forth by the CDC (see Appendix B).

The 'critique sheet' composed for this study was completed on each article. The critique sheet recorded the answers to the questions contained in each article. The data being reviewed were victim's age, gender, method of suicide, place of suicide and if a suicide note was found. Critique answers were evaluated and then were then recorded.

Answers are either 'yes' or 'no', with 'no' being the appropriate, recommended answer, according to the Surgeon General. The recommendations are from the Surgeon General's National Strategy for Suicide Prevention and the AFSP (see Appendix A). A grade is then established. Using these data and score, this study assessed how responsive media sources are to the recommendations given in order to prevent suicide.

Ten Symptoms of Depression

The Surgeon General suggested reporters consult with an expert on depression or suicide. They list 10 danger signs that a person is depressed. Although most depressed people do not commit

suicide, most suicidal people are depressed. Depression may be present if at least five of the following symptoms have been present nearly every day for at least 2 weeks: Depressed mood. Change in appetite or weight. Change in sleeping patterns. Speaking/moving with unusual speed or slowness. Loss of interest or pleasure in usual activities or hobbies. Decrease in sexual drive. Fatigue or loss of energy. Feelings of worthlessness , self-reproach or guilt. Diminished ability to think or concentrate, indecisiveness. Thought of death, suicide, or wishes to be dead. (from www.afsp.org/education).

6 Warning Signs for Suicide

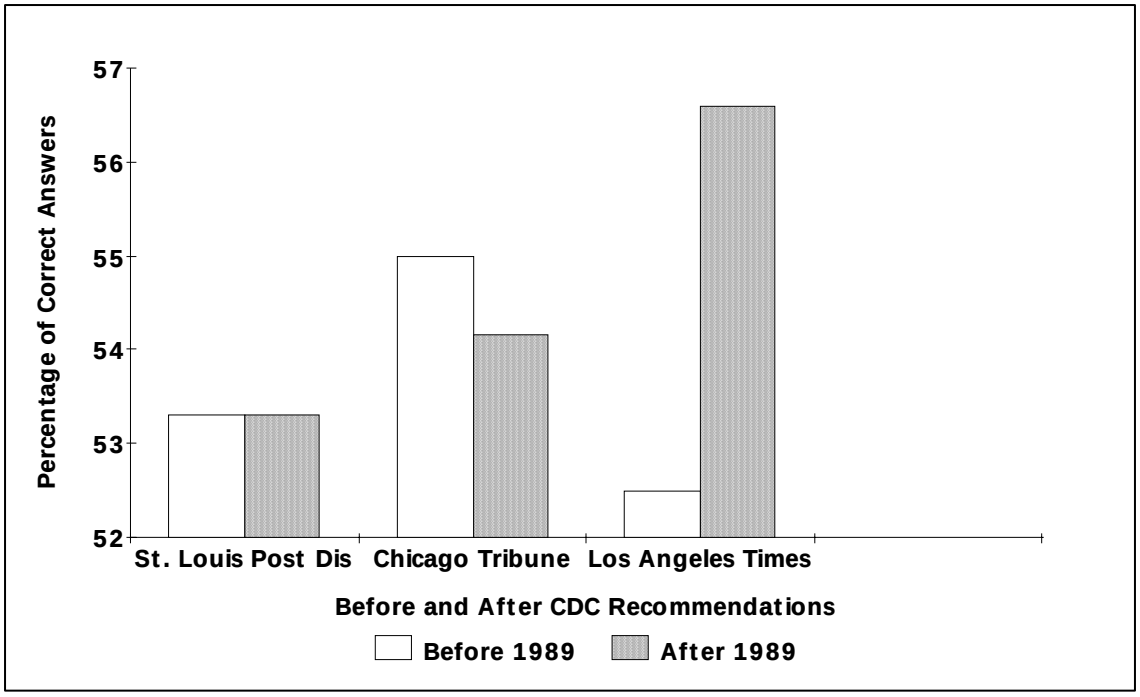
The Surgeon General has listed six signs of suicide crisis: A recent traumatic event such as the death of a loved one, or career failure, or a man's abusive behavior while drinking causes his wife to leave him. Intense Affective State/Depression Desperation – anguish plus rage, anxiety, guilt, hopelessness, acute sense of abandonment. Changes in behavior. Talk or Discussion – Talk or discussion suggesting the person is close to suicide. 'My family would be better off without me.' Talking as if they were 'going away' or saying 'goodbye.' Actions ranging from buying a gun to suddenly putting one's affairs in order. Deterioration in functioning – at work or socially, increasing use of alcohol, other self-destructive behavior, loss of control, rage explosions.(www.afsp.org/education).

Results

Scores comparing the three daily newspapers before the CDC requirements were as follows: St. Louis Post Dispatch 53.3%, Chicago Tribune 55.0%, and Los Angeles Times 52.5. With the same criteria applied after the CDC requirements, the newspapers scored as follows: St. Louis Post Dispatch 53.3%, Chicago Tribune 54.1% and Los Angeles Times 56.6% (see Figure 1). The average score before the CDC requirements was 53.6%. The average score after the CDC requirements was 54.6%. There was a minimal difference of 1% from all articles written before the CDC recommendations to after the recommendations. Considering each newspaper separately to assess for any

progress in commitment to follow CDC requirements, the St. Louis Post Dispatch had 0% change. The Chicago Tribune had .84% increase in compliance. The Los Angeles Times had an increase of 4.1% in compliance.

Figure 1. CDC compliance before and after CDC recommendations



Discussion

Though the purpose of the study was to show that the media has not made any improvement in how they report suicides in newspapers, the scores show a minimal increase of 1% from before the CDC requirements were put in to place to after the recommendations came out in 1989.

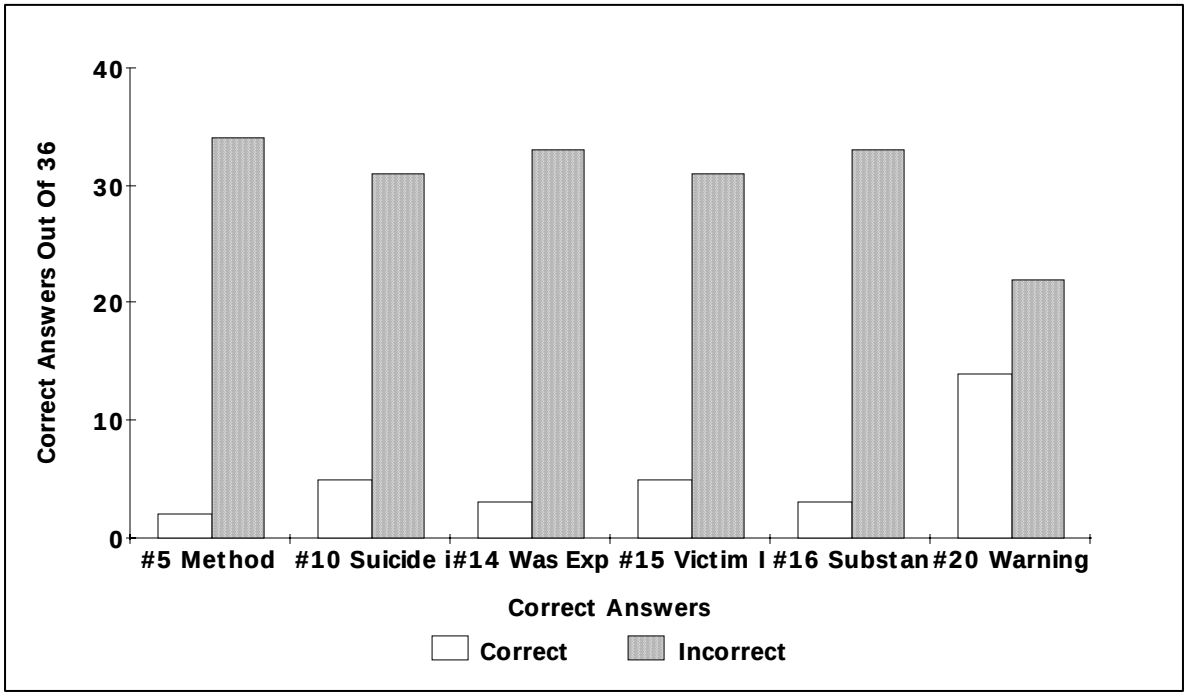
When considering before and after the CDC requirements, there was no difference in the score that the St. Louis Post Dispatch earned. The Chicago Tribune actually went down .84%.

The Los Angeles Times, however, had the worst compliance score before the CDC recommendations, yet improved the most with an increased score of 4.1%.

Even with these improvements, it is still important to mention that the average total score was only 54.6%, showing that most newspaper articles got only about half of the questions correct. There was a median score of only 53.0% for all articles.

Another interesting factor was which questions the newspapers typically missed. Although most scores were low, they were also very consistent throughout all the newspapers. The questions missed the most in each article were Question 5 and Question 19. Question 5 asked if the article indicated the method that the person committed suicide. Only 2 out of 36 articles were written correctly according to the CDC. Question 19 asked if the writer of the article took the time to ask if the family of the person that committed suicide had any mental disorders or symptoms of depression. Only 1 out of 36 answered this question correctly (see Figure 2).

Figure 2. CDC compliance by question type



Another pattern of answers indicated that most reporters/writers need additional training in the area of mental health issues. Questions that relate to mental health were not asked/reported correctly, according to the CDC recommendations. Scores indicated that hardly ever did the reporter/writer ever consult an expert in mental health to better understand or report the suicide. Most of the time, reporters/writers did not investigate if there were past mental health issues or substance abuse issues. These mental health issues are very important when reporting suicide, however, they were the most commonly missed questions in this study.

Finally, the scores indicated that reporters/writers are doing a poor job of picking and choosing headlines regarding suicide. The CDC suggests that newspapers do not use the fact a person's death was due to suicide in the headlines. Only 5 out of 36 articles followed this recommendation. This is the first thing that people reading the newspaper will notice, and it was only found in compliance 13.8% of the time.

Morally and professionally, the media must require their reporters and writers to comply with CDC requirements. The purpose of these requirements, according to the CDC is to lower the risk of additional suicides from sensationalism or contagion. It is disappointing and socially irresponsible that the media is not doing more to stay in compliance.

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Appendix A

Recommendations/Requirements

Avoid Sensationalization with Graphic Detail
In one article, the method was mentioned many times in graphic language/wording. "He leapt to his death"… and "He jumped onto the tracks and was killed instantly, as the train was traveling 60 miles per hour". Another article was called 'A Kiss Before Dying'. The article was about a couple that committed suicide together. These articles contained unnecessary uses of wording and description that promoted sensationalism.

Do Not Describe a Memorial For The Victim
One article devoted three paragraphs to discuss a makeshift memorial at the train station where a suicide occurred. It also included descriptions of personal items and gifts left at the funeral home. Nationally accepted recommendations for reporting suicide explicitly warn that dwelling on the memorializing details of a suicide have a danger of encouraging suicide contagion and/or copycat suicides.

Do Not Describe People Grieving Over Victim
After a suicide, one article discussed 'hundreds of parents with their arms slung around their children's shoulders… groups of teens hunched closely together'. This description has the risk of leading young people to see suicide as a way of getting the attention that they think is otherwise not available.

Do Not Refer To Suicide in Headlines
One article headline read 'Former Enron Vice Chairman Commits Suicide'. Recommendations from the Surgeon General state that 'suicide' or the method of death should not be in the headline, but included appropriately in the body of the article.

Avoid Portraying Suicide As Heroic
One article headline reads "With Suicide, an Admiral Keeps Command Till the End." This suggests that the courage and emotional control he displayed during times of war were the same heroic virtues that motivated his joint suicide with his wife.

Romanticized Coverage
In an article about the double suicide of two young people who were dating, the article quoted a friend as saying the suicide was a 'Romeo and Juliet thing… they would not allow anyone to keep them apart and they kept their word.' This romanticized the story and has great potential to encourage imitation suicides.

Do Not Include Pictures of Suicide Victim
An article titled 'A Kiss Before Dying' included a picture of the victim with very detailed description of the suicide method. It is said that by including pictures of the victim, others will begin to identify with the victim. This encourages imitation suicides. Pictures should never be included in public media articles.

Do Not Include Pictures of Place Suicide Occurred
An article about a model that jumped to her death from a 24 story building included an actual picture of the victim, jumping to her death. This picture was on the front page. This has several negative effects to the reader. The reader may be traumatized from seeing an actual suicide act. Children may see the picture and have the same repercussions. Finally, it could sensationalize the notion of suicide and encourage imitation or copycat suicides. It lends to the idea that the victim received a lot of publicity and attention from committing suicide.

Do Not Discuss Method of Suicide
It is believed that the danger in imitation suicides and copycat suicides are substantially greater when the article contains detailed descriptions of the method of suicide.

Do Not Portray Suicide as Inexplicable
Reporting suicide as the inexplicable act of an otherwise healthy or high-achieving person may cause identification with the victim.

Must Provide Clear Statistics That Public Can Understand
An article headline reads '11 Years, 11 Suicides'. Based on 10 undergraduate suicides over 11 years, the article concluded that suicide was a greater danger at MIT than anywhere else. When one considers that science and business students have considerably higher suicide rates that liberal arts students, and that male college students kill themselves five times more often than female college students, the figures quoted prove nothing. MIT is cited as currently being composed of 59 percent male students; that fact alone would make the suicide rate differences with most other colleges understandable. Statistics can be very misleading if not written correctly and misunderstood.

Media Should Consult A Professional Regarding Suicide/Depression – 10 Signs of Depression
One article stated that the victim did not leave a note, and no one that knew him thought that he had any depressive symptoms. The article said the 'circumstances around his death were unclear.' No medical experts on depression or suicide were consulted, leaving this article with little creditability in examining the victim's motives.

Include If Victim Received Treatment for Depression/Mental Disorders
Articles should include information about whether or not the victim has had past/current treatment for depression or other mental illness, as it could assist in showing cause. Over 90 percent of suicide victims have a significant psychiatric illness at the time of their death.(CDC) It is also thought that if this information is included, readers will be exposed to the idea that if you are depressed or mentally ill, that it is appropriate and preferable for you to get treatment. Treatment can help prevent suicides.

Discuss If Victim Had Issues of Substance Abuse
One article discussed a suicide victim with a $300 a day drug habit, but did not report that anyone tried to get the victim help. The article did not inform the reader that drug abuse is a problem that half of suicide victims have. Recommendations by the Surgeon General state that many of the people who are suicidal have or did have substance abuse issues. This could help establish cause. People that have a mood disorder with substance abuse issues are at even more risk of committing suicide.

Report Should Include Options For People, Other Than Suicide
The writer should discuss that there are options for people that are depressed, besides suicide. People should be encouraged to talk to family/friends or to seek professional help.

List Any Recent Struggles Victim May Have Had
One article discussed an Enron executive that committed suicide. The family stated that the victim was frustrated and distraught over the fact others were abusing company money and he could not do anything about it. Family said that the frustration of his struggle caused the depression that led him to suicide.

Report Any Family History of Mental Disorders/Suicide
Depression has genetic and environmental links, so establishing whether or not family members suffer from depression or other mental illness could assist in understanding motives and causes.

Report Any Warning Signs – 6 Warning Signs
Suicidal people tend to show some signs/symptoms of their decision. Reporting any warning signs could show cause and motive, as well as teach the readers about what signs to watch out for. Also, acknowledging the victims problems and struggles as well as the positive aspects of their character contributes to a more balanced picture.

Scapegoating/Placing Blame
An article about a female college student that committed suicide reported many comments from the parents. These comments made it seem that the school was responsible for her death, as they did not require her to be hospitalized, nor did they contact the parents about any possible mental health issues. (The victim was over 18 years old and there are laws about confidentiality). The parents also blamed past physicians for her death. It is common for parents of suicide victims to want to blame others, but journalists must be careful when quoting people… to discuss and determine what is someone's opinion and what is factual.

Sensitive Language/Wording
Do Not Use the Words 'Committed Suicide'. The Surgeon General's recommendations suggest that using the words 'committed suicide' imply that the victim committed a criminal or sinful act. It is suggested that reporters use words like 'having died by suicide'.

Appendix B

Critique Sheet Questions

Article #: _____ **Grader #:_____**

SENSATIONAL W/ GRAPHIC DETAIL/ROMANTIC = _____of 7 = _____

1) Does article portray suicide as romantic?

2) Does article portray suicide as sensational?

3) Does article provide pictures of the suicide site?

4) Does article show pictures of suicide victim?

5) Does article discuss the method of the suicide?

6) Does article portray/describe people grieving over the victim's death?

7) Does the article describe a memorial for the victim?

VARIOUS/OTHER = _____ of 6 = _____

8) Does article portray suicide as heroic?

9) Does article suggest that someone/some place played a role in blame because they did not do enough to help prevent suicide?

10) Does article refer to the suicide in the headline of the article?

11) Does article use the words 'committed suicide'?

12) Does the article contain inconsistent statistics?

13) Does the article contain hard to understand information?

MENTAL HEALTH ISSUES = _____ of 7 = _____

14) Did the writer publish article without consulting an expert on mental health?

15) Did the writer publish the article without including if the victim ever received treatment for mental disorders?

16) Did the writer publish the article without suggesting whether the victim had issues of substance abuse?

17) Did the writer publish the article without suggesting that others seek treatment to get help rather than take one's own life?

18) Did the writer publish the article without acknowledging the victim's current struggles?

19) Did the writer publish the article without reporting if any family members have suffered from any mental disorders?

20) Did the writer publish the article without asking if the victim had any warning signs?

Appendix C

Articles Critiqued

1) Pair With Tax Debt Kill Selves In Texas. (1988, February 14). *St. Louis Post Dispatch*, p. 8C.

2) Mental Patient Hangs Himself in Hospital. (1988, April 3). *St. Louis Post Dispatch*, p. 6D.

3) Man Kills Himself In Florissant Jail. (1989, February 16). *St. Louis Post Dispatch*, p. 6A.

4) Boy, 14, Kills Self In Jefferson City Classroom. (1989, March 15) *St. Louis Post Dispatch*, p. 1A.

5) Coroner: Abbie Hoffman Killed Self With Drugs. (1989, April 19) *St. Louis Post Dispatch*, p. 17A.

6) Man Kills Self To Save Kin, But All Is In Vain. (1989, December 21) *St. Louis Post Dispatch*, p. 13A.

7) Suspect Commits Suicide Before Arrest. (1989, March 19) *Chicago Tribune*, p. 3.

8) Man Enters Lion's Den In Apparent Suicide. (1989, March 26) *Chicago Tribune*, p. 24.

9) Woman Dies In Leap At State Building. (1989, April 11) *Chicago Tribune*, p. 19.

10) Man Found Hanged In Public Lockup. (1989, November 30) *Chicago Tribune*, p. 3.

11) Tennessee Officials Dies Of Self-Inflicted Wound. (1989, December 21) *Chicago Tribune*, p. 4.

12) Teen On Bus Shoots Schoolmate, Kills Self. (1989, December 6) *Chicago Tribune*, p. 11.

13) Man Shoots Woman, Turns Gun On Self. (1989, October 28) *Los Angeles Times*, p B3.

14) Man Jumps To Death In Anaheim. (1989, October 30) *Los Angeles Times*, p. P1.

15) 2 Kill Selves, 1 Seized After Police Chase. (1989, November 6) *Los Angeles Times*, p. A23.

16) Hong Kong Double Suicide. (1989, November 16) *Los Angeles Times*, p. A12.

17) Pastor Facing Trial Apparent Suicide Victim. (1989, December 1) *Los Angeles Times*, p. B1.

18) Officer Unable To Stop Suicide. (1989, December 1) *Los Angeles Times*, p. P2.

19) Two Men Kill Themselves After Confrontations With Police. (2004, February 14) *St. Louis Post Dispatch*, p. 14.

20) Youth Couldn't Solve Depression. (2004, May 7) *St. Louis Post Dispatch*, p. A1.

21) Most Famous Unknown Artist In America. (2004, July 23) *St. Louis Post Dispatch*, p. E3.

22) Family Tells Of Tragedy. (2004, September 14) *St. Louis Post Dispatch*, p. A2.

23) Cathedral Standoff Ends With Suicide. (2004, December 18) *St. Louis Post Dispatch*, p. 28.

24) Boy Who Died In Center Was Upset, Police Say. (2005, February 5) *St. Louis Post Dispatch*, p. 8.

25) Georgian Upset By Election Kills Self At Ground Zero. (2004, November 19) *Chicago Tribune*, p. 13.

26) Cops: Man Kills 2, Then Self At Store. (2004, November 19) *Chicago Tribune*, p. 25.

27) Man Critically Wounds Wife, Fatally Shoots Self. (2004, November 22) *Chicago Tribune*, p. 3.

28) Husband Shoots Wife, Self In Home. (2004, November 23) *Chicago Tribune*, p. 1.

29) Family Suffers A 2nd Tragedy. (2004, December 10) *Chicago Tribune*, p. 3.

30) Jail-Cell Hanging Ruled A Suicide. (2005, February 10) *Chicago Tribune*, p. 3.

31) Mental Patient Dies In Harbor-UCLA's Psychiatric ER. (2004, November 3) *Los Angeles Times*, p. B3.

32) Death Row Inmate Found Hanging In Cell. (2004, November 4) *Los Angeles Times*, p. A12.

33) Man Shoots And Kills Officer, Takes Own Life. (2005, January 1) *Los Angeles Times*, p. A26.

34) Friends, Colleagues Recall Veteran FBI Agent At Memorial. (2005, February 5) *Los Angeles Times*, p. B6.

35) 3 Found Dead In Oxnard In Apparent Murder-Suicide. (2005, February 15) *Los Angeles Times*, p. B3.

36) Man Kills Estranged Wife, Small Children. (2005, February 21) *Los Angeles Times*, p. A14.

How Males and Females Feel About Body Image

Hannah Briscoe and Cadey Kuehnel

Lindenwood University

We wanted to see if the participants have a low or high body image. The participants were asked questions determining how they feel about their body image and others around them. Our hypothesis is that the younger participants will have a lower body image then those older, males will have a higher body image than females and seniors will have a higher body image than freshmen. The subjects were from the Human Subjects Pool at Lindenwood University consisting of general psychology, Anthropology, and Sociology classes. Our findings were significant with our hypothesis.

How do males and females differ with their attitudes on body image? That is what we are trying to figure out. Many studies have investigated this question. Most studies combined proved one thing in common; body image has been defined as being multidimensional, including components such as physiological, psychological and sociological (Cash, 1994; Cash & Pruzinsky, 1990; Parks & Read, 1997, cited in Hoyt, 2001). "In general, body image is one's body, particularly its size, shape, and aesthetics; it refers to individuals' evaluations and affective experiences regarding their physical attributes" (Cash, 1994; Cash, Ancis, & Strachan, 1997 as cited in Hoyt, 2001).

Hoyt (2001) wrote in an introduction about how relationship satisfaction and body image relate in male and female college students. The implications for studying attitudes about body image and how it reacts to relationships is enormous. It is human nature to base first impressions on physical appearance. The article goes on to tell how women are

more dissatisfied with their body images, while men are more dissatisfied with their relationships and sex lives. Hoyt (2001) created a 24-item questionnaire to assess participants' satisfactions with 15 specific body parts. The participants were asked to rate each item on a six-point scale (1-extremely satisfied to 6-extremely dissatisfied). The main point is to show that both men and women are dissatisfied consistently with the "ideal" body parts that are emphasized in society. What American society views as "ideal" is to be tall, skinny yet lean.

McCabe (2001) studied the influences on body image strategies to increase/decrease body size among adolescent boys and girls. There has been recognition of behavioral problems among males in ways of increasing muscle tone and weight gain. In the past, society has always been more concerned about females and their eating habits. McCabe (2001) had the participants complete the Body Image and Body Change Inventory (Ricciardelli & McCabe, 1999) and the Sociocultural Influences on Body Image and Body Change Questionnaire (McCabe & Ricciairdelli, 2001). These tests assess the following: body image satisfaction, body image importance, body change strategies to decrease weight, body change strategies to increase weight, body change strategies to increase muscle tone, binge eating, food supplements, the influence of father, the influence of mother, best male friend, best female friend, and the media. This study supported her hypothesis and other studies regarding sociocultural influences.

Men and women have different strategies to achieve the "ideal" body image. Men try to increase weight and muscle tone whereas most women try to do the opposite. It seems from the findings in this study that girls are more at risk to be influenced by sociocultural influences than boys are. Girls are more influenced by media, parents and

peers than are boys. Another interesting finding from this study is both boys' and girls' dissatisfaction with their body, and the use of supplements and/or strategies, increase with age.

Turner (1997) did a study involving 49 undergraduate women on body image. The women were divided into two groups: one half to a fashion magazine group and the other half to a news magazine group. Fashion magazines included Vogue, Allure, Elle and Bazaar; the news magazines included Time, Newsweek, Business Week and U.S. News and World Report. After looking at these magazines while sitting in a waiting room (the kind of magazines left in the room depended on what group the female was in) the girls were given a questionnaire to fill out. The findings were consistent with the hypothesis: body image satisfaction is influenced by exposure to the "ideal" body presented in the media. Those girls who read the fashion magazine desired to weigh less and held more negative beliefs about themselves than those who read the news magazines. The women in the study did not differ significantly in height or weight. Women became much more conscious about their own body; their self-esteem, self-perception and their own identity development were affected negatively after viewing fashion magazines. It could be conclude that anything that portrays the "ideal" body image will have the same negative affect.

The goal is to find out how the undergraduates at Lindenwood University feel about their own body image and those around them. The reason we choose this topic is because we are personally curious because both of us are highly concerned about our own body image. In this experiment, we are trying to see the differences between men and women's body image, and if they are concerned with others' body images. We believe

that people who are concerned work on their own body will also be concerned and focus on others' appearances than those dissatisfied.

Method

Participants

Participants were recruited from the Human Subject Pool (HSP) at Lindenwood University. The HSP consists of all students enrolled in Introduction Psychology, Sociology, and Anthropology. A sign up sheet was put up on the HSP bulletin board so the participants could sign up for a time that works best for them. They had an incentive of extra credit points toward their respective introduction class. There were 30 participants for this experiment 15 females and 15 males.

Materials

Our experiment requires an informed consent form, and a questionnaire (see Appendix A) that includes questions about how an individual feels about their body. A desk is needed in a room in the psychology lab at Lindenwood University. A pen or pencil was required to write with. An informed consent form was given prior to the questionnaire and the feedback letter was also provided after the questionnaire was completed, along with the extra credit slips provided by the Human Subject Pool.

Procedure

Our data was taken from the subjects that signed up through the Human Subject Pool. The subjects made an appointment on the sign up sheet that we created and the subjects then proceeded at their designated time to the experimentation room.

Once the participant arrived s/he received an informed consent form and was asked to read and sign it. The experimenters then asked the participant to fill out the

questionnaire as honestly as s/he could. All of the data were kept anonymous. After the questionnaire is completed they are given a feedback letter and asked if there were any questions about the experiment. The experimenters gave the participant an extra credit receipt and then will dismiss the participant.

Results

A total of 30 participants completed this questionnaire; 15 males and 15 females participated. The participants were divided into five groups based on their perception of their body. Those with a total points of 0-20 were classified as extremely low, 21-40 low, 41-60 moderate, 61-80 high, and 81-100 extremely high.

Overall there were 13 males with a score of high and two males with extremely high ratings of body image. Four females had scored in the moderate range, ten scored high, and one with the rating of extreme.

We found that there was a moderate positive, yet significant correlation, $r = .242$, between ages and total body image scores. The mean age was 20.23. We did an independent one-tailed t-test for gender and the total body image score was our dependent variable and gender was the independent variable. We found a significant sex difference, $t(28) = 2.177$, $p=.038$. We found a mild, significant correlation between year of school and total body image score, $r = .194$. The mean year in school was 1.67, which would make it mostly freshmen.

Discussion

The results of the experiment show our hypotheses are correct with males' and females' attitudes on body image and age also plays a role in the differing attitudes. Consistent with our hypothesis that males will have a higher body image than females, it was found that female's attitudes on body image is, indeed, lower than males. The results also supported our hypothesis that the younger participants will have a lower body image then those older and our hypothesis that seniors will have a higher body image than freshmen was still significant but not as strongly correlated as the age difference. One reason for that may be because age is sensitive and it is possible that a freshman may be 25 years of age.

The limitations for this experiment were few but we felt the results were still accurate. First, we did not have very many females that signed up for our experiment. With 15 subjects there was not a strong correlation where as if it was 25 to 30 females. Also our experiments were ran in the psychology lab using the HSP subjects, so maybe if it was handed out in a classroom setting we would of had more subjects.

For future experiments it would be interesting to explore this same topic but with a broader group of people and ages. Some of the participants did not understand a few of the questions and if we were to do it again we would go back and re-look the questions that we choose. We would also like to use a more standard test that enables better scores.

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Turner, S. L. (1997). The influence of fashion magazines on the body image satisfaction of college women: an exploratory analysis. *Adolescence,* 1-6.

Appendix A

Questionnaire

DIRECTIONS
Fill out this questionnaire as honestly as you can, it will remain anonymous so no one will be aware of whom filled this out. On the questionnaire section, the rating scale goes from 1-5. 1 being never, 3 being your neutral, and 5 being always, 2 and 4 are in between, just circle which one you feel best fits how you think.

DEMOGRAPHIC QUESTIONS:

What is your age? _____

What is your gender? M / F

What year are you? _____

QUESTIONNAIRE:
1-never, 3-neutral, 5-always, 2 and 4 in between thoughts.

1. I am comfortable with my body. 1---2---3---4---5
2. I am aware of my surroundings while shopping. 1---2---3---4---5
3. I am happy with my weight. 1---2---3---4---5
4. I take chemical measures to control my weight. 1---2---3---4---5
5. I exercise as a way to control my weight. 1---2---3---4---5
6. I think about what I am going to eat. 1---2---3---4---5
7. I worry about my weight daily. 1---2---3---4---5
8. The sizes of clothes I wear make a difference to me. 1---2---3---4---5
9. I feel self-conscious with my body. 1---2---3---4---5
10. I worry about becoming overweight. 1---2---3---4---5
11. I think that if I am overweight people will be prejudiced against me. 1---2---3---4---5
12. I think that thinness equate with success. 1---2---3---4---5
13. Either one or both of my parents was concerned with my weight. 1---2---3---4---5
14. I work out to control my weight. 1---2---3---4---5
15. I skip meals if I feel like I already ate too much. 1---2---3---4---5
16. My initial impression is based on looks. 1---2---3---4---5
17. I feel most people I encounter look better than me. 1---2---3---4---5
18. I compare myself to others of the same sex. 1---2---3---4---5
19. I try to make myself look like others. 1---2---3---4---5
20. I try to please others with my looks. 1---2---3---4---5

The Stroop Task: Gender Differences between College Students

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There were six male and six female students from Lindenwood University that participated and they were recruited through the human subject pool office. The hypothesis tested was that females are faster at completing the Stroop test than the males. The students were presented with a color key that had the numbers that matched the colors they were required to correspond with onto the computer monitor. There was a practice session at the beginning and then condition one that contained four color-words, red, blue, green and yellow that were printed in any one of the other colors stated above, totaling to 12 words. The second condition contained 4 color-words printed in black, totaling the stimuli to 12 to words. There was no significance found in any of the trials.

Are there any differences between male and female college students when it comes to the Stroop Task? The Stroop Task is a color-word interference test that measures reaction time in identifying the color of the word versus reading the color. It is a psychological test of our mental strength and flexibility. The task takes advantage of our ability to read words more quickly and automatically than we can name colors. The purpose of this study was to test the Stroop effect on gender among college students. This study was used to test whether gender differences affect our automatic process of reading, if this process is immediate and cannot be prevented or interrupted, with speed and accuracy as variables. This experiment is worthy for investigation because it could help teachers and other educators understand gender differences in certain tasks, which

could be accommodated for in the classroom. It also would help in student placement in educational settings in different levels of reading skills.

The original experiment was performed by J. Ridley Stroop in 1935. Since then this has become one of the most famous effects in all of psychology. When John Ridley Stroop created his test in 1935, he used five words for the basis of the examination: red, blue, green, purple, and brown. He first asked participants to read the list of words as fast as they possibly could. In this first test, the colors of the words were congruent with the color-word (i.e. a red ink was used to write the word "red"). As for the second test, the color of the ink used was incongruent with that of the color-word (i.e. the word "green" was written in a blue ink). This time he asked the participants to say aloud the color they perceived instead of the word. In his conclusion, Stroop stated that incongruency of colors and color-words resulted in a longer response time, but that participants could adjust to the incongruency and reduce response times. (MacLeod, 1991).

"Current research on the Stroop effect emphasizes the interference that automatic processing of words has on the more mentally "effortful" task of just naming the colors. The task of making an appropriate response when given two conflicting signals has tentatively been located in a part of the brain called the *anterior cingulate*. This is a region that lies between the right and left halves of the frontal portion of the brain. It is involved in a wide range of thought processes and emotional response" (This study dealt with color- words; red, blue, green and yellow, that were printed or displayed in a color different from the color it actually named; for example, the word "**red**" was written in **blue ink,** one was likely to say the word "red" more readily than naming the color in which it was displayed, which the case was "blue." The study was not modified and was

like that of Stroop's original test. Gender was recorded to account for differences in males and females (not recorded by Stroop), but only university age students were tested, therefore, age was not taken into consideration (nor was it a consideration for Stroop) and could affect the conclusion based on such response times.

The hypothesis tested was that the female students were faster than male students. A review of the Stroop effect literature stated that, "there are no sex differences in the Stroop interference" (MacLeod, 1991). In another article by (Sarmany, 1977), found that "women performed significantly better on all the five repetitions (of a color-word test) than men". In another study done, "women were consistently faster than the men over the trials" (Mekarski & Cutmore, 86).

Six male and female students from Lindenwood University participated, and ranged from freshmen to junior class as they represented the median age group and they were recruited through the human subject pool office. The students were presented with a color key that had the numbers that matched the colors of which they were required to press on the computer monitor. The colors and number keys presented were red was 2, blue 4, green 0 and yellow 8.

Method

Participants

The participants in this study were 12 students, (6 males and 6 females) recruited from Lindenwood University's Human Subject Pool. They ranged from freshmen to juniors who were enrolled in Psychology 100 and 101, Anthropology 112 and Sociology 102. For their participation, each participant received one bonus point toward their respective course.

Materials

The experiment was carried out in the psychology lab that is located in Young Hall in Lindenwood University's main campus. The room contained one computer, two chairs and one desk that contained the feedback letters, informed consent forms, participant receipts. A pen was used by the participants to fill in the forms named above, a note book for the experimenter to record the data after the completion of the experiment and a floppy disk that was used to save the data from the computer.

Procedure

Each participant was asked to read and sign the informed consent form first as the experimenter set up the program on the computer. Participants were tested individually. Each participant was presented with color stimuli presented on the computer monitor. There were 2 conditions and one practice condition, each with 12 stimuli. The practice condition contained color-blocks that were red, blue, green and yellow. The first condition contained the color-words, red, blue, yellow and green that were written in colors that differed from the color written. For example, the color-word "blue" was written in either of the other colors named previously in random order, this been repeated for the other colors, having each color written in three different colors for a total of 12 words (stimuli). The second condition contained the same color-words named above, written in black, having a total of 12 words (stimuli).

The participant's task was to press the key on the computer key board that corresponded to the color being presented. The color key was red=4, blue=2, yellow=8 and green=0. It was emphasized that they should always report its color for the practice and condition one and for condition two, report the word of the stimulus. During the

experiment, the color key was presented at the beginning of the experiment during the practice session as they were required to know the correct keys without the key for the other conditions. The program was recording their number of errors, average of correct and incorrect time in each of the conditions.

The experimenter recorded on a separate sheet of paper the gender of the participants as they took the experiment because the program only recognized the participants as numbers.

Results

The data were compiled using the SPSS program, which aided in the computation of results by conducting multiple independent t-tests. The degree of freedom was 10; the level of significance used was at the .05 level and the N group was 12 (6 males and 6 females). The dependent variables that were measured included, the number of errors in condition one. This is amount of time recorded for the number of wrong stimuli each participant had in condition one. There was no significance found as $t_{(10)} = .729$, $p > .05$. The number of errors measured in condition two was $t_{(10)} = .985$, $p > .05$, thus no significance. The variable that measured the speed in which the participants corresponded the correct keys to the matching color words was recorded as the average correct time in condition one (in sec), and was $t_{(10)} = .839$, $p > .05$. There was no statistical significance. The average correct time in condition two (in sec) was calculated and found to be $t_{(10)} = .-1.302$, $p > .05$, no significance was found.

The amount of time that the participants corresponded the wrong keys with the color words was recorded as the average incorrect time in condition one (in sec) and was found to be $t_{(10)} = 1.093$, $p > .05$, finding no significance. The average incorrect time in

condition two (in sec) was $t_{(10)}$=--.977, p>.05. There was no significance found in any of the trials/conditions stated above, thus accepting the null hypothesis.

Discussion

There was no significance found due to a number of probable reasons. First, the number of participants was small thus creating a limited sample. Some participants that had signed up for the experiment were not sampled as the program, (the Stroop Task) on the computer that was used for testing was deleted and hence the participants were compensated for their effort and their willingness to participate. Some of the participants tested were international students who did not understand the directions handed to them at the beginning of the experiment, thus they asked many questions as the experiment was running and making many mistakes along the way. Other participants carried out the experiment at later times of the day, either at noon or early evening, and were exhausted and thus not been able to remember the color-key, which lead them to ask for assistance and delaying their time response.

If this study is to be replicated and carried out in the future, color-vision should be a factor that would interfere with results and should be addressed in the informed consent or the participants should be asked before the experiment. For example, the time that the participants are recruited should be controlled, that is have a specific time, be it morning or mid-noon that ensures that the participants' minds are fresh and undistracted. There should be set instructions that should accommodate international students who are having problems with the instructions. The practice time should be more extensive for the participants to be come more familiar with the keys and corresponding colors.

Another probable cause of accepting the null hypothesis is, past experiments were carried out using stimuli that was represented on cards not computer; thus having a difference in materials and procedure, hence creating room for error this indicating more research using stimuli on computers is need.

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Are You Up To Date?

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If an individual is up to date on current events, it makes it easier to carry on or even start a conversation with another individual who is also up to date. The researchers feel that individuals aged 40 and over are more up to date on current events than those ages 18-25. In the current study, 46 participants; 26 participants aged 18-25 years old and 20 participants aged 40 years and older, recruited from the St. Charles area, took a ten question questionnaire on current events. The participants were divided by age and gender, so the study had a representative sample. Results showed t (44) =2.888, p=.003. The researchers had to reject the null hypothesis.

Typically, current events are known more by those who are 40 years and older than those who are in the 18-25 age group. If the hypothesis is supported, further studies can be conducted on why older adults are more up to date on current events than college level students, and how college level students can become more up to date. The hypothesis of this study was, older adults, 40 years and older, are more knowledgeable about current events than college age adults, 18-25 years. Current events were US local political events, along with entertainment 1 to 2 months old.

In study conducted by David Tewksbury (2003) states that Americans rely on the internet more than the newspaper or the news on television. It also stated that individuals found their news on the internet and often visited sites of the traditional media, not Internet outlets (Tewksbury, 696). The sites visited also included websites of national

In 1996 Jennings conducted a study to know if younger individuals, age groups not specified, knew more about politics and the current political issues than older adults, again, age groups not specified in the article. They used three different generations over time. The researchers used three different categories of knowledge; textbook knowledge, surveillance/current event knowledge, and collective memory/historical facts. The researchers found that younger individuals lacked the political knowledge than that of older adults.

Basil and Vincent conducted a study in 1997 that tested the use of news media and the gratification theory, a theory that states immediate satisfaction in order to achieve a reward. Also, the longer an individual is being educated the more knowledgeable the individual is as far as adult news. The study wanted to show the correlation between media use and the year in college, and it was proven that it was consistent with the gratification theory. The objective of this research was to explore patterns of usage of news media by college students and the relationship between traditional news gratification functions. In this study the researchers used a survey that was published in Time Magazine, Summer Events Quiz, 1999, to gather the data for the research. The researchers did find a correlation between the years of college and media use does grow with the years in college.

The general methodology of this study was participants were given a survey, in which the participants remained anonymous to where the data and the Informed Consent

Form were not placed together and were randomly placed in the folder, therefore there was no way to match up the Informed Consent Form and the questionnaire. Each participant filled out a questionnaire on current events to the best of their knowledge. The questions were designed to test the participant's knowledge of current events. There were questions that pertained to current events involving both age levels that were being tested. The experimenters conducted research on current events within the United States and covered on news casts, stories headlined in the newspapers, the St. Louis Post Dispatch and/or on the internet daily, including websites such as: www.msn.com, www.stltoday.com, and www.cnn.com.

The experimenters believe that younger adults, ages 18-25, are not up to date due to the fact they do not have a lot of time on their hands to sit down and watch or read any of the news topics. However, those who are ages 40 years and older do have the time to sit down at night and watch the evening news. If this is true, society should do further research to figure out why the younger adults are not as informed about current events than the middle aged adults are. The general purpose of this experiment was to see if in fact the middle aged adult population, ages 40 and older, are more knowledgeable about current events than college aged individuals, 18-25 years of age.

Method

Participants

The participants that were used in this study were 26 undergraduate students, both male and female participants, between the ages of 18 and 25; and 20 local adults, both male and female participants, that were 40 years or older. The participants were recruited randomly on the campus of Lindenwood University and in the local St. Charles area. The

researchers randomly asked students on Lindenwood University's campus. As far as the individuals ages 40 and older, they were recruited by just randomly asking individuals to fill out the questionnaire.

Materials

The participants took a ten-question questionnaire to test their knowledge of current events (see Appendix A). The survey consisted of ten multiple choice questions on current events such as, The Governor of Missouri is? Who is currently the Attorney General? as well as, What two major cell phone companies just merged? Following each question there were four choices to choose from, and the participant had to choose which response they found the most correct out of the four.

For the individuals at Lindenwood University, there was a table or desk that was used for the participant to take the questionnaire on, and a chair to sit in while the participants completed it. For those participants who were recruited through the Greater St. Charles area, they were placed in a secluded area away from distractions so they could concentrate on the questionnaire. The participant was supplied with one black ballpoint pen to use to complete the consent form and the ten-question questionnaire (see Appendix A).

Procedure

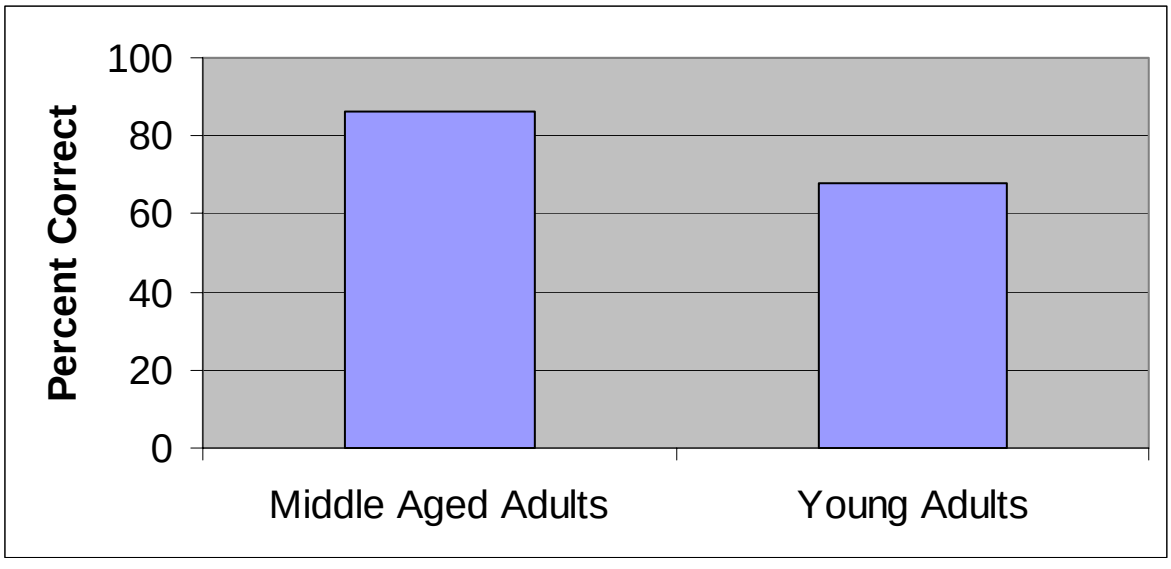
The participants were asked to sit down at the table or desk where there were two copies of the consent form, one for the participant to read and sign, for the researcher's records, and one for the participant to keep. After the participant understood the consent form, and all questions had been addressed, then the researcher handed the participant the current event questionnaire and instructed the participant to answer the questions to the

best of their knowledge. When the questionnaire was completed, the participant then received a feed back form, and the researcher then answered any questions that the participant had at that time. Also, the researcher informed the participant that if at any time they had any questions they could call either one of the researchers, or the researcher's supervisor of the project.

Results

Using SPSS, a one tailed independent t-test was conducted on the responses that the participants gave on their surveys. The results of the independent t-test showed that there was statistical significance at the .003 level stating that the individuals ages 40 years and older did in fact know more about current events than those in the 18-25 age group did. The results showed: $t(44)=2.888$, $p=.003$. This is not surprising due to the fact that it is generally thought that individuals 40 and older do stay up to date with current events than those in the 18-25 age group. As results showed the younger adults received 68% of the questions correct, and the middle aged adults received 86% of the questions correct (see Figure 1).

Figure 1. Mean percent of questions answered correctly.



The general purpose of this experiment was to see if in fact the middle aged adult population, ages 40 and older, were more knowledgeable about current events than college aged individuals, 18-25 years of age. The experimenters developed the questions from issues that were big in the news, as well as current event topics that were on the headlines of the newspaper, on the internet, and on the morning and evening news broadcasts.

Some problems that were encountered in our study were that one of the questions had two possible answers due to the fact that President Bush had changed his view on one of the choices that was randomly included in there after the questionnaire was made up and the researchers had started running participants. On that same question one of the answers was foreign to the participants and they all needed clarification. The answer key had to be changed to where the answer was the on that was most current with the news. However, the researchers accepted both answers as correct. One of the questions had dealt with the conference on steroids and which member of Congress had attended the conference, and out of the 46 participants only 18 got the question correct.

Ways that this study could be improved are to gather more participants from each age group in order to get a representative sample of each age. Also, another thing that could be improved would be to possibly have more than ten questions and make sure that the questions are easily understandable for all participating in the study.

The next step in continuing on this research would be to find out why exactly the younger population is not as up to date with the middle aged population, whether it is due to the fact of school, evening employment, or several other possibilities. Society should then see what they can do in order to help the younger generations become more up to

date. Whether it be offering classes in college to help the individuals become up to date on what is currently happening in their world, or just encouraging the younger generation to become more up to date on what is going on in the world around them.

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Appendix A

ARE YOU UP TO DATE?

Directions: Please circle the answer to the following questions to the best of your ability. If you do not know the answer, circle your best guess.

AGE: _____
GENDER: MALE: _____
FEMALE: _____

1. The Missouri Governor is:
   a. Matthew Dunn
   b. Matt Blunt
   c. Sarah Steelman
   d. Jay Nixon

2. Who is currently the Attorney General?

   a. Colin L. Powell
   b. Dick Chaney
   c. John Kerry
   d. Alberto Gonzalez

3. What was the date of the worst tsunami in history?

   a. December 26, 2004
   b. February 31, 1945
   c. September 16, 1978
   d. May 25, 1981

4. What two major cell phone companies just merged?

   a. Verizon Wireless and T-mobile
   b. Cingular and A T &T
   c. Centurytel and Sprint
   d. Sprint and Verizon

5. Where was the most current school shooting that was said to be almost as bad as Columbine?

   a. Missouri
   b. Minnesota
   c. Mississippi
   d. Michigan

6. President Bush has currently changed his views on:

    a. The war on terrorism
    b. Gas prices
    c. Ethicists
    d. Social Security

7. The boy who is testifying in the Michael Jackson case is how old?

    a. 15
    b. 8
    c. 10
    d. 13

8. What case did Congress get involved in?

    a. Nancy Cruzan
    b. Terri Schiavo
    c. Karen Ann Quinlan
    d. Allison Burke

9. Which local member of Congress took part in the hearing on steroids?
    a. Jerry Costello
    b. Russ Carnahan
    c. Todd Akin
    d. William Lacy Clay

10. Which St. Louis star got a second chance on American Idol?

    a. Nikko Smith
    b. Bo Bice
    c. Aloha Mischeaux
    d. Mario Vazquez

The Effects of Positive Feedback on Performance Perception

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Nonverbal communication may have an effect on people's perceptions of themselves and their performance on certain tasks. When people receive some type of positive feedback while performing an assignment, they may overestimate the extent to which the task was successfully completed. During this study, 22 participants were asked to take three short spelling tests, then evaluate their performance on each test. For one of the tests, the researcher provided words of encouragement and nods of approval while scoring the test. There was no feedback given during the scoring of the other two tests. While the subjects did not consistently rate scores higher on the stimulus test only, it was discovered that the perceived scores were elevated regardless of the feedback condition.

Many people are under the impression that a great deal of communication going on is nonverbal. If this is the case, then many of us are communicating most of the time. However, our awareness of this communication is limited. This study was designed to measure the extent to which positive feedback and body language would affect a participant's perception of his or her performance on a specific task. Research by Vrij, Akehurst, and Morris (1997) has suggested that there is a relationship between hand movements and deception. Liars tend to keep movements to a minimum in order to decrease any suspicions. In attempting to do this, their movements often appear very controlled and rigid. These researchers' findings may have played a part in this study due

to the fact that the researcher used deception to obtain results. There is a possibility that some subjects were able to detect this.

Still more research has indicated that it is a relatively simple matter to distinguish a fake smile from a real smile (Gosselin, Perron, Legualt, & Campanella, 2002). In that study, both children and adults were exposed to three different smiles and then asked to say whether the stimulus person was happy or pretending to be happy. While the children did not possess enough knowledge about the difference between enjoyment and nonenjoyment smiles, they were able to distinguish the regions of the face that were different on each smile. The adults, however, were able to make a distinction between enjoyment and nonenjoyment smile. In spite of the children's inability to distinguish between the two types of smiles, it has been found that children may be capable of using these two types of smiles while being unaware of how they are perceived. This type of emotional control has been evidenced in preschool children (Cole, 1986; Josephs, 1994). That is, these children were able to keep smiling even when being presented with a disappointing gift. So the children in that study were able to use the nonenjoyment smile, but it seems that they were not totally cognizant of what they were doing. Again, the findings of Cole and Josephs may have had an impact on the results of this study due to the deception that was used. There is the possibility that subjects were able to detect these slight differences during the experiment.

The researcher hypothesized that the effects of positive body language would affect participants' perception of their performance. That is, those subjects who received positive body language stimulus during their experiment would believe they had performed better than those who received no stimulus, regardless of the actual

performance. The results of this study would be useful in determining the effectiveness of positive feedback in many aspects of communication. If the channels of communication were widened and honed, then all of us would benefit greatly in that we would be able to more clearly and effectively get across to others our thoughts, feelings, and ideas.

In order to test this hypothesis, the researcher designed the study so that the participants were to take three ten-word spelling tests. Participants received feedback for only one of the three tests. After each test was completed, a participants filled out a survey for that particular test to determine their thoughts on their performance.

One prediction for this study was that the lists on which participants received feedback would yield a higher mean perceived score than the score that was actually received. That is, the participants would think they did much better than they actually did when the feedback was provided. Consequently, it was predicted that the mean perceived score on the feedback lists would be significantly higher than the mean perceived score on the non-feedback lists, meaning that the participants believed they had performed worse when no feedback was given.

Method

Participants

The participants in this study were male and female Lindenwood University students enrolled in lower level behavioral science classes, such as psychology or anthropology. The ages of the participants ranged from 18 to 25. A total of 22 participants were enlisted for this study. The participants were recruited using designated sign-up sheets posted on the Human Subject Pool bulletin board in Young Hall. They received bonus points toward their respective course grades for involvement in the study.

Materials

For the experiment, the researcher used paper for all necessary forms. The informed consent form was used to assure the participants that the results of the study would be kept confidential and used only for educational purposes. The spelling test survey (see Appendix A) was used to assess participants' thoughts about how well they had performed on the test. Questions included a rating scale (one to five) on overall performance, as well as some filler questions inquiring about the skill level of the words and asking participants to note any conditions under which they may have performed better or worse on the test. Pens were provided for participants to fill out all information. For each participant, the researcher used a pen and a data sheet (see Appendix B) containing all three lists of words, as well as spaces in which to record stimulus condition, actual score, perceived score, and participant identification number. Scrap paper was provided for participants to use to record their answers. Finally, the participants were provided with a receipt to redeem for bonus points and a feedback letter. The study was conducted in the Psychology Lab, room 105 in the basement of Young Hall. The room was small, with four white walls, bright lights, two desks and chairs, and a door.

Procedure

Upon arrival to the study, participants sat at a table in order to fill out the experimenter's list of participants and informed consent forms. The researcher then gave them instructions about the three short tests and surveys that would follow. It was stressed once again that the results of the study would be kept confidential and would be utilized for educational purposes only. The order that the lists were given was never

altered; however, the stimulus condition was alternated for each participant. If the first participant received feedback on list one, he received none on lists two and three. The second would receive feedback on list two, but not for lists one or three. Accordingly, participant three would receive feedback on list three, but none on lists one and two, and so forth. After completion of each test, the researcher would take the paper from the participant and pretend to score it. For the stimulus condition, the researcher nodded as she made her way down the list, notated the participant id and list number, then turned around to smile and tell the participant, "Good job," and hand out the survey. For the two non-stimulus conditions, the researcher simply looked at the paper, making no movements or remarks, notated the participant id and list number, then proceeded to the survey. After each test, the participant was given a survey to fill out about that set of words. When all three sets of tests and surveys were completed, the participants were debriefed, given a receipt and feedback letter, and released from the study.

Results

Three separate dependent t-tests were computed in order to determine the results of this study. The first paired t-test was between the actual score received and perceived score for the feedback condition. In this analysis, $t(11) = -3.362$, $p < .05$, which revealed a significant difference in the participants' perceived scores compared to their actual score.

The second analysis conducted was a paired t-test between the actual score received and the perceived score for the non-feedback condition. For this analysis, $t(11) = -3.604$, $p < .05$, which also showed a significant difference between participants' perceived scores compared to their actual score.

The third paired t-test was conducted between the perceived scores in the feedback condition and the perceived scores in the non-feedback condition. This analysis revealed that there was so significant difference, as $t(11) = .601$, $p > .05$. As revealed by the t-test, participants believed their scores to be much higher than they actually were in the feedback condition. However, the second t-test revealed that the participants also believed their scores to be higher in the non-feedback condition. Finally, the third analysis revealed that the mean perceived scores for both conditions were relatively the same, giving no support for the prediction that the perceived scores in the feedback condition would differ significantly from those in the non-feedback condition. So the only conclusion that can be drawn from the results of this study is that participants judged their performance to be better than it actually was, regardless of the feedback condition.

Discussion

Although the results of the study did not provide support for the hypotheses tested, a discovery was made that people tend to be optimistic when judging their own behavior or performance. There are many alternative possibilities as to why participants tended to evaluate themselves on a higher level. Perhaps the participants actually believed they had the correct spelling of the words, and in fact, consistently misspell them. Another explanation could be that the subjects, reassured by the researcher that the answers would not be seen by anyone other than the researcher, did not put forth one hundred percent effort. While it was necessary to relay this information to participants to ensure their comfort during the experiment, it is conceivable that some of them may not have tried as hard as they would have if the test were more formal.

There were a few problems that needed to be addressed in the study. The first problem was that the stimulus was ineffective, as many participants had trouble spelling the words, and therefore had a negative perception. For this reason, the study was modified so that there were two tests for each participant with two new sets of words. The stimulus condition was counterbalanced for each participant to help account for order effects. However, even after the study was adjusted to help gather more significant results, a dilemma arose when one participant realized what was happening during the experiment. Once again, the study underwent some revisions. It was at this time that the third and final design was implemented and used for the remainder of the study.

No other problems emerged until the analysis of the data. It was at this time that the researcher realized that there was no filler group. That is, each list had the potential to be the stimulus list, though one of them should have remained consistently free of stimulus every time. For example, only lists one and three would alternate the stimulus condition, while list two always remained free of stimulus. The data of ten participants also had to be excluded from the computation of the t-tests. Nine of the participants had been tested before the final revision, and one of the participants received a perfect score for all three tests. As the perceived score was then 100 for each test, no valuable data was collected from this participant.

An interesting variation of this study would be to take the same measure from participants, but the stimulus could be writing instead of speaking or body language. For example, after the test, the researcher would pretend to write comments on the completed test for 15 seconds, 35 seconds, or write nothing at all. It would be interesting to see participants' reactions the these supposed "comments."

In sum, the results gathered from this study did not support the hypotheses that were suggested. What was discovered, however, was that participants tended to rate their performance better overall, no matter if the feedback was present or absent.

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Appendix A

Spelling Test Survey

Answers to these questions should be based on your opinion only. Please keep in mind that the results of this survey will be used only for educational purposes, and there will be no identifying information used.

1. On a scale of 1 to 5, with 1 being the lowest, how well do you think you did on this test?

1 2 3 4 5

2. Do you feel that these words are appropriate for your college skill level?

Yes Somewhat Not Really No

3. If no, do you believe they are above or below your college skill level?

4. On a scale of 1 to 5, with 1 being the lowest, rate your spelling skills.

1 2 3 4 5

5. Do you believe there are any circumstances under which you may have performed better on this test? Please write suggestions below.

6. Do you believe there are any circumstances under which you may have performed worse on this test? Please write suggestions below.

Appendix B

Data Sheet

List 1	List 2	List 3
Believe	Definitely	Grateful
Argument	Conscience	Accommodate
Memento	Column	Neighbor
Millennium	Occasionally	Embarrass
Disappoint	Schedule	Knowledge
Tragedy	Discipline	Miniature
Occurrence	Grammar	Success
License	Noticeable	Privilege
Rhythm	Personnel	Receive
Guarantee	Dialogue	Foreign
Stimulus:		
AS	AS	AS
PS	PS	PS

Participant ID:

Instinct and Second-guessing Oneself on Tests

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When taking exams, students may find themselves deciding between the answer that first comes to mind, and a second logical answer. When given the option to record both first instinct and second-guess answers, are students able to answer correctly more on their first or second try? Furthermore, do those students who tend to answer correctly on their second try have lower grade point averages? If so, this would indicate that when taking tests, they have not been able to fully represent their knowledge. In the present study, 16 participants read an informative passage and completed a series of ten open-ended questions regarding the passage. Students tended to answer correctly more on their first instinct. This implies that students should either stick to their first instinct, or that the study was not representative due to the small sample size. Overall, students answered incorrectly most of the time, indicating the difficulty of the test. There were no significant findings when correlating GPA with performance on the test.

How often have students taken a multiple-choice test and found themselves stuck deciding between two plausible answers? A particular answer may seem correct at first, but upon further inspection, a second one seems just as likely. Test-taking tips and strategies have often declared that students should stick to their instinctive answers. Who came up with this commonly taught strategy, and what research has been done? The purpose of this study is to shed light on this idea of first instinct on exams. Should students stick with their gut, or put some extra thought into their answers? Furthermore,

this study will compare performance on an experimental test and GPA in order to determine if students with a low GPA tend to answer correctly with further thought rather than instinct. Searching for previous studies has yielded few dependable results, although countless sources proclaimed that students should go by their first instinct.

The concept of sticking to instinct is the dominant belief among college students and faculty (Benjamin, Cavell & Shallenberger, 1984). Though this belief is common, no scientific sources were found defending or supporting it. Empirical evidence suggests that students should not stick to their first instinct. Studies indicate that in the long run, changing answers is beneficial. Benjamin and his colleagues reviewed 20 studies on this issue, and found that answer changes that went from the wrong answer to the right answer outnumbered changes that went from the right answers to the wrong answer by a sizable margin.

Furthermore, three points are typically gained for every one point lost by changing an answer (Geiger, 1991). Knowing the truth regarding this matter is important because it has been found that "test-wise" students outperform those who are not "test-wise" (Rogers & Bateson, 1994; Towns & Robinson, 1993). Test-wiseness is defined as the ability to use knowledge of the characteristics of tests and the testing process to improve one's performance (Millman, 1966).

Although there is a significant amount of hearsay that test-takers should go by their first instinct, empirical evidence continues to state otherwise. The current research is not being conducted to determine if students do better when they change their answers, because research already supports such a hypothesis. The purpose of this research is to determine how often students answer correctly when given the opportunity to state their

second answer without penalty, and if the frequency of this occurrence correlates with their GPA. Thus, it was predicted that not only will participants correctly answer open-ended questions on their second try; participants who have a high amount of correct second try answers will also have a low GPA. This hypothesis was conceived because previous studies support the idea that test-takers perform better when they change their answers, and go with a second instinct. Furthermore, if participants have a high amount of correct second try answers; it would make sense that they would have a low GPA. It may be the case that on tests they tend to stick with their first instinct, therefore scoring lower by not changing their answers. To test this, participants will read a short informative passage and then be given a series of ten open-ended questions. Participants will first write their instinctive answer. Secondly, participants will consider the question a second time, assuming that their first answer is wrong. They will then write in their second-choice answer.

Method

Participants

Twenty-five Lindenwood University undergraduates participated in this study, but the data from only 16 participants could be used. Nine participants did not follow the directions given to them for the experiment, so their data was not useful. Participants were recruited in Butler library by use of the verbal script (see Appendix A).

Materials

In order to execute the research as designed, the participants were asked to sit at tables in Butler Library. Butler Library was chosen because of the similar atmosphere to that of a classroom. Basic materials used included a desk for the participants to sit at, a

chair for the participants to sit on, a pencil for the participants to write with, and appropriate documents for each individual participant. The packet of appropriate documents included the informed consent, a GPA release form (see Appendix B) instructions on how to perform the experiment (C), the informative passage (see Appendix D), and a question and answer sheet (see Appendix E). These documents were stapled in this order. A feedback letter was also required, and was given to the participants after they finished the experiment. Materials for the experimenter included an expanding file folder to file participant documents into, a pen to code the papers with, a verbal script that was used to recruit participants (see Appendix A), and an acceptable answer sheet (see Appendix F).

Procedure

After hearing the verbal script and volunteering to participate in the research, participants were asked to take a seat at a designated table in the library. After being seated, they were given the packet of documents, and were verbally informed that any questions would be welcomed. First, they signed the GPA release and consent forms. Any questions regarding these documents were answered. Most frequently, participants needed verbal confirmation that their GPA would not be identified with their person. Next, participants read the instructions. The instructions stated that the next page of the packet would include an informative passage that they would need to read. It informed them that they would be taking a ten question test regarding the passage, and the passage could not be referred to after the test began. The instructions also explained the format of the test. It was clearly stated that participants should answer with their first instinct on the first blank, and then assume their answer was wrong and re-answer on the second blank.

If they had no questions, they informed the researcher that they were ready to begin. Once the participants read the informative passage, they turned to the series of ten questions and answered accordingly. After the questions were complete, the packet was returned to the experimenter. At this time, the GPA release form and the answer sheet were coded with a matching number. Furthermore, the consent forms were detached from the packet and filed into an expanding file folder. GPA release forms, consent forms, and answer sheets each had their own respective areas.

In order to score the "tests" we considered each answer. If the answer was correct, we placed an "R" next to it. If the answer was incorrect, we placed a "W" next to it. The following three combinations were possible: "RW," "WR," and "WW." "RW" would indicate that the participant answered correctly by their first instinct. "WR" would indicate that the participant answered incorrectly on instinct, but with further consideration, they answered correctly. Clearly, a "WW" indicates that they could not recall the correct answer.

Results

It was hypothesized that participants would achieve more "WR" results than "RW" results. Furthermore, it was hypothesized that students with higher GPAs would have a higher amount of "RW" answers. Contrastingly, students with lower GPAs would have a higher amount of "WR" answers. On average, 3.87 questions were answered correctly on the first try. On the second try, 1.56 questions were answered correctly. The maximum number of questions remembered correctly on the second try was six, and this circumstance occurred twice. On average, 4.56 questions were answered incorrectly

("wrongness"). When observing "rightness", or the occurrence of achieving a correct answer on either the first or second try, 5.44 questions were answered correctly.

In order to analyze the findings, Pearson correlations were done, comparing GPA with scores. The Pearson correlation (r) for "WR" and GPA was .209, with a significance of .219. When correlating GPA with total wrongness, r was found to be .448, with significance of .035. For GPA and the number of "RW", r was -.404 and significance was .060. The GPA and adjusted score correlation was -.196 and significance level was .233. Adjusted score was found by grading tests in such a way that 10 points were gained for each "RW" and .5 points were gained for each "WR". Graphical representations of findings can be found in Figures 1 – 4.

Figure 1. GPA and number of "right-wrong" responses

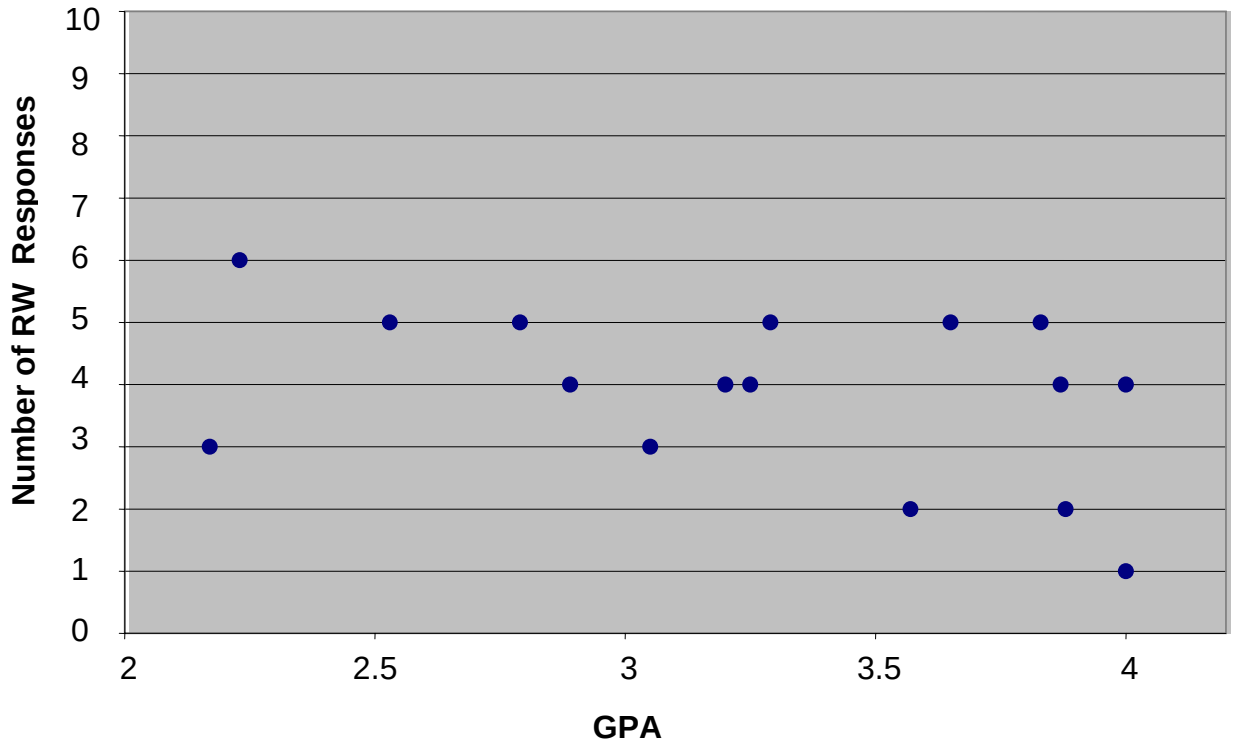


Figure 2. GPA and number of "wrong-right" responses

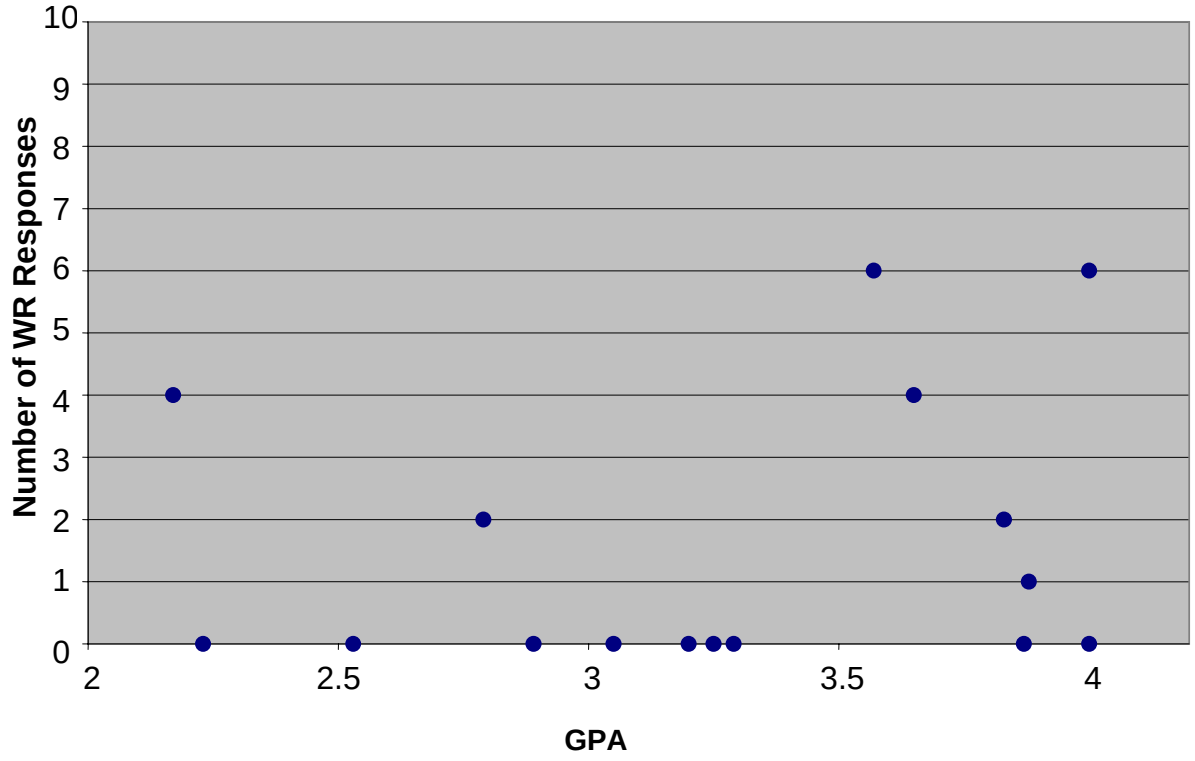


Figure 3. GPA and number of wrong responses

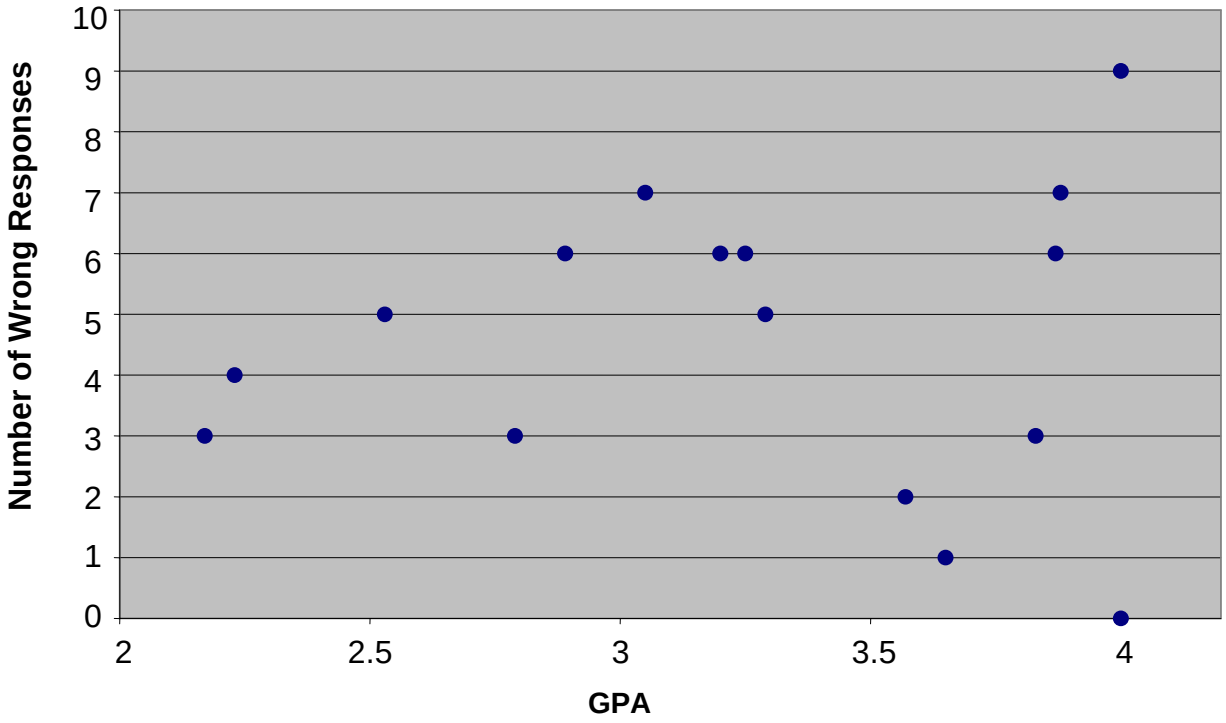
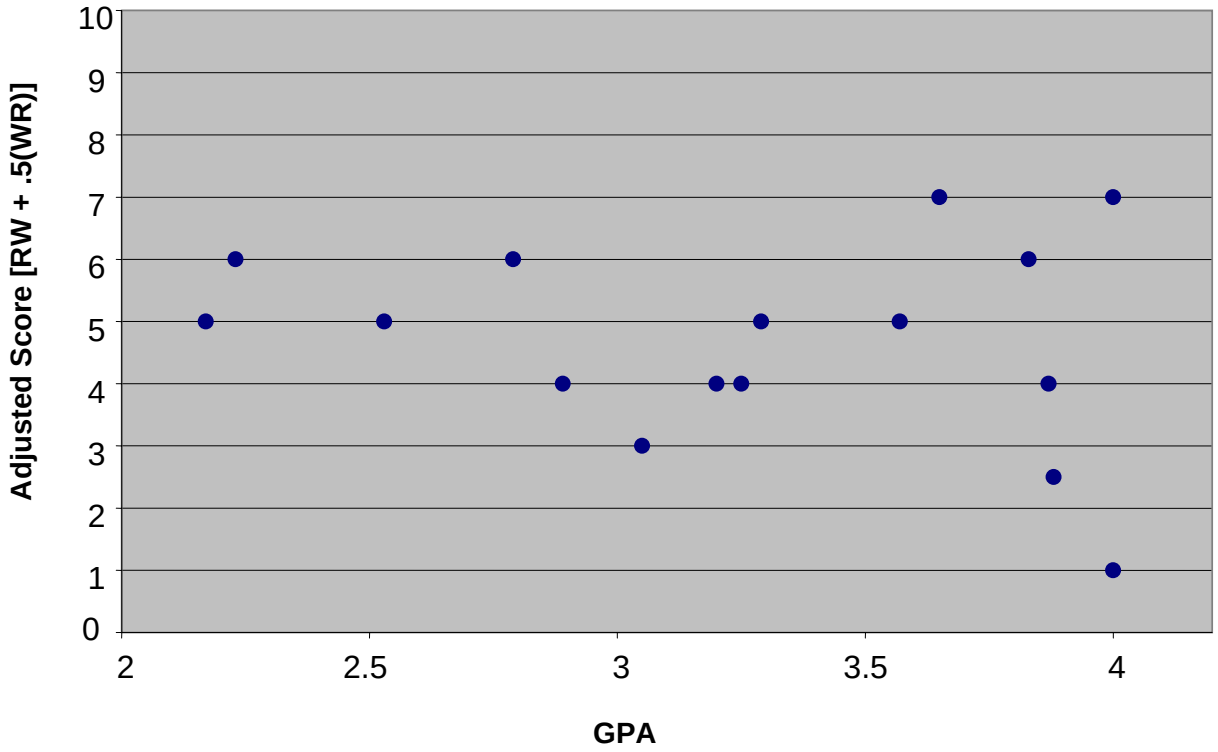


Figure 4. GPA and number of "wrong-right" responses



Discussion

Statistically, not enough data was gathered in order for this finding to be conclusive, but for the purposes of this research, the findings were accepted. Both of our hypotheses were found to be incorrect. We really think that this is because we did not get enough participants; especially because of the odd findings when looking at GPA. Analysis of our data indicated no statistically significant findings when correlating GPA. The most significant correlation was found between the number of wrong answers and GPA. The higher a persons GPA, the more questions they answered incorrectly.

One of the most troubling circumstances that we ran into was due to the instructions. We concluded that most participants did not actually read the instructions thoroughly, perhaps because they thought that when they did the experimental test, it

would be self-explanatory, as more tests are the same. Participants may not have realized that our test was to be set up differently. We came to this conclusion because of the way that participants answered the questions with the same answer twice, although our instructions clearly indicated that the answer should be different from the first. In order to correct this, we should have read the instructions aloud, and asked for questions before the person began in order to resolve these issues. This way, there would be no chance of participants skimming over the instructions, and we would know that they had been exposed to the instructions in their entirety.

A notable occurrence occurred in participants who did not follow the directions. Those who repeated their instinct answer, though instructed to assume their first answer was wrong, obviously may have strongly felt that their first instinct answer was correct. We can draw this conclusion because they did not repeat their answer on all of the questions, indicating that when they chose two different answers they were utilizing the ability to guess twice, and have a higher probability of being correct. Though they strongly believed that their answer was correct, a noticeable amount of the time they were actually wrong.

This leads to the next issue, the way the data was analyzed. We did not take into account that the answers that were wrong both times, or right both times, because of participants answering the same answer twice. Instead, we dropped that data, which is why we had such an insignificant amount of participant data to analyze. The insignificance of our results probably stems from the fact that in real life people actually find their instincts and logic to be either right or wrong at the same time. Not accounting for this is crucial because it forces us see only one part of a much greater picture.

Furthermore, many studies have been conducted that support our hypothesis, but our results indicated the opposite. We are accepting our results, but attributing this to the low number of participant data.

During and after the experiment, we got several complains that the questions were much too hard, and that they should have been changed. Moreover, some participants found even the idea of our experiment too difficult, and decided not to participate after merely reading the instructions. It may have been too difficult. However, our participants were also not provided with any incentives, which would explain for their lack of trying. An interesting finding was that we had to students with cumulative GPA's of 4.0. One student got all of the answers right, either on his or her first or second-try. The other student got nine wrong out of ten. We assume that these participants are typically hard working; therefore, the difference in their score may be due to the lack of incentive.

In future experiments, we might consider giving participants a timed test first. This investigation would involve testing quickly answered questions (instincts) versus answers achieved with an unlimited amount of time (logic). These times would be a significant asset to us because they would help show the nature of the answers. In addition to changing the answers, we would also change the entire test. Rather that giving them a single test we would give them two tests. Though different, they would be similar in order to measure both instinct and logic on separate levels.

The final and probably least controversial problem of the entire study was the environment in which the participants had to take the test. All the participants were tested within Butler Library. While the library is quiet, as a testing atmosphere would be,

there is also an immense amount of traffic most of the time, specifically between class periods. Those who did poorly may have experienced interference from their friends being in the same vicinity, or other traffic in general. This distraction could have been as simple as glancing up and looking at someone during the reading. Furthermore, they may have been in a hurry and may have wanted to get back to their studies in the library.

Though briefly mentioned already, in order to achieve a more significant and critical value, we would definitely need more participants. Of course, having more people typically leads to more reliable results.

If it could be done without breaking confidence, future experimenters may want to try checking test scores in an actual classroom setting. This could show a more realistic account of what happened in the student's mind while taking a test. For example, if the student drew an 'x' over an answer then chose another, experimenters know that they had an issue with their first instinct and then second-guessed themselves. If they additionally put an 'x' over their new answer, and decided to revert to their first answer by making a note to the instructor, this shows even more consideration of the answers. Finally, we would like to see a person take a test for what they believe to be a grade in their class. This way, a true testing environment would be created. The conflict that arises when taking tests when students second-guess their instinctive answers may be more likely to occur if this testing environment is created.

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Appendix A

Verbal Script

My name is (Bethany/Nicole) and I am here to recruit participants for our study. The study should not take more than 10-15 minutes of your time. In fact, it should typically take less depending on how fast you read. You will be asked to answer a series of questions after reading a short story. We are not interested in your individual results, but instead the results of a large group of participants. No identifying information about you will be associated with our findings. Our study is not only evaluating the idea of instinct versus second-guessing on exams, but the findings of our study also have the potential to elicit reason for teachers to consider altering their testing methods, so it should be an exciting study to contribute to. Would you like to participate?

Appendix B

GPA Release Form

I, _____ (print name), give permission to Michiko Nohara-LeClair to access my GPA with the intent to anonymously release it to Nicole Lafser and Bethany Bennett. I understand that my name will in no way be attached to my GPA, but will be instead coded by a number. I am aware that this number cannot be used to identify my person. I also understand that this information will be used solely for the purpose of the study, "Instinct and Second Guessing." I am also aware that any questions I have regarding this GPA release procedure shall be answered by the researcher(s) involved to my satisfaction. By signing below, I verify that I am at least 18 years of age.

_____ Date: _____

(Signature of participant)

_____ Date: _____

(Signature of researcher obtaining consent)

Student Researchers' Names and Numbers:

Nicole Lafser

(314)-550-2312

Bethany Bennett
(636)-579-9476

Faculty Supervisor:

Michiko Nohara-LeClair
Psychology
Lindenwood University
209 S. Kingshighway
St. Charles, MO 63301

Appendix C

Instructions

Please do not turn to the next page of the packet until instructed to do so.

The next page of this packet is an informative passage for you to read. After reading the passage, you will need to turn to the next page. **Once you have turned the page you may not turn back and refer to the informative passage.** The page following the informative passage includes a list of 10 open-ended questions. Each question will have two blanks underneath it, with the first blank labeled 1 and the second blank labeled 2. You should read each question and immediately answer in blank 1. Answer on your first instinct, placing the first answer that comes to mind in this 1st blank. Remember, FIRST blank = FIRST instinct.

Next, consider the question again, assuming that your first choice answer was wrong, and answer the question again in blank 2. Please answer seriously, avoiding nonsense answers. You should write educated, possible answers in blank 2, even if you think that your first choice answer is correct. Remember; ASSUME that your first choice answer is incorrect.

Our intentions in this study are to test the accuracy of participant's first instinct compared to their second guesses or educated guesses. Please keep in mind that once you have read a question you must provide your first instinct answer. *An example question is provided below*. If you have any questions, please ask the researcher now. If you have no questions, inform the researcher that you are ready to begin.

What is the name of the main character?

1)_____

2)_____

Appendix D

Informative Passage

In 1892 the Sierra Club was formed. In 1908 an area of coastal redwood trees north of San Francisco was established as Muir Woods National Monument. In the Sierra Nevada mountains, a walking trail from Yosemite Valley to Mount Whitney was dedicated in 1938. It is called John Muir Trail.

John Muir was born in 1838 in Scotland. His family name means "moor," which is a meadow full of flowers and animals. John loved nature from the time he was small. He also liked to climb rocky cliffs and walls. When John was eleven, his family moved to the United States and settled in Wisconsin. John was good with tools and soon became an inventor. He first invented a model of a sawmill. Later he invented an alarm clock that would cause the sleeping person to be tipped out of bed when the timer sounded.

Muir left home at an early age. He took a thousand-mile walk south to the Gulf of Mexico in 1867and 1868. Then he sailed for San Francisco. The city was too noisy and crowded for Muir, so he headed inland for the Sierra Nevadas.

When Muir discovered the Yosemite Valley in the Sierra Nevadas, it was as if he had come home. He loved the mountains, the wildlife, and the trees. He climbed the mountains and even climbed trees during thunderstorms in order to get closer to the wind. He put forth the theory in the late 1860's that the Yosemite Valley had been formed through the action of glaciers. People ridiculed him. Not until 1930 was Muir's theory proven correct.

Muir began to write articles about the Yosemite Valley to tell readers about its beauty. His writing also warned people that Yosemite was in danger from timber mining and sheep ranching interests. In 1901 Theodore Roosevelt became president of the United States. He was interested in conservation. Muir took the president through Yosemite, and Roosevelt helped get legislation passed to create Yosemite National Park in 1906. Although Muir won many conservation battles, he lost a major one. He fought to save the Hetch Valley, which people wanted to dam in order to provide water for San Francisco. In the late 1913 a bill was signed to dam the valley. Muir died in 1914. Some people say losing the fight to protect the valley killed Muir.

Appendix E

Question and Answer sheet

When was the Sierra Club formed?
1) _____
2) _____

What is the name of the trail dedicated to John Muir?
1) _____
2) _____

Where was John Muir born?
1) _____
2) _____

How did Muir's alarm clock wake sleeping persons up?
1) _____
2) _____

How long was walk south of the Gulf of Mexico that Muir took?
1) _____
2) _____

Why did Muir climb mountains and trees during thunderstorms?
1) _____
2) _____

What was Muir's theory pertaining to how the Yosemite Valley had been formed?
1) _____
2) _____

What year was Muir's theory about the formation of Yosemite Valley proven correct?
1) _____
2) _____

Muir wrote that Yoesmite Valley was in danger of timber mining and what one other interest?
1) _____
2) _____

When people said, "losing the fight to protect the valley killed Muir", which valley were they referring to?
1) _____
2) _____

Appendix F

Acceptable Answer Sheet

When was the Sierra Club formed?
Acceptable Answer(s): 1892

What is the name of the trail dedicated to John Muir?
Acceptable Answer(s): John Muir Trail, John Muir

Where was John Muir born?
Acceptable Answer(s): Scotland

How did Muir's alarm clock wake sleeping persons up?
Acceptable Answer(s): Tipped people out of bed, tipped them

How long was walk south of the Gulf of Mexico that Muir took?
Acceptable Answer(s): One thousand miles, 1,000 miles

Why did Muir climb mountains and trees during thunderstorms?
Acceptable Answer(s): To get closer to the wind

What was Muir's theory pertaining to how the Yosemite Valley had been formed?
Acceptable Answer(s): Glaciers

What year was Muir's theory about the formation of Yosemite Valley proven correct?
Acceptable Answer(s): 1930

Muir wrote that Yoesmite Valley was in danger of timber mining and what one other interest?
Acceptable Answer(s): Sheep ranching, sheep

When people said, "losing the fight to protect the valley killed Muir", which valley were they referring to?
Acceptable Answer(s): Hetch valley, Hetch

Does Love Make You Smarter?

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Lindenwood University

Little research has been done that examines the correlation between the length of a romantic relationship and academic success. In the present study, a questionnaire addressing this issue was administered to 40 college students at Lindenwood University. Analysis of the questionnaire revealed no correlation between the length of a romantic relationship and participants' actual GPAs. However, a moderately strong correlation between participants' self-reported GPAs was found. This study implies that the length of one's romantic relationship may be particularly related to perceived academic success.

Many studies have been conducted to determine factors that contribute either positively or negatively to academic success. One such study by Amenkhienan and Kogan (2004) found student effort and involvement among university students to be directly related to student performance and retention. Student involvement can be defined as one's personal initiative and commitment to one's academics. This includes the amount of both physical and psychological energy a student dedicates to his/her academic work (Astin, 1999, as cited in Amenkhienan & Kogan). In essence, the more time you spend on something, the better you get at it.

Closely related to student involvement and effort is work drive. Work drive, or a student's persistent motivation to spend time and effort to be productive and achieve success, is found to be significantly positively related to grade point average (Lounsbury

& Ridgell, 2004). Lounsbury and Ridgell state, "Students with a well-developed academic [work drive] place their studies above their leisure activities; study on a daily or nearly daily basis; and study in a disciplined, intense, and sober fashion (p. 609)." Students with a high work drive were found to possess high levels of conscientiousness, openness, and agreeableness as well (Lounsbury & Ridgell).

While these internal traits have been shown to have a positive relation to overall academic success, workload, an external factor, is shown to be negatively related to academic achievement. When the quantity of material is too demanding, students have been known to engage in what Kember and Leung (1998) call "superficial learning." Students concentrate on memorizing just enough information to pass an examination. Even worse, when confronted with large amounts of material, students find it difficult to distinguish between key concepts and support material (Wenestam, 1978, as cited in Kember & Leung).

While these factors influencing academic achievement have been studied somewhat extensively, the correlation between GPA and the length of one's current romantic relationship has not. The purpose of this study is to determine whether the length and status of a romantic relationship is related positively to a student's grade point average. The word "length" can be interchanged with the word "commitment." Commitment in a college student's relationship is of importance because according to Pistole and Vocaturo (1999), building a central, committed relationship to which their life and career will be secured is a major developmental agenda for young adults.

A secure partner provides an anchor to promote research behaviors such as learning (Pistole & Vacaturo, 1999). Therefore, we hypothesized that the longer a person

is in a monogamous, romantic relationship, the higher his/her GPA will be due to a higher level of attachment. This was determined through the use of a survey containing questions concerning the participant's current relationship status and his or her GPA. Participants' actual GPAs were obtained through the registrar's office of Lindenwood University.

Method

Participants

Forty college students were recruited through the Human Subject Pool at Lindenwood University. These students were from PSY 100, SOC 100, and ANT 100 classes. Participants received extra credit towards their respective classes for participating. Twenty-three participants were male between the ages of 18 and 27, and 17 were female between the ages of 18 and 30. Participants were recruited by means of a sign-up sheet on the Human Subject Pool board on the forth floor of Young Hall.

Materials

A survey containing questions concerning romantic relationships and academic success was given to all participants along with a pen to answer the questions. Half of the participants were given survey form A, while the other half was given form B. The survey questions were exactly the same; however, question order was changed between the two forms as a form of counterbalancing. Participants also received informed consent forms, feedback letters, and grade point average consent forms (a form created by the researchers to obtain participants' grade point averages from the Lindenwood registrar). The rooms used generally had a chair and a desk for the participant to use. However,

some questionnaires had to be administered in Y105E where a desk was not available. Participants used a coffee table to write on instead.

Procedure

Upon entering the lab, participants were told that the study involved the relationship between romantic relationships and grade point average. Participants were asked to sit down to fill out and sign a consent form and a Human Subject Pool form. The researcher then explained the purpose of obtaining the participants' current GPAs and asked participants to fill out and sign a GPA consent form. The GPA consent form contained the participants' names, student identification numbers, and their research identification numbers assigned to them by the researcher. The completed forms were given to a psychology professor who obtained the participants' GPAs from the registrar's office at Lindenwood University. Before giving the GPAs to the researchers, the professor removed all identifying information except the participants' research IDs. This insured anonymity.

Next, the researcher gave participants the survey (Appendix A) and explained that the questions would concern the participants' own romantic relationships and GPAs. Questions included, "What is your current GPA?" and "How long have you been in a monogamous relationship?," etc. Researchers alternated evenly between survey A and B. Participants were told if they did not understand any of the questions on the survey feel free to ask.

After identifying themselves as either male or female and how old they were, the survey asked participants if they were in an exclusive, monogamous relationship with someone whom you see at least once a week. If participants answered "Yes" to this

question they were then asked how long they had been in this relationship with the "conditions as they are now (monogamous and exclusive)" along with questions pertaining to positive or negative effects of their relationship on their GPAs. If they answered "No" they were instructed to skip over questions concerning a romantic relationship and move on to questions about GPA, study habits, and life events. Those in romantic relationships answered these questions as well.

Questions 1, 3, 5, 6, 8, and 10 on survey A and questions 1, 4, 6, 8, 9, and 10 on survey B were rated on a nominal scale. All other questions were rated on a ratio scale. All questions except number 10 were closed ended questions. Therefore they were easily assessed. Responses for question 10 concerning life events were categorized as follows: 1. Job, 2. Leaving home (negative effect), 3. Leaving home (positive effect), 4. Peer pressure, 5. Parties and drinking, 6. School dissatisfaction, 7. University sports (negative effect), 8. Death of a loved one, 9. Parental divorce, 10. Personal change, 11. Break up (negative effect), 12. Financial trouble, 13. University sports (positive effect).

Before leaving, participants were asked if they had any questions or concerns about the study in which they had just participated. They were then told how and when they could find out the results of the study and were given a feedback letter (Appendix E) containing the researcher contact information along with the information they were just told verbally.

Results

Using SPSS, a correlational analysis was conducted on participants' responses to the survey. This analysis revealed no correlation between the length of a participant's romantic relationship and his/her actual grade point average, $r = .063$. However, there

was a positive correlation between the length of a participant's romantic relationship and his/her self-reported grade point average, r = .532. Of the 40 participants surveyed, only 14 of them were in a monogamous relationship at the time of the study. On average, female participants had a higher actual grade point average than male participants. The female mean GPA was 3.24 while the male mean GPA was 2.93.

Discussion

Our hypothesis was not supported by the information that was gathered. The length of one's romantic relationship does not correlate with one's actual grade point average. However, this conclusion may be due to the lack of participants currently in a romantic relationship. The correlation between subjects' self-reported GPAs and the length of the romantic relationship may be due to those in monogamous relationships overestimating their GPAs. These results were surprising considering there was a strong positive correlation between actual GPA and self-reported GPA, r = .793. No correlation was found between any of the life events reported by the participants and their respective GPAs. However, 40% of those surveyed found that involvement in athletics negatively affected their academic performance.

Our surveys yielded more missing data than originally anticipated. This may be due to international and American students not understanding some of the questions or words within the questions. While we encouraged all participants to ask questions should they have any, some people may not have felt comfortable enough with the survey situation to do so. Words such as "monogamous" and "exclusive" may have caused problems for some participants.

We believe that the reason for the correlation between self-reported GPA and length of a relationship is that people in romantic relationships tend to overestimate their GPAs more so than those who are not in romantic relationships. Future studies should further investigate these findings.

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Appendix A

Survey Questions

1. Male or Female (circle one)

2. Age in years _____

3. To the best of your knowledge, what is your current GPA?

4. How much time (in hours) do you spend studying each week?

5. Are you currently in an exclusive, monogamous relationship with someone whom you see at least once a week (if not, skip to question 9)?

6. How long have you been in this relationship with the conditions as they are now (monogamous & exclusive)?

7. Do you feel that your current relationship is positively or negatively affecting other aspects of your life?

8. Is your grade point average (GPA) higher or lower than it was before you were in this relationship?

9. If you are not in a relationship, how does your current GPA compare to your GPA when you were last in a relationship of the above magnitude (if applicable; if not skip to question 10)?

10. Since enrolling in college, have there been any other life events that you feel may have impacted your GPA either positively or negatively? (feel free to elaborate or skip)

Do Sports Have an Effect on School Performance?

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The amount of time someone spends playing and practicing for a sport, or how much involvement it has with other activities was studied in respect to performance in school. Students were assumed to not do well in school if they were too involved with sports and other extracurricular activities. The students that participated in the research were all from the human subject pool at Lindenwood University. These students were either in a psychology, anthropology, or sociology class to receive extra credit. All of them were administered a ten questions survey in regards to involvement and school. In the study, 28 participants were studied, 16 being males and 12 being females.

Students, who are involved with athletics or other activities, usually have a heavier load on their hands than other kids. In this paper, college students were asked to answer a few questions about their schoolwork, their involvement in other activities. Then results were analyzed to see if being too involved in activities has an effect on grades.

In an article, "Working Overtime," Debra Viadero (1998) explains how students who work more than 20 hours a week will be more drawn to drugs and alcohol, and will tend to do poorly in school. Throughout the article, many researchers were named on conducting this study in other states: Viadero- Minnesota, Steinberg- Wisconsin and North Carolina, Wendy Piscitelli- Pennsylvania, Jerald Bachman- Michigan, Jeylan Mortimer- University of Minnesota, Michael Frone- New York. One

study found, that "if students work fewer than 20 hours a week they will receive better grades than those students who do not work at all or who work more hours" (Viadero, 1998). Wendy Piscitelli, as cited in Viadero, says that most students do a fair job of juggling the demands of homework and jobs in the Philadelphia area.

Laurence Steinberg, a psychology professor, says, "Kids, students, who work a lot manage their academic schedules to protect their GPA" (Viadero, 1998). This does not always mean that they work especially harder; they might cheat on homework or tests or maybe even take easier courses. Either way, there is no real answer as to if working so many hours a week has an effect on students' education.

"Coaching the Student in the Student-Athlete," talks about coaching a student, reveals that students consider themselves hyphenated student-athletes. The author talk defines student-athlete: coaching and educating a student this is also an athlete. The article mentioned that these athletes spend more time with teammates than in the classroom. Furthermore, these athletes spend more time together than all their classes combined. "Coaches can go a long way toward helping student-athletes get their priorities straight, but many institutions don't encourage coaches to get involved with academic culture" (Krebs, 2004).

Does this mean that if a person is an athlete at a top-notch university, he or she should get special treatment for their classes? What about the other students who do not play a sport and are having a difficult time? The article says, "Professors should find out who among our majors are athletes and reach out to them, bring them into an intellectual environment that can offer some of the rewards that sports do (Krebs, 2004)." Overall, this article says that student-athletes should be able to miss a few classes here and there

for departmental events, and should be treated different from other students who are not athletes.

Does involvement with athletics and other activities overwhelm students to a point that they will end up using drugs or alcohol to help calm things down? An article by Pyle (2003), states, "males have been shown to be more vulnerable to externalizing disorders such as drugs and alcohol abuse, risk taking and acting out (2003). This is not stating that every athlete or someone else that is involved with many activities will use drugs or alcohol as a way out of stressful situations. "Sport participation has often been associated with the precipitation of eating disorders in girls" (2003).

Pyle's study concluded, "an elite level serves as a protective factor most notable for eating disordered behavior in girls (2003). Therefore, playing a sport at a level higher than high school will make females more likely to have an eating disorder. There is also a question of determining attentional sets between athletes and nonathletes. Jim McAuliffe (2004) conducted a study on this and found out that both groups showed attentional sets. He did find that "the volleyball participants had greater attentional control than did the nonathletes (2004). " Athletes take longer to move attention to a new target location if they have adopted an attentional set for a feature of the cue that matches a feature of the target" (2004). In plain terms, this means that it takes athletes longer to focus on a moving object if that one object has been in a spot for a long time.

Therefore, overall playing a sport or being involved in activities does not seem to be the only reason why athletes or nonathletes have to drop clubs from their busy schedules of everyday life. The purpose of this study was to test whether extracurricular activities or athletics have an effect on your school performance.

Method

Participants

The participants were recruited for this study was 16 males and 12 females, through the human subject pool in Young Hall. The college participants ranged from freshman to seniors. The college participants received extra credit for their respective class.

Materials

For the study, the experimenter used paper work: Informed consent forms, one for participant and one for the researcher, survey, feedback letter and participant's receipt. The survey contained 10 questions: asking if each person if they were involved with athletics, if they worked, and others. See Appendix A for all the questions. The participants provided their own pen for this study. The participants were surveyed in the Psychology Lab, room 105 in Young Hall. The rooms are small with white walls, a desk, and two chairs were provided.

Procedure

The college students were tested over a two-week period. The students signed up for a specific time slot. At their specific time, they arrived at the psychology lab in young hall, signed a permission slip to participate and completed the survey. Once the participant completed the survey a receipt was filled out and given to them so that they could receive extra credit for their class. Participants have ten minutes to fill out the survey in the Psychology Lab. All the students that are studied are completing the same survey. After completion of the survey, each participant was given a feedback letter explaining the interest in comparing students' participation in activities to those who do

not, and to determine if this affects their grades. After all the surveys have been filled out, analysis will determine if playing a sport, or being too involved in school as an effect on your schooling in any way.

Results

The research question was whether involvement in sports and activities has an effect on school performance in college students. Of the data that was received from 16 males and 12 females, here is what was found to be true. Of the 28 participants, 57 percent played a sport while 42 percent did not play a sport. If you want to go further into detail then, it comes to equal out that four quit, while twelve stuck it out.

Also found was that of those who played a sport, 26 of them also work, and 21 percent are involved with other activities. Also found out was that three-fourths of them have not quit an activity cause of grades as slipped, but one-fourth of them have had to quit something before. Sixty-four percent of the total are involved with other activities, while thirty-five percent are not involved in anything else. Of these percents, it equals out to be nine have not quit, while there was only one who did have to quit cause of his/she involvement with other activities.

This study also factored working outside of school athletics, and other activities into my study. It was found that 15 students could balance work and other activities while there was only three who had to quit cause of work. Along with all the percents that were calculated, the found mean age of the study was 20 years old, with the minimum age being 18 and the maximum being 24.

The participants also rated how the sports, activities and other factors had affected them school wise. One equals not at all and five equally completely. The one people most

rated were three, which should not surprise anyone. Most people chose the middle number since it is in the middle and no one has to make a choice of the first or last.

Discussion

The study showed information that was believed to be true from the start. The study needed more participants in order to have a better understanding of the results. This led me to realize that if I had been able to gather more data then maybe my hypothesis would not have been totally correct. My results that I did gather did help me realize that there was a difference and my hypothesis was accepted.

With all the information I gathered, I came to understand that there are people who had to quit an activity because of falling grades, but not by a big margin. This makes me wonder, if I did gather more data, would there have been a difference? To me, it seems that students know how to handle the stress of many activities on their plate and to also balance schoolwork at the same time. Some students have been dealing with this issue for many years of schooling, and instead of quit something they love to do, they know how to balance their time right so that quitting is not an option to them.

In regards to my study, I understood that more participants would have helped me in different aspects. I would have been able to analyze data by conducting a chi-square test, a t-test or even an ANOVA. Instead, I have to conduct my paper on percents of the twenty-eight participants that I did receive. I now also realize that if I had gotten the 28 participant consent to obtain their GPA, it may have had an effect on my project also.

Once I found all my calculations for my study, you can really tell that there is a problem with sports, activities and school, but not by a huge margin. The only thing that I was able to put into this paper was percents only because of the lack of participants. So as

mentioned earlier, my study could have been done better with better results supporting my hypothesis.

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Appendix A

Survey

Age: _____

Gender: _____

What grade are you? (Circle one) Freshman Sophomore Junior Senior

Do you play a sport in school? No Yes

If yes, how many hours per week do you practice? _____

Do you work? No Yes

If yes, how many hours a week do you work? _____

If yes, how many days do you work a week? _____

Are you involved in any other clubs or activities? (ex.: key club, club sports teams) No Yes

If yes, please list each one and also how many hours per week you spend on them:

Activity	Hours Per Week
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Please rate, how much your involvement with other activities affects your grades?

1	2	3	4	5
Not at all	Minimally	Somewhat	A lot	Completely

Have you ever quit an activity because your grades slipped? No Yes

If yes, which one(s) did you take out of your schedule?_____

The Correlation of Working College Students And Their Grade Point Average

Latasha Stepps and Chandra Brown

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Students that work while in school have higher grade point averages than students who do not work. The number of students that work while in college has increased over the years. In this study 28 participants were asked to full out a ten question survey that pertaining to the number of hours they worked and their academic performance. Then the results were compared to determine the correlation between the student grade point average and the number of hours they worked. The results found that there was a positive correlation between the two. It seemed that the more hours the students worked the higher their grade point averages.

Students may decide to work while attending college full-time for number different of reasons. Our research shows that the most recorded reason for students deciding to work while attending a university is for extra money. Students are also increasingly likely to work while in college. Since 1984 the number of students, between the ages of 16 to 24 that work full time has increased from 49 to 57 percent. Many of the students that work while in school are more likely to work full- time than part-time: it seems that over time these numbers has nearly doubled, rising from 5.6 percent in 1985 to 10.4 percent in 2000. The number of full-time students who worked full-time went from 366,000 in 1985 to 828,000 in 2000 (Orszag, 2001). Working while in school can be a problem for students who cannot exert enough energy for more than one task. This

problem is then shown in student's grade point averages and their class attendance. Overall, it would seem that students who work either a part-time or full-time job outside of school are more likely to have a lower GPA than a student who does not work outside of school, because of the lack of available time to study. Many reasons have been discovered for the dropping of student's grade point average, while working outside of school such as energy, time, number of hours, and the type of job.

The position held by the student either part-time or a full-time positions may affect the students performance in class. This is due the amount of time exerted by the student when at work and at school. Our research indicates that the more time spent at work (full-time position) the less time available for time studying, doing research papers, and homework. Contrastingly, the less time spent at work (part-time position) the more time available for the student to study and prepare for class.

The type of job held by the student may affect the student's performance in school. If they are working either a blue collar (ex. janitor, groundskeeper, and cook) or white collar (ex. lab technician, doctor, and dentist) job may have a crucial affect on the student's performance in school. Blue-collar jobs are manual labor jobs, which in most cases; do not correlate with student's majors. White-collar jobs are jobs that rely more on mental labor and are most likely to be pursued by students after college. The two types of employment for students who work while in school my have different affects on the students academic performance. Blue-collar on one hand may provide quick money with not a lot of skill, but it does not usually apply to the student's area of study in school, assuming that most students intended to have careers in the white collar job field. The lack of the relationship between the student's area of study and their job could lower the

possibility of performing well in school because they are not able to apply the things that they are learning to their job. White- collar jobs on the other hand are assumed to have a positive relationship between the student's area of study and their jobs (Quasnitschka, 1998).

The amount of hours a students works per week may affect their grade point average. We feel that students that work part-time and go to school full-time have a higher chance of being successful in both areas rather than students who work full-time. "…students who work part-time (and particularly those who work on the campus) are more connected to the institution, manage their time more efficiently, and are more focused on their academic work than students who don't work at all" (King, 2002: 20). Many of these part-time positions are with the constitution to pay off loans taken out to finance their full-time attendance. In other studies, students that worked part-time, at most ten hours a week had a slightly higher GPA than their cohorts.

Whether or not the job correlates with the students major can be another important factor in one's academic success. Goldstein and High (1992)observed that employment outside the classroom had a damaging effect on the grade point average of art and science majors, but none on the business majors.

Evidence supports the idea of college students working full-time results in lower GPAs even dropping out (Orszag, 2001). Negative effects typically arise because hours spent at work take time away from studying, which may lead to lower grades and less attractive post-college opportunities. Student employment can also be a positive experience, for example, some students may gain experience in their job which will helps them in the classroom or in the labor market after college.

Thus, we predicted that college students that worked either part-time or full-time and attend school full-time will have a higher grade point average, than students who do not work at all and attended school full-time.

Method

Participants

Participating were 28 male and female undergraduate students that attend Lindenwood University. These students are between the ages of 18 to 30. These participants signed up for the study through the human subject pool and by word of mouth. In fulfilling their participation of the study all students were given ball point pens for their participation, all of the students from the human research pool also received extra credit from their instructor for their participation.

Materials

The materials used in this research were 3 sheets of paper for each participant, which was used for the informed consent, survey (see Appendix A), and feedback letter. Pencils and Pens were used by both the participants and experimenters to record and analyze data. Tables and desks were utilized by both parties to have something to write on and record data on. We also utilized computers to organize, retrieve, and type up data used in the study.

Procedure

The subjects were 28 university students attending Lindenwood University. Some were recruited by the human subject pool advertised on the fourth floor of Young Hall and others were recruited by word of mouth. Ball point pens were given to all the participants for their participation, and bonus points were given to students from the

human subject pool from selected classes for their participation. Each participant was tested individually. Upon arrival each participant was presented with 3 sheets of paper face down on the desk. Then they were given instructions to take a seat in front of the paper and to wait for further instructions. The experimenter then explained the purpose of the study and then asked each participant to fill out a 10 question survey (see Appendix A) pertaining to his/her work schedule and academic grades. Each participant was also asked to provide his/her full name to the study in order for the true grade point average to be retrieved. Then the participants were instructed to read the informed consent form carefully and sign and provide their initials if they agreed to the terms. Once the informed consent form was collected, then the participants were instructed to fill out the 10 question survey (see Appendix A) to their best ability. After the survey was collected the participants were told to flip over the last sheet, which was the feedback letter providing each participant with the researcher contact information and then debriefed about the project regarding the project.

If the students gave permission, the experimenter then used the information given by the participant to retrieve the participant's current grade point average anonymously. Once all the data was collected the surveys were given to Professor Nohara-LeClair and she pulled the students true grade point average from the academic roster at Lindenwood University. She then returned the surveys after removing the students name and replacing them with the student's true grade point average. The results were then compared and analyzed. Once all of the scores are retrieved, we then split the scores up into two groups (students that work and students that do not work) and compare

these scores using a with-in subjects design to determine if working a job either full-time or part-time and going to school full-time does actually affect a students grade.

Results

We had 30 participants, but we were only able to use 28 participants' results, due to two of the students being transfer students, their grade point averages were not available. Out of the 28 participants 16 of them actually worked and 12 of them did not work (mean GPA= 2.5/mean number of hours worked 14.2). The number of students that actually worked ranged from 0-16.

The GPA value of these working students ranged from 1.7-4.0 (M = 2.84, SD = .74). The amount of hours worked by the students ranged from 0-50 hours per week (M = 14.2, SD = .89). The average amount of hours worked of the students who actually worked was 25 hours per week.

There was positive correlations between the amount of hours the students worked and the students actual GPA. Full- time students were described as working at 40 hours or more a week. In the results, their were only three students who worked full time, out of those three, there was an average grade point average of 3.4, which was higher than those students who worked part time, which was at an average of 2.7. Working was positively correlated with the GPA, r = .36 (n = 28). Our directional hypothesis was found to be true; students that work have higher grade point averages, than students who do not work. In our study, when asked, many of the participants felt that working while in school had a negative impact on student's grades. They suggested that there was a negative relationship between bad grades and having a job outside of school. However, the results

showed that there was a positive relationship; the average number of students who worked had a higher grade point average than the students who did not work at all.

Discussion

The results showed that the average number of students who worked had a higher grade point average then the students who did not work at all. In the results their were only 3 students who worked full time, out of those three they had a average grade point average of 3.4, which was higher those students who worked part-time. The amount of students that worked 40 or more hours a week was only three, if their was more students that worked full time that results may have been different. When given the survey, before the actual grade point average was looked up on the register, many students gave a very accurate estimate of their grade point averages which was surprising, because we expected the students to inflate their grade point averages.

Regarding the absence of the positive correlation between working and going to school full-time, it may be that many students that work outside of school have less time to dedicate to their studies while students that did not work have more time to study. In contrast, to the results most of the research supported our hypothesis that students would have a higher GPA than students that did not work at all. Do to the motivating factor of having a full schedule and a higher degree of seriousness, the student is more inclined to having academic success as so in their job. If this explanation was true this study would have shown a positive correlation between working and going to school full-time.

Another factor is that working while in school may help students keep a better schedule in life and they are able to stay focused on all tasks at hand. The lack of participants may have been crucial to the results. If this research was to be done over I

would liked to have used at least 300 hundred students. One hundred that work full, one hundred that works part time and one hundred that did not work. In future studies we would have asked the participants if they worked either white collar or white-collar jobs. We felt that working helps students keep better schedules, and stay in line with their duties.

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Appendix A

Survey

How does work affect your schooling?

Student Full Name_____

1. Do you have a job?

2. If so, why do you work?

3. If not, why not?

4. How hours a week do you work?

5. What is your current GPA?

6. Do you feel that working, affects your grades?

7. Are you a full time student?

8. Do you participant in other extra curriculum activities?

9. How long have you been working?

10. What year are you?

A Study of Self-Esteem and Grade Point Average (GPA) Among College Students

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The study examined the possible relationship between self-esteem and grade point average (GPA) held by college students. One hundred forty college students completed a survey, through the Human Subject Pool, as well as at the end of five separate classes, to determine their level of self-esteem as well as to obtain their permission to view their GPA anonymously. Results suggest that there is a positive relationship between self-esteem and grade point average

Some researchers have suggested that how well a student does in school is related to how the students feel about themselves (Saunders, Davis, Williams, & Williams, 2004). This would imply that there is a relationship between a student's self-esteem and their grade point average (GPA). Is it true that self-esteem has a causal impact on academic performance, or is the main causation in the other direction, from higher grades to enhanced self esteem? Possibly the correlation at any one time is mainly coincidental, for both are the result of experience over the course of time (Hoge, Smit, & Crist, 1994). Concerning the possibility of the relationship between self-esteem and GPA, Hoge *et al*. (1994) said a "possibility is that the two are the result of past reciprocal causal influences over a long period of time."

While there are some who believe that the relationship between self-esteem and GPA is weak, if not nonexistent (Hoge *et al*., 1994), there are others that feel that the

relationship between self-esteem and GPA is quite strong (Saunders, Davis, Williams, & Williams, 2004). Research shows that while it may be weak or strong, a relationship between self-esteem and GPA exists.

Several studies have been done to find a relationship between self-esteem and GPA. Saunders, Davis, Williams, and Williams (2004) studied 243 African American high school sophomores. It was found that there was a strong association between higher GPA and a sense of greater self-efficacy. Hoge, Smit, and Crist (1994) did a longitudinal study of 363 students with questionnaires being given to the students four times – at the beginning and end of both sixth and seventh grade. They found the relationship between self-esteem and GPA to be quite weak. Lane, Lane, and Kyprianou (2004) conducted a repeated measures study investigating the relationships between self-efficacy, self-esteem, previous performance accomplishments, and academic performance with 205 postgraduate students. The students completed a baseline of their self-esteem before a fifteen week course. Their self-esteem and self-efficacy were measured during the course period, and then at the end. It was noted that grade level at the end of the course correlated strongly with perceived academic success and the self-esteem measures. Garzarelli and Lester (1988) conducted a study of a group of 36 male and 43 female students, in the age range of fourteen to seventeen years. They measured three types as self-concepts such as identity, self-satisfaction, and behavior, along with an overall measure of self-esteem. The results showed a significant relationship between self-esteem and GPA, but only for the females. Alves-Martins, Gouveia-Pereira, Amaral, and Pedro (2002) studied 838 students (429 girls and 409 boys) in the seventh, eighth, and ninth grade classes with an age range from thirteen to fifteen years of age, with an average age

of fourteen. The study was conducted to find what strategies were pursued in order to protect self-esteem when threatened by a negative evaluation of school competence. The results showed that while there was a relationship between self-esteem and GPA for the seventh grade students, such results were nonexistent for the eighth and ninth grade students. Wiggins and Schatz (1994) conducted a study of students from grades five and six to find a relationship between self-esteem and academic performance. Results showed a strong correlation between self-esteem and grade point average.

The purpose of this study was to find a positive relationship between a student's self-esteem and their GPA. One hundred forty undergraduate students completed a questionnaire relating to self-esteem. Scores from the survey were then matched anonymously with participants' GPA.

Method

Participants

Participants were 140 undergraduate students attending Lindenwood University. Participants were both males and females of varied races and backgrounds and ranging between the approximate ages of 18-23. Recruiting was done through the Human Subject Pool of Lindenwood University's Psychology department, as well as the researchers classes. Nine participants came from the Human Subject Pool, and 131 participants came from the researchers' classes. As incentive to participate in this study, students from the Human Subject Pool earned bonus points towards their specified classes, while students recruited from classes earned Tootsie Roll Pops. Due to the inability to get information because of students transfer status, illegible identification, duplicate names, or non-consent to release of GPA, only 87 surveys could be used for analysis.

Materials

In addition to the instructions (see Appendix A), two forms (A and B) of a 30 item survey were administered to assess the self-esteem of the participants. Form B contained the same questions as Form A (see Appendix B) in reverse order. Each item on the survey was answered by ranking the statement on a Likert scale of 1-5, 1 indicating "never", 2 indicating "rarely", 3 indicating "sometimes", 4 indicating "frequently", and 5 indicating "almost always". An example of a statement from the survey is "I am not able to appreciate my own accomplishment" (see Appendix B). Human Subject Pool participants completed informed consent and feedback forms with their own writing utensil in the library at library tables. Class volunteer participants completed informed consent and feedback forms with their own writing utensil in school classrooms upon school desks. Tootsie Roll Pops were available for the class volunteer participants as incentive to complete the survey.

Procedure

Participants recruited through Human Subject Pool met experimenters at the specified time in the specified room in which they signed up for on the participant sign-up sheet. After all participants were seated and accounted for, the experimenter then handed out the informed consent forms. After participants read, signed and returned these forms to the experimenter, the experimenter passed out the survey. Participants were given Form A or Form B depending on the order they signed up on the sign-up sheet. Participants who signed up on odd numbered lines will receive Form A and participants who signed up on even numbered lines will receive Form B. After all

surveys were completed and collected by the experimenter, feedback letters were given to the participants and participant receipts were signed.

Participants recruited from the researchers' classes met experimenters at the end of the class. After all participants were seated and accounted for, the experimenter then handed out the informed consent forms. After participants read, signed and returned these forms to the experimenter, the experimenter then distributed the survey. Participants were given Form A or Form B depending on the order in which they were seated. After all surveys were completed and collected by the experimenter, feedback letters were given to the participants and participant receipts were signed. Surveys were then scored and then given to the experiment supervisor to be anonymously matched with the participants' grade point average.

Results

Correlations between self-esteem and the participants' GPA showed that there was a relationship between the participants' self-esteem and their GPA. A significant positive correlation emerged from the people who had high GPA and a high level of self-esteem ($r = .21$, $p < .05$).

Surveys scores ranged from 30 points representing very low self-esteem up to 150 points representing very high self-esteem. GPA has a range of 0.00 to 4.00. Results indicated that students who scored moderate to high on the self-esteem survey ($M = 72.61$, $SD = 15.11$) would also have a high GPA ($M = 3.02$, $SD = .66$).

Discussion

This study noted the positive correlation between self-esteem and grade point average (GPA) in college students. The results noted that significant differences in GPA

exist between students who had high self-esteem and those who had low self-esteem. This is not to suggest that there is causality between the two in either direction.

Limitations of this study include that the directions given were not clear enough to prevent the loss of information. Out of 140 surveys, only 87 could be used for analysis. Polling several thousand students rather than several hundred would possibly yield a greater significance. Another aspect of the study that could be improved would be the use of a better survey. The survey used contained many questions that were double-barreled.

Further research to find a connection between self-esteem and GPA is recommended. While we could not make any causal assumptions about one variable affecting the other, future research may be able to uncover a causal relationship. This finding could be valuable in assisting students to understand how their view of themselves could affect or be affected by their academic performance.

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Appendix A

Instructions

DIRECTIONS: Please put your name on the line provided. It will be used to match your GPA to your survey by the faculty advisor and then detached to ensure your anonymity. For the statements below, circle the rating which is most true of your level of exhibiting these behaviors in your life. Use the following rating scale:

1 = never

2 = rarely

3 = sometimes

4 = frequently

5 = almost always

Appendix B

Survey

Name (please print):_________________

- -

Survey (J.J. Messina, 1999)

1 = never

2 = rarely

3 = sometimes

4 = frequently

5 = almost always

(1) 1 2 3 4 5 I seek approval and affirmation from others, and I am afraid of criticism.

(2) 1 2 3 4 5 I guess at what normal behavior is, and I usually feel as if I am different from other people.

(3) 1 2 3 4 5 I isolate myself from and am afraid of people in authority roles.

(4) 1 2 3 4 5 I am not able to appreciate my own accomplishments and good deeds.

(5) 1 2 3 4 5 I tend to have difficulty following a project through from beginning to end.

(6) 1 2 3 4 5 I get frightened or stressed when I am in the company of an angry person.

(7) 1 2 3 4 5 In order to avoid a conflict, I find it easier to lie than tell the truth.

(8) 1 2 3 4 5 I have problems with my own compulsive behavior, e.g., drinking, drug use, gambling, overeating, smoking, use of sex, shopping, etc.

(9) 1 2 3 4 5 I judge myself without mercy. I am my own worst critic, and I am harder on myself than I am on others.

(10) 1 2 3 4 5 I feel more alive in the midst of a crisis, and I am uneasy when my life is going smoothly; I am continually anticipating problems.

(11) 1 2 3 4 5 I have difficulty having fun. I don't seem to know how to play for fun and relaxation.

(12) 1 2 3 4 5 I am attracted to others whom I perceive to have been victims, and I develop close relationships with them. In this way I confuse love with pity, and I love people I can pity and rescue.

(13) 1 2 3 4 5 I need perfection in my life at home and work, and I expect perfection from others in my life.

(14) 1 2 3 4 5 I seek out novelty, excitement, and the challenge of newness in my life with little concern given to the consequences of such action.

(15) 1 2 3 4 5 I take myself very seriously, and I view all of my relationships just as seriously.

(16) 1 2 3 4 5 I have problems developing and maintaining intimate relationships.

(17) 1 2 3 4 5 I feel guilty when I stand up for myself or take care of my needs first, instead of giving in or taking care of others' needs first.

(18) 1 2 3 4 5 I seek and/or attract people who have compulsive behaviors (e.g., alcohol, drugs, gambling, food, shopping, sex, smoking, overworking, or seeking excitement.)

(19) 1 2 3 4 5 I feel responsible for others and find it easier to have concern for others than for myself.

(20) 1 2 3 4 5 I am loyal to people for whom I care, even in the face of evidence that the loyalty is undeserved.

(21) 1 2 3 4 5 I cling to and will do anything to hold on to relationships because I am afraid of being alone and fearful of being abandoned.

(22) 1 2 3 4 5 I am impulsive and act too quickly, before considering alternative actions or possible consequences.

(23) 1 2 3 4 5 I have difficulty in being able to feel or to express feelings; I feel out of touch with my feelings.

(24) 1 2 3 4 5 I mistrust my feelings and the feelings expressed by others.

(25) 1 2 3 4 5 I isolate myself from other people, and I am initially shy and withdrawn in new social settings.

(26) 1 2 3 4 5 I feel that I am being taken advantage of by individuals and society in general; I often feel victimized.

(27) 1 2 3 4 5 I can be overresponsible much of the time, but I can be extremely irresponsible at other times.

(28) 1 2 3 4 5 I feel confused and angry at myself and not in control of my environment or my life when the stresses are great.

(29) 1 2 3 4 5 I spend a lot of time and energy rectifying or cleaning up my messes and the negative consequences of ill–thought–out or impulsive actions for which I am responsible.

(30) 1 2 3 4 5 I deny that my current problems stem from my past life. I deny that I have stuffed–in feelings from the past which are impeding my current life.

____ TOTAL SCORE

Self-Esteen Levels in Relation to Grade Point Average

Patrick Wilson

Lindenwood University

This study is designed to show a relationship between self-esteem and grade point average (GPA) among college students. Undergraduate college students from Lindenwood University participated in this study. The survey used in this study was designed by J.J. Messina (1999) containing questions a subject's family, personal, social, and educational life. The students were asked if they would like to participate in a survey randomly. Upon completion of the survey and informed consent they received a feedback letter. The data I collected showed a weak relationship, however I believe it was due to the fact I only surveyed 25 subjects.

This study was designed to show a positive relationship between self-esteem and grade point average (GPA) among college students. The researcher hopes that this information can assist students in possible understanding their struggle with their low GPA. A number of studies have been conducted that have used the same variables that support this researcher's hypothesis.

Most people assume the goal for most college students is to improve their own academic performance. To improve one's own performance it is necessary to improve GPA. A number of academic studies have shown a relationship between low academic performance and low self-esteem, as well as high academic performance and high self-esteem. Bankston and Zhou (2002) concluded that self-esteem and academic achievement are correlated positively.

Feeling positive about ourselves (positive attitude) appears to be what most of us believe that self-esteem is. A certain area that I am interested in exploring is a student's academic self-concept. Before the year 1980 researchers computed correlations between self-esteem and academic achievement. Until then a lot of studies reported positive correlations ranging from .20 to .40. However, correlations between academic performance and IQ range form .50 to .70. These results show a moderate relationship between academic performance and self-esteem. However since correlation cannot imply causation a new method arose to find the causation between the two.

Noris and Wright (2003) took their study a little further. They explained that achievement, situational optimism, and striving were very important when considered as ability variables, when they were used as predictors of academic achievement. Yates (2002) also found a relationship of optimism and pessimism. Yates found that a students academic performance was predicated on their level of optimism (can I learn more) and pessimism (I have learned all I can). Students who went into the classroom wanting to learn performed much higher with an optimistic attitude.

Another condition that is also linked with self-esteem is self-efficacy. The positive similarities between performance and self-efficacy are reported widely. Also, a lot of research has been conducted in a different range of settings. "The ideal conditions that maximize the self-efficacy and performance relationship are unlikely to exist in real-world settings where many decisions are made about complex issues, with relatively unclear knowledge of the tasks to be performed (Lent & Hackett, 1987). To further this idea Lane & Lane (2001) found how self-efficacy can assist in coping with the intellective aspects of a certain program.

Investigations has uncovered that self-esteem is a factor in persuading reactions to achievement. This led to the discovery of a relationship between self-esteem and expectancy for success. Very few studies have been done, but Kemper (1978) believed he discovered that disconfirmation of expectancies can lead to much stronger emotional responses than confirmation does. Forsyth and McMillan (1981) submitted that following performance in any academic environment, students seem to respond somewhat emotionally, attribute causality, as well as set future expectations for their own performance.

Bloom (1977) conducted research over the past twp decades, and they believe that the importance of academic achievement related to self-esteem cannot be emphasized enough. They believe that school performance seems correlated with self-esteem at least to a moderate level. Students with high self-esteem are able to conduct their everyday lives with a better degree than those with low self-esteem. He also branched a little further and found that self-esteem and achievement were also generally correlated.

A very troubling bit of information showed that contradictory evidence if just as strong. 1,500 students were not affected by self-esteem nor does self-concept seem to have affected educational performance 5 years after graduation. Also, research indicates children's academic self-concept is determined by their academic performance. This researcher knows this is not entirely related to my experiment, but this researcher is also convinced that if we start dealing with this problem at an early age higher GPAs will be obtained in the future.

Method

Participants

A survey developed by J.J. Messina was distributed over the course of 2 weeks to 22 undergraduate participants at Lindenwood University. Of these 22 participants the average age was 19.5 years. There were no specific boundaries on these participants besides being enrolled as a student at Lindenwood University. They could be male/female, freshman/junior, or anything in between. The researcher surveyed 25 participants, but was only allowed to use 22 because of their GPA not being registered.

Materials

In this study all participants were asked to complete 30 questions on a self-esteem survey developed by J.J. Messina. There were two different forms of this survey to counterbalance the results. This does not mean that Form A has different questions than Form B. It simply means that the questions are presented in opposite orders on the 2 surveys. An example of some of the material on the survey was that I tend to have difficulty finishing a project from beginning to end. I isolate and am afraid of people in authority roles. Each question had a rating scale of 1-5, 1 meaning never, and 5 meaning almost always.

The experiments did not occur in any one place. I used any natural environment possible such as; the lounge in Aires dormitory, the Butler Library, Young Hall, and the computer lab ate the Spellman Center. The only attribute that these settings had in common is that they were all quiet while the participant was filling out the survey. There were no sign up sheets, and the experiment was conducted completely at random. Before the survey took place each participant was required to fill out a consent form which

clearly stated that they were 18 years of age, they would have total anonymity, and they would be releasing last semesters GPA. After the consent form was filled out with a pen that I provided. Upon completion of the survey each participant was given a feedback letter just in case they wanted to inquire about the results of the experiment.

Procedure

Each participant was given five minutes to complete the survey, and they were also allowed to stop and ask questions if they had any. Once the data was collected the results were handed to Professor Dr. Nohara-LeClair for the participants GPA scores. To keep anonymity the names were cut off the survey. The only thing left was the survey score and the relating GPA. The collected data was taken from random students at Lindenwood University. The subjects did not have to make an appointment on a sign up sheet, and there was no designated time. In this experiment the independent variable was the survey, and the dependent variable is the total score on that survey.

Results

The experimenter conducted a Pearson correlation on the program SPSS in order to test the experimenter's hypothesis. The experimenter found that the r = .107. Even though it showed a weak relationship in the direction that I was hoping for it did not produce enough of a relationship. As a result I had to accept the null hypothesis.

Discussion

The experimenter believes that if allowed more time to conduct the experiment it would have yielded results that would have produced a stronger relationship. The reason for this is because there would have been more time to look for more participants not only at Lindenwood University but through the Human Subject Pool as well.

Some of the extraneous variables that the participants dealt with were no consistent setting, time of day, their attitude during the day, and whether or not they were in the mood to complete the survey or not. Also the experimenter could not have foreseen any family situations that were present at the time of the survey.

The survey seemed to be reliable. This could have been due to the fact that the experimenter had limited participants, but the researcher believes that some of the questions were a little confusing. If the experimenter was permitted to conduct the experiment a second time the experimenter would develop original questions relevant to everyday life. The researcher would also increase specifics in the experiment. The experiment was just to general. Specific time, specific place, and specific group of participants would be necessary to contribute to the validity (intended to measure) of the experiment. Also, the researcher would have only used freshman, thus making the Human Subject Pool that much more important. This would have been done because freshman seems to care a lot more about their grades than most seniors do. The researcher would have also tested males and females differently. Improving the academic performance of both males and females would take different educational techniques. The researcher also believes that test-retest would have been a better way to conduct this experiment (see Appendix A).

Future studies that can be done as an implication of my research would be to test whether or not having proper expectations would increase self-esteem. The researcher does not believe that testing self-esteem in relation to GPA is informative at all considering the highest relationship shown was moderate by Bloom. When the number of extraneous variables is an s high as it is the experiment should be altered to include all

the necessary aspects in finding ones academic performance. Having said this, a causation experiment should be done in order to retrieve the proper information targeted.

This experiment was a very nice educational experience. I enjoyed working alone, because I was able to learn how all the processes work. The experimenter would rate this experience a 10.

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Appendix A

Survey (J.J. Messina, 1999)

1=never
2=rarely
3=sometimes
4=frequently
5=almost always

1. 1 2 3 4 5 I seek approval and affirmation from others, and I am afraid of criticism.

2. 1 2 3 4 5 I guess at what normal behavior is, and I usually feel as if I am different from other people.

3. 1 2 3 4 5 I isolate myself from and am afraid of people in authority roles.

4. 1 2 3 4 5 I am not able to appreciate my own accomplishments and good deeds.

5. 1 2 3 4 5 I tend to have difficulty following a project through from beginning to end.

6. 1 2 3 4 5 I get frightened or stressed when I am in the company of an angry person

7. 1 2 3 4 5 In order to avoid a conflict, I find it easier to lie than tell the truth

8. 1 2 3 4 5 I have problems with my own compulsive behavior, drinking, drug use, gambling, overeating, smoking, shopping, etc.

9. 1 2 3 4 5 I judge myself without mercy. I am my own worst critic, and I am harder on myself than I am on others.

10. 1 2 3 4 5 I feel more alive in the midst of a crisis, and I am uneasy when my life is going smoothly; I am continually anticipating problems.

11. 1 2 3 4 5 I have difficulty having fun. I don't seem to know how to play for fun and relaxation.

12. 1 2 3 4 5 I am attracted to others whom I perceive to have been victims, and I develop close relationships with them.

13. 1 2 3 4 5 I need perfection in my life at home and work, and I expect perfection from others in my life.

14. 1 2 3 4 5 I seek out novelty excitement, and the challenge of newness in my life with little concern give4n to the consequences of such action.

15. 1 2 3 4 5 I take myself very seriously, and I view all of my relationships just as seriously.

16. 1 2 3 4 5 I have problems developing and maintaining intimate relationships.

17. 1 2 3 4 5 I feel guilty when I stand up form myself or take care of my needs first, instead of giving in or taking care of others' needs first.

18. 1 2 3 4 5 I seek and/or attract people who have compulsive behavior.

19. 1 2 3 4 5 I fell responsible for others and find it easier to have concern for others than for myself.

20. 1 2 3 4 5 I am loyal to people for who I care, even in the face of evidence that the loyalty is undeserved.

21. 1 2 3 4 5 I cling to and will do anything to hold on to relationships because I am afraid of being alone and fearful of being abandoned.

22. 1 2 3 4 5 I am impulsive and act too quickly, before considering alternative actions or possible consequences.

23. 1 2 3 4 5 I have difficulty in being able to feel or to express feelings: I feel out of touch with my feelings.

24. 1 2 3 4 5 I mistrust my feelings and the feelings expressed by others.

25. 1 2 3 4 5 I isolate myself from other people, and I am initially shy and withdrawn in new social settings.

26. 1 2 3 4 5 I feel that I am being taken advantage of by individuals and society in general; I often feel victimized.

27. 1 2 3 4 5 I can be overresponsible much of the time, but I can be extremely irresponsible at other times.

28. 1 2 3 4 5 I feel confused and angry at myself and not in control on my own environment or my life when the stresses are great.

29. 1 2 3 4 5 I spend a lot of time an energy rectifying up my messes and the negative consequences of ill-thought-out or impulsive actions for which I am responsible.

30. 1 2 3 4 5 I deny that my current problems stem from my past life. I deny that I have stuffed- in feelings from the past which are impending my current life.

_____ Total Score

Biased Preferences to Names

Timothy J. Panek and Megan Gibson

Lindenwood University

The experimenters intended to show support that children have a bias against names that are uncommon and difficult to pronounce. Common and uncommon names were taken from the social security administration. Sixty-nine college students participated in a survey to determine what names are difficult to pronounce. Names that were common and easy to pronounce were paired with those names that were uncommon and difficult to pronounce. These pairings underwent a t-test to ensure they were significantly different from each other. Twenty-one children whose ages range from 6 to 12 took part in an interview on preferences of names. In using a chi square analysis, statistical significance was found at the .001 level, showing support for the hypothesis that children prefer names that are common and easy to pronounce.

One of the most prevalent components of a person's identity is his or her name. A person's name is used in conversation others have with them and to refer to them. What if an individual's name was also used as a factor in deciding how liked that individual is? A person's first name may be part of an initial impression when meeting someone for the first time. First names may be the difference between seeing someone in a positive or negative way. It may be the difference between making a friend and not making a friend. It may also be the difference between getting hired or not for a desired job.

Dinur, Beit-Hallahmi, and Hofman (1996) conducted an experiment involving 408 high school and college students in Israel. The students were presented with 12 common first names divided into 2 categories Israeli and Jewish names. The more recent Israeli names were the most preferred, followed by biblical names, traditional Jewish names, and lastly names connected to Diaspora Jewish names. Another study done by Erwin (1999) dealt with the association of the attractiveness of a person's name with their academic performance. Erwin obtained records of 68 students who completed their second year of their psychology degree and rated their first names for attractiveness. Results showed that individuals whose names were rated as unattractive achieved better grades in their academic assessments then individuals whose names were rated attractive.

In 2001, Mehrabian conducted 7 studies regarding characteristics attributed to people on the basis of their first name. Four characteristics were identified: Ethical Caring, Popular Fun, Successful, and Masculine-Feminine. His results showed that men's names were attributed to having more masculine, less ethical caring, and more successful characteristics than women's names. Nicknames were associated with less successful, greater popular fun and less ethical caring characteristics than names given at birth. Neutral gender names were associated with greater popular fun and less masculine characteristics for men and less ethical caring, greater popular fun and more masculine characteristics for women than gender specific names. Lastly, less common names were associated with higher levels of anxiety and neuroticism than those with common names (Mehrabian, 2001). Van Fleet and Atwater (1997) conducted 4 studies examining gender neutral names. These studies showed that most gender neutral names identified were Pat, Terry, Chris and Lee. Another study done by Levine and Willis (1994) was conducted to

examine people's reactions to common and uncommon names. Two hundred participants were given 40 names and asked to rate them on a 5-point Likert-type scale. The more common names received higher ratings on success, health, morality, cheerfulness, warmth, and sex stereotype. From these previous research experiments, it can be understood that the mere presence of a first name already gives a person, in general, a preconceived mental image of what the individual will be like without ever meeting them. Conclusions about a person are made solely based on their first name.

It is believed that there is a bias in children in which they are prone to like names that are more common and easier to pronounce. The purpose of the research is to determine whether or not children show a preference toward familiar names and easier to pronounce names. Based on their answers to simple questions regarding name preference and the first name of their best friend(s), it can be concluded as to whether or not it is a factor in how they choose their friend(s). (Do children prefer names that are simpler, common, and easier to pronounce? Do children choose friends that have names which are similar in those given factors to their own name?) If this preference is demonstrated in children, it may also be able to be said the same about adults. If children exhibit this behavior, then it could as be demonstrated that when people grow up, the same preference may exist; but may be less obvious. Due to juvenile thinking of children, it could be expected to get a more honest answer to our questions than what we would get from adults. For the experiment, it was believed there will be a statistical difference in children's preferences for common names and those easier to pronounce. There would be little to no preference for names that are uncommon and difficult to pronounce.

Method

Participants

Sixty-nine students from Lindenwood University and 21 children participated in this study. The Lindenwood University participants were recruited by going into classes with the professor's permission and asking for participants. They were also recruited in dormitories on campus. The children were recruited from Faith Christian School and the greater St. Charles, Missouri Community. No compensation was given to the college students, but candy was given to the children. The college students were used only to rate names based on how easy they were to pronounce. The main focus of the study, however, was the preferences children had in their name selection.

Materials

There were several documents used in this experiment. There were two types of informed consent forms: the Lindenwood students consent form and a parental consent form. There was also a feedback letter that explained the general idea of why the experiment is being preformed and contained contact numbers of the experimenters. The experimenters used scripts to request permission from a professor to use their class, and permission to use an after-school or daycare facility, and lastly, in the interview with the children. A survey composed of a list of 60 male and female names taken from www.ssa.gov/OACT/babynames/1999/top1000of90s.html (see Appendix A), listing the most popular names of the 1990s, was given to the Lindenwood student participants.

There were two parts to this experiment. The child participants were recruited from Faith Christian School in Florissant, Missouri. The students were interviewed outside of their classrooms in a commons area. Upon completion of the interview, all

children received candy, regardless as to whether or not they participated in the study. (Children in their classes that did not participate also received candy.) The researchers used a pen to record the answers of the children on a data sheet (see Appendix B).

Procedure

In order to recruit college participants, professors were asked permission of use of their classroom and students to survey. Once permission was granted the experimenters asked students if they would be willing to complete a survey. The students who wished to participate were asked to sign a consent form and were then given the survey (see Appendix C). A feedback letter was also given to each participant upon completion of the survey. Those college students not recruited via a professor's class were recruited by asking them for permission in a dormitory. The same procedure for administration of the survey was followed. From the results of the surveys, one female and one male common and easy to pronounce name as well as one female and one male uncommon and difficult to pronounce name were paired. They were paired as such to make two pairs of boy names and two pairs of girl names. They were paired using the top two names (boys and girls) that were rated the most common and easy to pronounce and the two names that were rated most uncommon and difficult to pronounce. The names that were rated most common and easy to pronounce were Emily, Sarah, David, and John. The names that were rated most uncommon and difficult to pronounce were Yajaira, Kelia, Nikhil, and Giancarlo. We then used a Latin square design to counterbalance the order in which we were going to present the names to the child participants. Boys only received boy names to choose from and girls only received girl names to choose from. Next, permission to recruit participants from Faith Christian

School was requested and granted. The school completed an informed consent form granting us use of their facility. A note explaining the experiment and a parental consent form was sent home to the parents. The child was also asked to sign or mark a specific area on the parental consent form, which their parent had signed. The children were asked the following questions: "How old are you?" "Who would you rather play with (Name 1) or (Name 2)?" and second "Who would you rather play with?" (Name 3) and (Name 4)." "What is the name of your best friend?" A datasheet was used to record the responses. It was also recorded as to whether or not the child was Caucasian or not. Upon completion of the interview the children were given a feedback letter to take home to their parents in the same manner in which they were given the initial informed consent form. Candy was given to all of the students in the school regardless of participation.

Results

Two independent t-tests were conducted to show the names we had chosen to present to the children were statistically significantly different from each other based on how easy they were to pronounce in addition to how common and uncommon they were. For the boy names we showed statistical significance at the .0005 level, $t(2) = -42.709$, $p < .0005$. For the girl names we showed statistical significance at the .05 level, $t(2) = -3.835$, $p < .05$.

In order to show statistically significant preference in the choices of the children we interviewed, we used several chi-square analyses.

Analysis 1

A chi-square analysis was conducted on the preference of common and easy to pronounce first names over uncommon and difficult to pronounce first names for both the boys and girls. The results revealed that the differences were statistically significant, $\chi^2 = 13.714$, $p = .001$.

Analysis 2

A chi-square analysis was conducted on the names the boys preferred. The results revealed that the differences were statistically significant, $\chi^2 = 10.889$, $p = .001$.

Analysis 3

A chi-square analysis was conducted in on the names the girls preferred. The results revealed that the differences were statistically significant, $\chi^2 = 4.167$, $p = .05$.

Analysis 4

A chi-square analysis was conducted on the preferences of only the Caucasian children. The results revealed that the differences were statistically significant, $\chi^2 = 13.5$, $p = .001$.

Analysis 5

A chi-square analysis was conducted on the preferences of the children whom were not Caucasian. The observed value (2.0) was less than the critical value (3.841) at the .05 level; therefore the null hypothesis was not rejected. These differences are not statistically significant.

Analysis 6

A chi-square analysis was conducted on the preferences the children had when the children themselves had names that were common and easy to pronounce. The results revealed that the differences were statistically significant, $\chi^2 = 16.133$, $p = .001$.

Analysis 7

A chi-square analysis was conducted on the preferences the children had when the children themselves had names that were uncommon and difficult to pronounce. The observed value (.333) was less than the critical value (3.841) at the .05 level; therefore the null hypothesis was not rejected. The differences are not statistically significant.

Analysis 8

A chi-square analysis was conducted on the preferences of children who's best friend has a name which is common and easy to pronounce. The results revealed that the differences were statistically significant, $\chi^2 = 12.8$, $p = .001$.

Analysis 9

A chi square analysis was conducted on the preferences the children had when the children had a best friend whose name was uncommon and difficult to pronounce. The observed value (2.909) was less than the critical value (3.841) at the .05 level; therefore the null hypothesis was not rejected. These differences were not statistically significant.

Discussion

The hypothesis of the study was that children have a bias against names that are uncommon and difficult to pronounce. Therefore, it was expected that children would choose names that were common and easy to pronounce when paired with those that are uncommon and difficult to pronounce. It was found that overall, boys and girls show a

preference for names that are common and easy to pronounce. It was also found the same when the boys and girls were viewed as individual groups. The Caucasian child participants showed a very strong preference for names that are common and easy to pronounce. Also, it was discovered a child's own first name is common and easy to pronounce or when their best friend's name is common and easy to pronounce, they show a strong preference for the same kinds of names. Those children who were not Caucasian did not show a strong preference toward either kind of name. In fact, the preference was almost equal on both sides of the spectrum. Children who had uncommon and difficult to pronounce first names and children whose friends had uncommon and difficult to pronounce names also did not show a preference toward either kind of name.

In general, the child participants showed a preference for more simple, mainstream names. All of the participants who had uncommon or difficult to pronounce names were non Caucasian. The non Caucasian participants comprised nearly half of the sample population, yet overall, the sample overwhelmingly preferred common and easy to pronounce names. Eight out of nine of the boys in the study had best friends with names that were common and easy to pronounce, and when given their choices, the boys overwhelmingly showed a preference towards names that were common and easy to pronounce. Interestingly enough, even though 9 out of the 12 girls reported having best friends with unusual names, when given their choices of names, they still showed a strong preference for names that were common and easy to pronounce.

Alternative possibilities (rather than having a bias) could include various reasons. The child may have chosen a simpler, familiar name because he or she could not pronounce one of the names in the choices given. One participant stated that they chose

the more difficult name rather than the easier one because they knew with a name that sounded similar. This may lead us to believe that the participants, who showed a preference to the more difficult names, may have only showed that preference, because despite the name being generally non mainstream, they may be more familiar with it.

If this study were to be repeated, we would suggest a larger sample size when recruiting children. Other than that, our experimental design limited extraneous variables. Our sample size for our undergraduate participants was 69, and was a nearly equal ratio of men to women (35:34). The ratio of boys to girls was almost equal. (9:12), as well as the ratio of Caucasian to non Caucasian child participants were almost equal (9:12). Girl participants were only given choices of girl names and asked by the female experimenter in order to eliminate bias against the opposite gender when choosing a name. Boy participants were only given choices of boy names and were asked by the male experimenter, also to eliminate bias against the opposite gender when choosing a name.

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Appendix A

List of Names

Most and least common names in the 1990's taken from

www.ssa.gov/OACT/babynames/1999/top1000of90s.html _

1. Michael	Ashley
2. Christopher	Jessica
3. Matthew	Emily
4. Joshua	Sarah
5. Jacob	Samantha
6. Andrew	Brittany
7. Daniel	Amanda
8 Nicholas	Elizabeth
9. Tyler	Taylor
10. Joseph	Megan
11. David	Stephanie
12. Brandon	Kayla
13. James	Lauren
14. John	Jennifer
15. Ryan	Rachel
976.Rudolph	Deana
987.Francesco	Jessi
988.Giancarlo	Jodi
989.Giovanny	Kelia
990.Harris	Kendal
991.Harvey	Kimberlee
992.Jess	Reina
993.Jovany	Yajaira
994.Koby	Alena
995.Nikhil	Brea
996.Omari	Georgina
997.Stetson	Joana
998. Storm	Meranda
999.Tristian	Mikala
1000 Abdullah	Nikole

Appendix B

Data Sheet

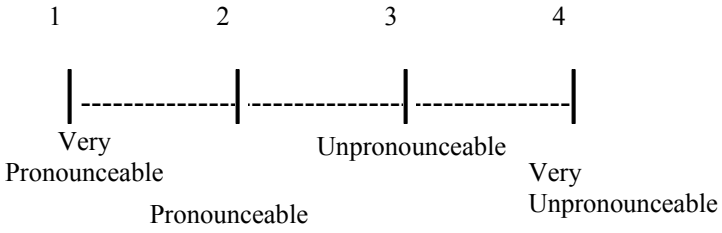
Subject Number	Sex	Age	Has Common/Easy Name?	Options/Choice One	Options/Choice Two	Best Friend Common/Easy Name?
1B	M		Yes / No	John / Giancarlo	Nikhil / David	Yes / No
2B	M		Yes / No	Nikhil / John	David / Giancarlo	Yes / No
3B	M		Yes / No	David / Nikhil	Giancarlo / David	Yes / No
4B	M		Yes / No	Giancarlo / John	John / Nikhil	Yes / No
5B	M		Yes / No	John / Nikhil	Giancarlo / John	Yes / No
6B	M		Yes / No	Giancarlo / David	David / Nikhil	Yes / No
7B	M		Yes / No	David / Giancarlo	Nikhil / John	Yes / No
8B	M		Yes / No	Nikhil / David	John / Giancarlo	Yes / No
9B	M		Yes / No	John / Giancarlo	Nikhil / David	Yes / No
10B	M		Yes / No	Nikhil / John	David / Giancarlo	Yes / No
11B	M		Yes / No	David / Nikhil	Giancarlo / David	Yes / No
12B	M		Yes / No	Giancarlo / John	John / Nikhil	Yes / No
13B	M		Yes / No	John / Nikhil	Giancarlo / John	Yes / No
14B	M		Yes / No	Giancarlo / David	David / Nikhil	Yes / No
15B	M		Yes / No	David / Giancarlo	Nikhil / John	Yes / No
16B	M		Yes / No	Nikhil / David	John / Giancarlo	Yes / No

Subject Number	Sex	Age	Has Common/Easy Name?	Options/Choice One	Options/Choice Two	Best Friend Common/Easy Name?
1G	F		Yes / No	Emily / Yajaira	Kelia / Sarah	Yes / No
2G	F		Yes / No	Kelia / Emily	Sarah / Yajaira	Yes / No
3G	F		Yes / No	Sarah / Kelia	Yajaira / Sarah	Yes / No
4G	F		Yes / No	Yajaira / Emily	Emily / Kelia	Yes / No
5G	F		Yes / No	Emily / Kelia	Yajaira / Emily	Yes / No
6G	F		Yes / No	Yajaira / Sarah	Sarah / Kelia	Yes / No
7G	F		Yes / No	Sarah / Yajaira	Kelia / Emily	Yes / No
8G	F		Yes / No	Kelia / Sarah	Emily / Yajaira	Yes / No
9G	F		Yes / No	Emily / Yajaira	Kelia / Sarah	Yes / No
10G	F		Yes / No	Kelia / Emily	Sarah / Yajaira	Yes / No
11G	F		Yes / No	Sarah / Kelia	Yajaira / Sarah	Yes / No
12G	F		Yes / No	Yajaira / Emily	Emily / Kelia	Yes / No
13G	F		Yes / No	Emily / Kelia	Yajaira / Emily	Yes / No
14G	F		Yes / No	Yajaira / Sarah	Sarah / Kelia	Yes / No
15G	F		Yes / No	Sarah / Yajaira	Kelia / Emily	Yes / No
16G	F		Yes / No	Kelia / Sarah	Emily / Yajaira	Yes / No

Appendix C

Questionnaire

Please rate each name on a scale of 1 to 4, 1 being the most pronounceable and 4 being the least pronounceable.



___ Michael
___ Christopher
___ Matthew
___ Joshua
___ Jacob
___ Andrew
___ Daniel
___ Nicholas
___ Tyler
___ Joseph
___ David
___ Brandon
___ James
___ John
___ Ryan
___ Rudolph
___ Francesco
___ Giancarlo
___ Giovanny
___ Harris
___ Harvey
___ Jess
___ Jovany
___ Koby
___ Nikhil
___ Omari
___ Stetson
___ Storm
___ Tristian
___ Abdullah

___ Ashley
___ Jessica
___ Emily
___ Sarah
___ Samantha
___ Brittany
___ Amanda
___ Elizabeth
___ Taylor
___ Megan
___ Stephanie
___ Kayla
___ Lauren
___ Jennifer
___ Rachel
___ Deana
___ Jessi
___ Jodi
___ Kelia
___ Kendal
___ Kimberlee
___ Reina
___ Yajaira
___ Alena
___ Brea
___ Georgina
___ Joana
___ Meranda
___ Mikala
___ Nikole

People Perception: The Effects of Facial Piercings

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The research hypothesis of this study is that subjects will have a more negative perception of models with facial piercings than models without. There were 35 subjects surveyed. Each subject looked at 15 pictures of people between the ages of 19 and 21 years. There were 11 filler pictures and four model pictures in each survey. The subject answered questions that helped them to rate these people on different positive and negative scales. The models were shown with no facial piercing, a fake lip piercing, a fake nose piercing or both a fake lip and nose piercing. The same models were used with every subject. The results of some of the tests indicated that there was a statistically significant difference in the way the subjects perceived the model with no facial piercing, the model with a lip piercing and the model with a nose piercing.

Body modification is becoming more prevalent in American society today than it has ever been. Because it is becoming more prevalent, some may go so far as to say that it is becoming more widely accepted. However, this is not necessarily the case. The purpose of my study was to determine if society would negatively perceive people who have a facial piercing. I conducted the experiment by having the participants complete an 11 question survey about 15 pictures. Throughout the pictures, there were 11 fillers (people without any facial piercing) and four models (people who were wearing fake facial jewelry). I hoped that by using fake facial piercings, society would learn that "you should not judge a book by its cover." In other words, you shouldn't judge a person by

whether or not they have a facial piercing and more broadly by whether or not they have a body modification. Throughout the literature reviewed, there was an overall negative connotation towards people with body modification, including facial piercing.

Myrna L. Armstrong, a professor in the School of Nursing at Texas Tech University Health Sciences Center figured that the number of people with piercings or tattoos is hard to know exactly as cited in (Schnirring, 2003). She has come across one study of college students that concluded that 17% of them are pierced and yet another study that shows that 51% are pierced. Both of these numbers still differ from her findings, which indicated that 33% of college students are pierced. A 1999 study by researchers from Emory University and Howard University published in the *Journal of Public Health Policy* indicated that… "a typical establishment would perform about 3,000 piercings per year" as cited in (Schnirring, 2003). This number alone shows that piercings are a very prominent activity in today's society. However, the difficult question to answer is whether or not the rest of society discriminates against people with body modifications (Schnirring, 2003).

Discrimination of body modification can be seen in many forms. In a study conducted by researchers at the University of Florida (UF), a comparison was made among gender differences in college students who had at least one tattoo or nontraditional piercing, defined as located anywhere other than the earlobe. Two-hundred and eighty undergraduate students from UF were surveyed for this study. Of the 280, 160 of them were women and the remaining 120 were men. Of the women surveyed, more than 80% were pierced. Whereas of the men surveyed, only 50% were pierced. To show an even bigger gender difference, of the men who were pierced, 40% of them waited until they

were 18 or older. Of the women who were pierced, only 20% of them waited until the legal piercing age. One could infer that this difference among genders helps to show that it is more widely accepted for females to have non-traditional piercings than it is for men. In other words, society deems it socially unacceptable or discriminates more toward males who have non-traditional piercings.

Marisa A. Miller, PhD. said, "It is apparent that body art is a fad that is gaining popularity worldwide, and oral jewelry is increasingly being viewed as an acceptable fashion statement in our society" (Miller, 2003). Although this comment may lead one to believe that this article is in favor of such piercings, the rest of the article refers to the dangers and hazards of oral and facial piercings to the athletic community. The article referred to the many dangers a person inflicts upon oneself by subjecting oneself to facial and oral piercings, as well the dangers to others. One such danger noted in this article was injuring oneself or another, with one's piercing, when physical contact is made during a sporting event. There is a debate of whether or not this danger should be eliminated, by forcing all players with a piercing to remove the piercing before being allowed to play, or considered another risk of playing the game. The fact that some people believe that those with facial and oral piercings should not be allowed to play in sports does show discrimination against people with such piercings. The discrimination against the person with a piercing may not be detrimental to the person, because he or she could simply remove the piercing, but the discrimination is still there.

In another study that showed discrimination of those with body modifications, Jessica Brown, a 10-½ year old girl, asked, "Doesn't that hurt…That's got to be painful," to a graduate student who had an ivory spike through his nose and needles going through

his skin on both sides of his chest (Lord, 1997). Her parents had taken her to a daylong body- art convention in hopes that she would no longer want to be a "body modifier." By the end of her day at the convention, Jessica was quoted saying that she doesn't want a tattoo because they make people uglier, but she still wants a navel ring (Lord, 1997).

Armando Favazza, a psychiatrist for the University of Missouri and the author of *Bodies Under Siege* said, "While it may alarm parents, the body-art fad is "nothing pathological" as cited in (Lord, 1997). Although, this may comfort Jessica Brown's parents, this belief is not widely held by all in the field of psychology. There was a correlation found between higher self-reported antisocial attitudes and the younger the age of the person when he or she began to pierce their body (Anderson & Carroll, 2002). This evidence was concluded from a comparative study of body modifiers versus non-body modifiers, conducted by Frederick and Bradley in 2000 (Anderson & Carroll, 2002).

Method

Participants

Thirty-five participants were recruited for my research project. However, one of the subject's data had to be omitted because he confused the order of the pictures viewed from the picture booklet. All of the participants were students at Lindenwood University. They were all enrolled in at least one of the following courses; Introduction to Psychology, Introduction to Sociology, Introduction to Anthropology and Interactive Psychology, which enabled them to be considered a part of the Lindenwood University Human Subject Pool. I used the Lindenwood University Human Subject Pool to recruit all of the participants. By recruiting the subjects through the Human Subject Pool, I was

able to give them a bonus slip, which enabled the subjects to receive bonus points from their professors.

Materials

The materials used were as follows; a lab room, a long desk with a divider in the middle (so if the researcher was running two participants at once, the participants could not see what the other one was looking at or writing down), a separate desk for the researcher and three chairs (one for each participant and one for the researcher). Each participant was given a pen to write with, a booklet of 15 head shots, see Appendix A for examples, and 15 copies of the 11 question survey in packet form (see Appendix B). The headshots were of 15 young adults who voluntarily signed a model informed consent, allowing the researcher to use his or her picture(s) for this study. Of the 15 head shots the subjects were going to view, four of them were target or model pictures. The other 11 were filler pictures. One of the four models viewed by the subject had no facial piercing, one had a fake nose piercing, one had a fake lip piercing and one had both fake nose and lip piercings. Every model was seen with all of the above four conditions in position three, six, 10 and 13 of the picture booklet. However, the subjects only saw each model with one condition. Therefore, by counterbalancing experiment was left with a total of 16 conditions and 27 headshots. The 11 questions on the survey dealt with the subjects rating the people in the photos on different life aspects. For instance, question #2 asked, "how far has this person gone academically?" The choices that the subject could chose from were: high school dropout, high school graduate, attending college, or college graduate. The answers that the subjects provided about the models were later analyzed to see if there was a significant difference in the way the subjects rated the model with a

facial piercing and the model without a facial piercing. The subjects were also given one informed consent to keep and one to fill out and give back to the researcher, a participant receipt to turn in for extra credit, an Experimenter's List of Participants form to fill out one line and give back to the researcher and finally a feedback letter. A debriefing script was used to ensure that the same thing was said to each participant at the conclusion of his or her participation.

Procedure

Before recruiting subjects, 15 of the researchers' friends were asked if they would be a model in a picture in the study. One head shot was taken of 11 of them. These were used as the "filler pictures" to help deceive the subjects. Had the subjects known that the study was looking at their judgments of only the people with the facial piercings; their answers may have been skewed. The other four people's pictures were used as the stimuli. One picture, of each of the four models, was taken with no fake facial piercing, one with a fake nose piercing, one with a fake lip piercing and one with both fake nose and lip piercings. A sample of all of these stimuli is on Appendix A. The order in which the filler pictures were presented was randomly decided, by turning all of the pictures upside down, mixing them up and then numbering them one through 11. The odd pictures were presented first, followed by the even pictures. The model pictures were presented in positions three, six, 10 and 13 in order to ensure that there was almost an even amount of filler pictures between each model picture. After the original order was determined, the researcher counterbalanced the order in which the subjects saw the models. Therefore, the study ended up having 16 conditions. Each model was seen in position three, position six, position ten and position 13. In each of the positions, the

model was also seen having no facial piercing, a lip piercing, a nose piercing or both a lip and a nose piercing.

To recruit subjects the researcher put a description of my study, along with a sign-up sheet on the Human Subject Pool Sign up Board, located on the fourth floor of Young Hall at Lindenwood University. The subjects signed up for a predetermined time and then came to the corresponding location at the correct time. When the subject arrived, the researcher asked for his or her name to make sure he or she was at the right place. The researcher then had him or her sit down at their desk and fill out the participant receipt, two informed consents and the Experimenter's List of Participants. Once they were finished doing this, the researcher explained to him or her that the first page of the survey corresponded with the first picture in the booklet, the second page with the second picture, and so on. The subject would answer the 11-questions on each page of the survey that pertained to the person in the corresponding picture. When the subject had completed the survey, the researcher would debrief them by reciting the debriefing script and then give them a feedback letter.

Results

All data that corresponded with the models that had both a nose and a lip piercing were omitted because subjects continuously stated after their participation, that he or she could tell that the piercings were fake. The researcher felt that if the subjects could tell that some of the models were wearing fake piercings they might have rated him or her differently than they would have if they believed the piercings to be real. The researcher analyzed the amounts of undesirable behaviors attributed to each model, the amount of negative characteristics attributed to each model, the perceived education level of each

model, the perceived amount of income made per hour by each model, the likelihood of the test taker befriending each model, the perceived category/categories each model fit into best and if the models were perceived to be an asset, menace or something else to society. These factors were chosen to be analyzed because the researcher felt that they are helpful in determining the subjects' perception of the models.

Data about the model's perceived race and positive characters was left out of all analyses because the researcher felt they would be of no help in determining the perception of the models.

The first test that was run on this data was descriptive. The variable of interest in this test was the perceived amount of income made per hour by a model with no facial piercing, a model with a lip piercing and a model with a nose piercing. In all cases, over 60% of the subjects chose either $6.00 - $7.99 or $8.00 - $9.99.

The second type of test used was a chi-square analysis. Here, the variables of interest were the perceived education level of a model with no facial piercing, a model with a lip piercing and a model with a nose piercing. Statistical significance was found in all three cases. For the model with no facial piercing, $\chi^2_3 = 26.000$, $p < .001$. For the model with a lip piercing, $\chi^2_3 = 8.118$, $p = .044$. For the model with a nose piercing, $\chi^2_3 = 18.000$, $p < .001$. However, the significance could be attributed to the fact that most of the subjects chose one of the two middle choices (i.e. high school graduate, attending college).

A one-way ANOVA was used when analyzing the difference in the amounts of undesirable behaviors attributed to each model. The dependent variable was the mean of the undesirable behavior and the independent variable was piercing. The levels of the

independent variable were a model with no facial piercing, a model with a lip piercing and a model with a nose piercing. Statistical significance was found, $F_{(2,64)} = 5.524$, $p = .006$, indicating that the models piercing status had an effect on the mean undesirable behavior rating.

Post-hoc tests were run to determine where the differences occurred. When the model with no facial piercing was paired with the model with the lip piercing, statistical significance was found, $t_{(33)} = -2.874$, $p = .007$. When the model with no facial piercing was paired with the model with a nose piercing, statistical significance was also found, $t_{(32)} = -2.852$, $p = .008$. However, when the model with a lip piercing and the model with a nose piercing were paired together, no statistical significance was found, $t_{(32)} = -.607$, $p > .05$. The statistical significance of the first two analyses hold even with the Bonferroni correction factored in in order to account for the inflation of Type I error.

Descriptive statistics were analyzed for the likelihood of the test taker befriending the model with no facial piercing, a model with a lip piercing and a model with a nose piercing. Of the subjects who viewed the model with no facial piercing, 12% said it was very unlikely they would befriend the model, 43% said it was unlikely they would befriend the model, 33% said it was likely the would befriend the model and 12% said it was very likely they would befriend the model. Of the subjects who viewed the model with a lip piercing, 15% said it was very unlikely they would befriend the model, 44% said it was unlikely they would befriend the model, 39% said it was likely they would befriend the model and 2% said it was very likely they would befriend the model. OF the subjects who viewed the model with a nose piercing, 18% said it was very unlikely they would befriend the model, 32% said it was unlikely they would befriend the model, 47%

said it was likely they would befriend the model and 3% said it was very likely they would befriend the model. A possible reason that a difference was detected could be the fact that subjects tend to choose the choices that are in the middle, as a majority of these subjects did. When the two unlikely choices were paired together and the two likely choices were paired together, no difference was detected. Of the subjects who viewed the model with no facial piercing, 54% said they would no befriend the model and 46% said they would. Of the subjects who viewed the model with a lip piercing, 60% said they would not befriend the model and 40% said they would. Of the subjects who viewed the model with a nose piercing, 50% said they would not befriend the model and 50% said they would.

Another set of Chi-Square tests that were run, looked at which category the model with no facial piercing, the model with a lip piercing and the model with a nose piercing fit into best. No statistical significance was found based on what type of categories the models were perceived to fit into best.

Another analysis conducted of this data was descriptive. 81% of the subjects perceived the model with no facial piercing to be an asset to society. The remaining 19% perceived the model to be a menace to society. 58% of the subjects perceived the model with a lip piercing to be an asset to society. The remaining 42% perceived the model to be a menace to society. 67% of the subjects perceived the model with a nose piercing to be an asset to society. 30% of the subjects perceived the model to be a menace to society. The remaining 3% made no distinction. Because the percentages of the model with a lip piercing were so close, a Chi-Square analysis was conducted to determine if there was

statistical significance. However, no statistical significance was found when looking at the model with a lip piercing, $\chi^2_1 = .758$, $p > .05$.

The final test that was run was another one way ANOVA. The variables of interest were the amount of negative characteristics attributed to a model with no facial piercing, a model with a lip piercing and a model with a nose piercing. No statistical significance was found and the Null Hypotheses was accepted.

Discussion

In today's society, it is important to know how people with facial piercings are perceived. Therefore, it is interesting to find out from this study that people with a facial piercing are generally looked upon more negatively than people without facial piercings. Facial piercing is a major topic of discussion in many workplaces and families. Because, it is mainly adolescents and young adults who are engaging in this piercing behavior, only models that were between the ages of 19 years and 21 years were used in this study. This factor could have been the first limitation to the study. If models that appeared younger or older than 19-21 years had been used in this experiment, the results may have been completely different.

Not only were the models used within that 3-year age range, but also all of the subjects that were tested in this experiment were very near to this age range. Although significance was found based on whether or not the model had no facial piercing, a lip piercing or a nose piercing in some instances, the actual amount of significance would have probably been greater if the age of the subjects had a wider range. It is sensible to believe that the amount of significance, when significance was found, was not all that great because of the fact that the subjects were in close age proximity to the models and

could therefore relate to them better than somebody of a different generation. Furthermore, college students, because of the era that they are currently living in, are more habituated to seeing people with facial piercings than people of older generations. Because in such situations as job interviews, the interviewees are usually of an older generation, it seems important to learn how young adults with facial piercings are perceived by members of earlier generations.

Another factor that could have caused the results of this study to be skewed either way could have been the mere boredom effect. Because of the time length and repetitiveness of the survey, the subjects could have easily become bored and just possibly marked down the same answers for the entire survey to just "get through it." Each subject was required to answer an 11-question survey about 15 different pictures. While observing some of the subjects answering the questions, it seemed as if they were fidgety. For instance, they would constantly be looking to the back of the survey to see how many they had left to answer instead of focusing on the picture and questions they were working on at the current time.

Another factor that should be considered in this study is the fact that a fourth type of model was used in the survey. There was a model that had both a lip and nose piercing. However, that data was thrown out because many subjects, after being debriefed, had told me that they believed one of the male models with both piercings really did have fake piercings. The mere thought that one particular model in the survey had a fictitious piercing could have led the subject to believe that all of the people with piercings indeed had fake piercings. It is possible that because the subjects believed that they had figured out the purpose behind the study, they wanted to do their best to give

false answers to make it seem as though they really would rate a person with a facial piercing lower than a person without one, when in all actuality they would not.

The final factor that has been considered to affect the results of the data in this study was the fact that some of the subjects accidentally skipped a few of the pages of picture book. Therefore, when they got to the end of the picture booklet, they still have a few pages in the actual survey to answer. The subject would then have to go back and look at each page carefully until they found which picture it was that they had not previously seen. If the pictures were viewed in the correct order, the results may have been different. For instance, if the previous picture viewed put the subject into a negative thinking mode, then the subject's response to the model picture could have been affected.

In replication of this study, the first thing one should think about is the use of a broader age range of subjects. Collegiate students should not be the only age range tested. For instance, more thorough results may be found if one would survey people in high school and business settings. Another suggestion would be for the researcher to use a computer to display the pictures and to have the subjects answer electronically. This way all subjects would for sure see all of the pictures in the same order. Another thing the researcher could do is to shorten the survey. This could take away from the boredom effect. Finally, the researcher should make sure that the models' fake piercings look as real as a real piercing does.

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Appendix A

Sample Pictures

Appendix B

People Perception Survey

Please circle the answer that **best describes** the person in Picture #1.

1. What race does this person belong to?

Caucasian Black Hispanic Croatian Other: _____

2. How far has this person gone academically?

High School Dropout High School Graduate Attending College College Graduate

3. How much money does this person make per hour?

Unemployed $0.01 to $5.99 $6.00 to $7.99

$8.00 to $9.99 $10.00 to $11.99 $12.00 or more

4. How likely do you think this person is to have been arrested?

Very unlikely unlikely likely very likely

5. How likely do you think this person is to smoke cigarettes?

Very unlikely unlikely likely very likely

6. How likely do you think this person is to use recreational drugs?

Very unlikely unlikely likely very likely

7. How likely do you think this person is to drink alcoholic beverages?

Very unlikely unlikely likely very likely

8. How likely are you to be friends with this person?

Very unlikely unlikely likely very likely

9. Which category/categories does this person appear to fit into best?

"Jock" "Druggie" "Preppy" "Trouble Maker" "All-American"

"Nerd" "Alcoholic" "Other": _____

10. Overall, is this person an asset to society or a menace to society?

Asset Menace Other (please explain on back)

11. On a scale of 1 to 4, where 1 is the lowest and 4 is the highest; please rate this person on how much of the following characteristics you believe that they have.

Honesty	_____	Trustworthiness	_____
Messiness	_____	Organization	_____
Kindness	_____	Selfishness	_____
Pessimism	_____	Optimism	_____
Hardworking	_____	Laziness	_____