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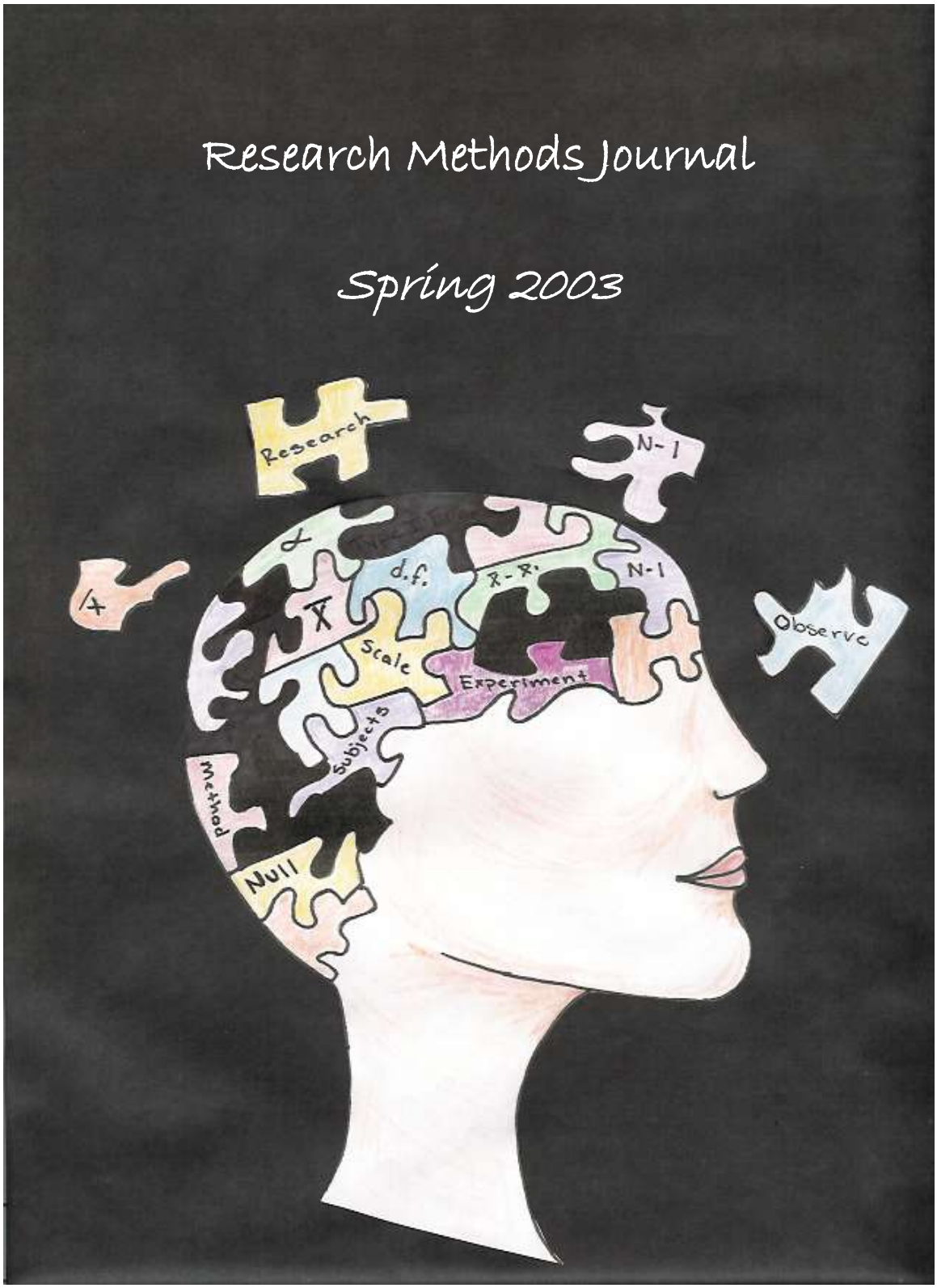
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About the Journal

We are very proud to present the second issue of the Research Methods Journal. This semester, the students designed, implemented, and presented their original research project. In addition, they used their creativity and imagination to propose a second project that is unrelated to their first research study. All of the students took an active role in the review process of the individual papers, providing helpful and often insightful comments to the author. The quality of the papers in this issue of the journal is a testament to the hard work and pride that the students have put into their course.

This year, several talented students came up with very creative covers for the journal and the choice was extremely difficult. In the end, the first place design by Jennifer Sytsma was chosen by the class to appear as the front cover of our journal. The class chose Sarah Brady's design which came in second place to appear as the title page for the research proposals that are found toward the back of this issue.

The course tutor, Stephanie Burkhardt took on the challenging task of Editor for this journal. We are very grateful for Stephanie's hard work throughout the semester and her dedication to the class. We would also like to thank Katy Black, Jaclyn Nesslage, and Sarah Torpea for helping to proofread this publication.

Dr. Michiko Nohara-LeClair
Course Instructor

Do You Know Your 50 States?

Katherine Friedhoff

Lindenwood University

When information is forgotten, sometimes a visual cue can act as a spark to cue your memory into remembering the lost facts. In this study, the task at hand is recalling as many of the 50 United States as possible. Twenty undergraduate students were randomly assigned into two groups, where the first group's task was free recall of the 50 states and the second group received a blank map of the states to test cued recall. This memory task may sound like an easy one but recalling the United States of America is tougher than participants imagined. However, there was no difference in the mean number of states recalled between the free recall condition and the cued recall condition.

Has anyone ever asked you to remember something that you learned years ago? When this happens, you may have the sharpest memory of anyone and just recite or write down the information that was requested or you may just frustrate yourself and wonder why you didn't retain that information during the learning process. Whether you learned the information yesterday or fifteen years ago, sometimes all you need is a hint and the information could come right back to you. One type of hint is a visual cue. Does cued recall yield better retrieval than free recall?

James Reffel (1997) conducted a similar research design. His research design consisted of three different settings of college students. In one study of 95 students, he used a repeated measures design. The participants first performed a free recall of the 50 United States. The second part of the experiment was cued recall of the 50 states given a

blank map and an answer sheet with 50 lines on it. He found that in the free recall task the mean number of states recalled was 41.4. Cued recall consisted of a blank United States map to perhaps spark some recall. In the cued condition, the mean number recalled was 31.8 states. Given these data, it appears that free recall is more accurate than cued recall. If you were not taught the direct relationship between the state maps and their names, you may have difficulty labeling a blank United States map and therefore the map may not serve as a positive cue for your recall of the states (Reffel, 1997).

An article by Sharps, Foster, Martin & Nunes (1999) discusses visual and spatial cues to recall certain items. In this particular study, age is a relevant factor, whereas in my study it is not. In this experiment young and older adults were asked to recall the location of sets of common objects placed on a table-sized context. The contexts were pf the same dimensions and structural layout but provided different levels of environmental support. A good point is made that the recall performance of older adults is shown to benefit more from visually distinctive cues to location than that of young adults. This shows that memory across the lifespan may be improved with help from visuospatial cues. If this theory were applied to my study then whoever learned the states according to the map at a younger age would be more likely to succeed in recall when given the map as a visual cue at a later age.

Images may help us in recall but a lot of verbal coding helps us with recall as well. Paivio's (1986) dual coding theory tells us about the importance of verbal and non-verbal processing. The theory assumes that there are two cognitive subsystems, one specialized for the representation and processing of nonverbal objects/events (i.e., imagery), and the other specialized for dealing with language. In stating this, we can say

that recall of auditory information, when presented in conjunction with imagery, is enhanced during immediate recall (Pinon, 1999). Pinon's (1999) experiment studies whether televised imagery could improve children's acquisition of visual-spatial geographic information. 50 second graders and 40 fourth and fifth graders watched a videotaped program on US geography. For half of the states shown, imagery was inclded to enhance elaboration and retrieval of the state shapes. The imagery aided in recall of the shapes of the states but not their locations. He did determine that overall learner who uses imagery has better recall than one who does not.

Webb and Saltz's (1994) study examined elementary students' ability to remember information when given iconic cues in addition to verbal stimuli. Fifth grade students studied maps of a fictitious island while listening to a related narrative. It was found that students remembered more text features and were more confident when cued by icons. The memory for feature information and pictorial retrieval cues appeared to activate memory for nonfeature info contained in the text.

Barker and Mcinerney (2002) researched the level of processing, deep and shallow, which is an important issue in recall tasks. 200 primary school students were randomly assigned into four groups: mastery focused condition, performance approach conditon, performance avoidance condition and control group. The participants were motivationally manipulated prior to receiving 12 stimulus words designed to be encoded at either shallow or deep levels. The students were then given a free recall test followed by a cued recall test. The results indicated that the cued recall test resulted in more words remembered over a free recall test. Performance approach and avoidance goals resulted in superior recall in both the free and cued recall tests.

In my study, it is unclear whether the participants are visual or auditory learners or even the method in which they were taught the 50 United States in school. The participants are undergraduate college students so the estimated length of time since their learning the states should be around seven or eight years. After considering all the background information, I have found some information that supports my hypothesis that participants who have a visual cue will recall more states with more accuracy. I have also found information that contradicts my hypothesis. I believe in my hypothesis because this is a simple experiment with only one independent variable and the task at hand involves information that was learned at an earlier time in the participants' lives.

Method

Participants

There were 20 participants involved in this study. The participants will be randomly assigned to one of two groups. One group will have a visual cue and the other will not.

Most of the participants were recruited from Lindenwood University's Human Subject Pool, which consists of students who are in psychology, sociology and anthropology classes. The remaining students were recruited from the McCleur residential dormitory on Lindenwood's campus. I was not interested in sex differences so both men and women were invited to participate.

Materials

The materials I used were simple. They consisted of a blank map of the United States of America and an answer sheet with fifty lines numbered one to fifty. For examples of materials, see Appendix A. The participants were provided with pens if they did not bring their own. In most cases, I used a small to medium sized classroom to

conduct the research. In the other cases, I used a quiet dorm room without noisy distractions and conducted one participant at a time.

Procedure

First, I had all the students sit and complete the consent form before beginning the experiment. I handed out the materials so they would all have the same amount of time. The first group of participants was given the answer sheet and was asked to recall the 50 United States. They were given fifteen minutes to complete this task. On another day, the second group of participants was given the answer sheet and a blank map of the United States. They were asked not to write on the map itself and to recall as many of the states as possible and write them on the answer sheet provided. This group was also given 15 minutes to complete the task.

This is a between-subjects design so it is uncertain whether the groups were equal to start with. I collected most of the data in the afternoon but because of scheduling there was some evening data collection, which may have contorted the data in some way. I can foresee two possible problems in this type of design and that is the knowledge of the participants. If the groups of participants that were given the maps did really well because they had the maps to trigger their memory, that would be good, unless the group without the maps performed poorly. These are individual differences that I can't predict or control. I cannot attempt to overcome the possible problem unless I gave everyone a pre-test that might have created demand characteristics.

Results

In order to test the hypothesis that cued recall would yield better retrieval than free recall, an independent t-test was conducted with the recall type (free or cued) as the

independent variable and the score as the dependent variable. The results revealed no statistically significant effect of type of recall on the participants' scores, $t(18) = -.179$, $p > .05$. The t-test showed that the presence of the map as a visual cue was not an asset when recalling the fifty states in the allotted time.

The mean number of states recalled in the free recall condition was 40.30 and 40.90 states were recalled in the visual cue condition. In the overall experiment, the minimum number of states recalled was 19 and the maximum, 50.

Discussion

Contrary to my prediction, cued recall was not more effective than free recall in remembering the 50 United States of America. The results were interesting to me after reviewing Reffel's (1997) study that was the most similar to mine. He reported that the overall recall of the 50 states was poorer than expected for college students. Reffel (1997) mentions that the recall for states in close proximity to a subject's current residence is better and that perhaps students live in a geographic bubble. If this is true, then it is not shocking.

An interesting and shocking aspect of my findings was the spelling errors of college students when recalling the 50 states. I understand forgetting a couple states, but I don't understand the spelling errors. The top five misspelled states were Connecticut, Massachusetts, Tennessee, Louisiana and Pennsylvania.

One thought I had after conducting this experiment was the possibility of international students that might participate in the study. Their schools most likely do not place emphasis on learning the 50 United States of America.

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The Effects of Music on Concentration

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People have long speculated the effects of music on learning. According to the Mozart effect, classical music has a positive effect on learning. Researchers have found that other genres of music, as well as silence, can actually act as distracters rather than stimulators. In the present study, 32 participants were tested under four different conditions. The participants were required to read an excerpt and then answer questions about the excerpt. For three of the excerpts, the participant was required to read and then answer questions while listening to music, while the fourth reading comprehension task was completed in silence. Results were inconclusive, as some participants followed the Mozart effect and performed better while listening to classical music, while other participants performed better in the other experimental conditions. Thus, music may have an effect on the concentration of some people, but not on others.

The present study is designed for determining whether various musical genres have an effect on a person's ability to concentrate on a reading comprehension task. I chose to research this topic because I was curious in knowing whether different types of music act more as stimulators or distracters. In addition, from what I have found through personal experience, different types of music seem to have an effect on my concentration, and I wanted to see if research would support this observation.

It is widely believed that classical music has a positive effect on learning, and some propose that some classical music actually sharpens the brain (Holden, 1999). This

phenomenon is known as the Mozart effect (Holden, 1999). Researchers have found that college students scored significantly higher on spatial-temporal reasoning after listening to the first ten minutes of a Mozart Sonata, but not after listening to silence, a relaxation tape, minimalist music, dance music, or a short story (Grandin & Peterson, 1999).

Previous work done has indicated that the effects of music depend upon which cerebral hemisphere processes the music (McFarland & Kennison, 1987). Recent coherence analyses of surface brain wave recordings taken from subjects listening to the Mozart sonata (as compared with those listening to a short story) and then performing the spatial-temporal task show enhanced synchrony of neural firing activity of the right frontal and left temporo-parietal cortical areas (Grandin & Peterson, 1999). Wagner and Menzel (1977) demonstrated that listening to music stimulates both alpha and beta brainwave activity in humans (as cited in Brown & Wilson, 1997). Studies have found that listening to the patterned classical music of Mozart can enhance performance on some measure of spatial reasoning (Brown &Wilson, 1997). It appears that Mozart's music is sufficient to improve accuracy on this spatial-reasoning task relative to relaxation music or silence stimulus conditions (Brown & Wilson).

While there might be general trends in our responses to stimulating or relaxing music, they are overshadowed by individual cognitions. These individual cognitions may affect the immediate effects, such as associations of particular pieces of music with particular events, or dislike of particular musical genres (Hallam, Katsarou, & Price, 2002). The Yerkes-Dodson law states that the arousal level of the individual increases performance up to an optimal level beyond which over-arousal leads to deterioration in performance (Hallam; et al). Stimulating music is expected to increase arousal and

improve performance on simple tasks, but if the task is complex, the level of arousal may become too great and performance deteriorates. Research done has supported this theory, and researchers have found that music perceived as arousing, unpleasant and aggressive had a negative effect on performance on a memory task and also led to a lower level of reported pro-social behavior (Hallam; et al). Music may also provide a non-verbal distraction, which is less absorbing than other possible distracters. If concentration is lost, attention becomes focused on the background music rather than in developing behavior, which completely disrupts work (Hallam; et al).

There is still more evidence that suggests that background noise has a negative effect on concentration. Researchers have found that heard speech, even in a foreign language, has a deleterious effect on tasks such as the sequential recall of a series of digits, if the subject performing the task is asked to ignore such background speech (Pring & Walker, 1994). Music as well as speech is highly structured and one may therefore expect to find the same disruption with music as is apparent with speech (Pring & Walker). Salame and Baddeley (1987) ran a series of digit recall experiments to test this theory and found that silence and pink noise had no effect, but instrumental music proved to be disruptive and vocal music was even more so (as cited in Pring & Walker, 1994). This may be because when one hears familiar music, it evokes associated text, and the semantic processing of the lexical items has presumably occurred (Pring & Walker).

Research has shown that classical music has a positive effect on spatial-learning tasks, but has a negative effect on concentration. Based upon such research, I expect to find that various genres of music will have different effects on one's concentration;

certain genres will have a positive effect, while other genres will have a negative effect. Participants will be required to do four reading comprehension exercises while listening to various genres of music for three conditions and in silence for one of the conditions. The participants will be timed while they are doing the comprehension exercises and their times and scores on the exercises will be compared.

Method

Participants

There were a total of 32 participants. The participants were all be recruited through Lindenwood University's Human Subject Pool and were mixture of both men and women, with no set number of either.

Materials

There was four different story excerpts taken from the book "American Dreams." Each story chosen ("Rosa Parks," "The Company Man," "The Enormous Radio," and "The Castro") was accompanied by a set of four questions pertaining to the story (see Appendix 1 for a copy of the stories and questions). Sample questions include "How old was the man who died?" (taken from "The Company Man"), "What are the first names of the Westcotts?" (taken from "The Enormous Radio"), "What holiday is celebrated in the second gay center?" (taken from "The Castro"), and "What is the date that this story takes place"? (taken from "Rosa Parks").

Some of the equipment that was required for this experiment included desks and chairs for the participants, blue ink pens for the participants, informed consent forms, copies of the stories and questions, CD or tape containing a classical song, an R & B song, and a rock song, CD or tape player, time keeping device (such as a stopwatch),

participant receipts, and debriefing slips. The study was conducted in Roemer 315 at Lindenwood University.

Procedure

Before the starting of the experiment, the researcher prepared the story/question packages. Thirty-two copies of each story and corresponding set of questions was required. A Latin Square design was used to match up the four stories with the four testing conditions (three with music, one in silence) so that sixteen combinations resulted. To make the study more reliable, the combinations were repeated so that more participants could be used (see Appendix 2 for a copy of the combinations and the results). Each package was numbered 1-32, with every four packages corresponding to a predetermined order of testing conditions. For example, packages 1-4 followed the order of no music, classical, rock, and R & B.

No more than four students could be tested at once since the Latin Square design was used. Upon arrival, the students were asked to sign in. They were then seated in desks and given a numbered package containing four sets of stories and questions, as well as a blue ink pen, and told that they were not to begin until asked to do so. The researcher needed to know which package number each subject had so that she could record the proper data. The participants were then be given the following information:

- Read the excerpt, making sure to pay attention to details.
- Answer the set of questions that follow the story, but do not refer back to the reading when answering the questions.
- Once you've finished answering the questions, stop & raise your hand, so your time can be recorded. Don't move on to the next story until the researcher instructs you to.

- While you are reading and answering the questions, there will be music playing for three of the stories, and silence for one of the stories.
- It is not a race, so take your time.
- Please do not speak to the other participants about the study until it has been completed.
- Any questions?

The researcher then told the participants to begin. At this time, the researcher started the timing device as well as began playing the music, if there was music to be played for that particular experimental condition. As each participant completed the reading and questions, the researcher recorded the times of each participant until all participants had completed the first reading and question set. The researcher then stopped the music and moved on to the next experimental condition, and so on until all four conditions were satisfied.

This is a within-subjects design, as the experiment is designed to see whether the different types of background music will make a difference on the participant's concentration. Everything in the testing environment was kept as consistent as possible between the participants. The door to the classroom was closed during the time of testing so that distractions from the outside could be kept to a minimum. The participants werel be seated scattered around the room so that other participants would not distract them while they were reading and answering questions. All of the participants were be tested in the afternoon, but at various times depending on the day of the week. If the participant was tested on a Monday, Wednesday or Friday, s/he was tested between the hours of 12:00 noon and 3:00 p.m. If the participant was tested on a Tuesday or Thursday, s/he

was tested between the hours of 3:00 p.m. and 5:00 p.m.

Results

Four one-way analysis of variance (ANOVA) tests were performed on the data to determine whether there was a significant effect of music on a person's ability to concentrate during a reading comprehension task. Concentration was measured based upon four factors: 1.) the average amount of time required to finish the comprehension task depending on the musical condition, 2.) the average amount of time required to finish the comprehension task depending on the story, 3.)the number of correct answers depending on the musical condition, and 4.) the number of correct answers depending on the story.

The average amount of time that each participant needed to finish the reading comprehension task for the assorted musical conditions are as follows: for no music, the average time was 3:23:22 (standard deviation=56.53 seconds), for the classical condition (Mozart), the average time was 3:17:47 (standard deviation=40.19 seconds), for the rock condition (Ozzy Osbourne), the average time was 3:11:45 (standard deviation=57.43 seconds), for the R&B condition (Fabolous), the average time was 3:06:58 (standard deviation=49.30 seconds). These results revealed that there was no statistically significant effect of music on the amount of time used to complete the comprehension task, $F(3, 93)=0.10$, $p=0.958$.

The average number of questions that the participants answered correctly for the assorted musical conditions are as follows: for no music, the average number of questions answered correctly was 2.69 (standard deviation=1.14), for the classical condition (Mozart), the average number of questions answered correctly was 2.63 (standard

deviation= 1.10), for the rock condition (Ozzy Osbourne), the average number of questions answered correctly was 2.72 (standard deviation=1.06), and for the R&B condition, the average number of questions answered correctly was 2.72 (standard deviation=1.14). These results indicated that there was no statistically significant effect of music and the number of questions answered correctly, $F(3, 93)=0.05$, $p=0.983$.

The average amount of time that each participant needed to finish each story is as follows: the average amount of time the participants took to read "The Castro" was 3:29:05 7 (standard deviation=56.97 seconds), the average amount of time the participants took to read "Rosa Parks" was 2:30:50 (standard deviation=38.07 seconds), the average amount of time the participants took to read "The Company Man" was 3:09:41(standard deviation=45.99 seconds), and the average amount of time the participants took to read "The Enormous Radio" was 3:05:49 (standard deviation=44.66 seconds). These results indicated that there was a significant effect of the story and the amount of time that the participants took to read it, $F(3, 93)=25.33$, $p<0.01$. After performing t-tests and using the Bonferroni correction (0.05/6), the following stories have a significant relationship: there was a significant difference in the amount of time it took to read "The Castro" and "Rosa Parks", $t(31)=7.45$, $p<0.05$, there was a significant difference in the amount of time it took to read "The Castro" and "The Enormous Radio", $t(31)=3.63$, $p<0.05$, there was a significant difference in the amount of time it took to read "Rosa Parks" and "The Company Man", $t(31)= -6.10$, $p<0.05$, and there was also a significant difference in the amount of time it took to read "Rosa Parks" and "The Enormous Radio", $t(31)=-5.103$, $p<0.05$.

The average number of questions that the participants answered correctly is as

follows: the average number of questions that were answered correctly for "The Castro" was 2.06 (standard deviation=1.16), the average number of questions that were answered correctly for "The Company Man" was 2.47 (standard deviation=0.95), the average number of questions answered correctly for "Rosa Parks" was 3.63 (standard deviation=0.56), and the average number of questions answered correctly for "The Enormous Radio" was 2.59 (standard deviation=0.67). These results indicated that there was a significant effect of the story and the number of questions that were answered correctly on the comprehension portion, $F(3, 93)=20.38$, $p<0.01$. After performing t-test and using the Bonferroni correction (0.05/6), the following stories have a significant relationship: there was a significant difference in the number of questions answered correctly between "The Castro" and "Rosa Parks", $t(31)=-7.27$, $p<0.05$, there was a significant difference in the number of questions answered correctly between "Rosa Parks" and "The Company Man", $t(31)=6.63$, $p<0.05$, and there was also a significant difference in the number of questions answered correctly between "Rosa Parks" and "The Enormous Radio", $t(31)=6.25$, $p<0.05$.

Discussion

The results of my study did not support my hypothesis that various musical genres would have an effect on one's concentration. There was no significant difference in the average amount of time that the participants took to answer the questions in the various musical conditions. There was also no significant difference in the average number of questions answered correctly in the various musical conditions. These results do not support the Mozart theory or the idea that background music has a negative effect on concentration, but rather they support the idea that there is no effect of noise on retention

(Pring & Walker, 1994).

However, there was a significant difference in the average amount of time it took to read each story, and also a significant difference in the average number of questions answered correctly for each story. These results could be because the difficulty levels of each reading differed. In general, it was found that participants took the least amount of time to answer questions for the story "Rosa Parks" (2:30:50). In addition, "Rosa Parks" had the highest average number of questions answered correctly compared to the other stories (3.63). On the other end of the spectrum, participants took the most time to read "The Castro" (3:29:05), and it also had the least number of questions answered correctly when compared to the other stories (2.06). Since all of the stories were approximately the same length, a possible explanation for these results is that the content of "The Castro" may have been more difficult than that of "Rosa Parks", so it required the participants to take more time to read the story. A possible explanation for the difference in number of questions answered correctly could be that "Rosa Parks" had questions that were easier than those for "The Castro" were.

Results of "The Company Man" and "The Enormous Radio" fell almost exactly in the middle of "Rosa Parks" and "The Castro". The average amount of time that the participants took to read "The Company Man" was 3:09:41, and for "The Enormous Radio", the average amount of needed was 3:05:49. The average number of questions answered correctly for "The Company Man" was 2.47, and the average number of questions answered correctly for "The Enormous Radio" was 2.59. These results suggest that the difficulty level of each of these two readings was on a similar level.

One possible explanation for why the music did not have an effect on the

concentration of the participants could have to do with the population in which the participant sample was obtained. All of the participants were recruited through Lindenwood University's Human Subject Pool, and from their physical appearances, seemed to be of college age (18-24). College student may be more accustomed to reading and trying to concentrate with background sounds, so the presentation of the various musical conditions did not bother them when trying to complete the reading comprehension task. If the participant age was more varied, it could have a different effect on the results of the study.

Despite all attempts to keep testing conditions consistent for each participant, there were irregularities. Since the volume of the music could not be controlled digitally (music was played off of a lap top computer), the participants may have been presented with different volumes of music depending on the song that was playing, and also when they were tested. The songs that were used in the study may have had a significant meaning to some of the participants. In one instance, one of the participants made a comment after the experiment, saying that the R&B song ("Can't Let You Go" by Fabolous) had an emotional effect on her because it reminded her of the current situation between her and her boyfriend. During one of the conditions, the experiment was interrupted twice by a walk-in participant who wanted to take part in the experiment. The participants who were being tested at this particular time may have been distracted by the interruption, which could have affected the amount of time they took to do the comprehension task, and also their ability to answer the questions correctly. On occasion, there was also external noise from outside, such as a lawn mower, conversation, and vehicles that were driving by. Finally, the lapse between each story

varied from trial to trial. There were some trials where there would only be one participant, so the lapse of time from one story to the next was very short. There were other trials where there were several participants and some participants had to wait for several minutes before they could move on to the next story because they had to wait for the other people in the trial to complete their story.

Other confounding variables may have affected the outcome of the experiment. The reading ability of each individual participant may have made a difference for time s/he took to read each story. There were several instances where the participants misunderstood the instructions and forgot to answer the questions after reading the story. One individual had to be continuously reminded to answer the questions before raising his hand to let the experimenter know that he was finished. The time of day that the experiment was conducted may have also affected the results. Some of the participants may have already had several tests that day and could have been stressed out before coming to participate in the study, thus affecting their performance on the reading comprehension exercise.

For future replications of this study, precautions should be taken to keep testing environment as consistent as possible. The type of classroom that will be used should not have windows, or should have soundproof windows so as to keep external noise down to a minimum. The music should be played on a device that has digital volume control so that each song is played at exactly the same volume. The stories used in the reading comprehension task should also be changed so that each story and the set of questions that accompany it are on a more balanced scale.

Alterations to the experimental design could also be made for future replications

of this experiment. Most, if not all of the previous experiments that were designed to test the Mozart effect used spatial-learning tasks such as mazes and math problems, so this study could be replicated using a maze or a set of math problems rather than a reading comprehension exercise. Another alteration that could be made would be to use different songs for the various genres, rather than Ozzy Osbourne's "The Ultimate Sin", Fabolous's "Can't Let You Go", and Mozart's "A Little Night Music". Rather than using rock, R&B and classical, the genres of music could also be changed.

In conclusion, one can conclude from the results of this research, that various musical genres do not have an effect on a person's ability to concentrate while trying to complete a reading comprehension task.

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Appendix A

Rosa Parks

On the evening of December 1, 1955, Mrs. Rosa Parks's entire body ached-her feet, neck, and shoulders were especially sore. Parks was a tailor's assistant in a Montgomery, Alabama department store. Hers was an exhausting job that paid a minimal salary; she made alterations and had to handle a large commercial steam press as well. On this particular day, she finished work and walked a few blocks as usual to the bus stop. The first bus on her route was so crowded she realized that there would be no place left to sit, and she desperately needed to get off her feet. She decided to wait for a less crowded bus. That gave her a little time to waste, so Parks walked over to a nearby drugstore to look for a heating pad, which might help ease the pain in her sore muscles. Not finding anything to her liking, she returned to the bus stop. Eventually, a bus arrived that had a fair number of seats available. She paid her ten cents, boarded the bus, and took a seat in the rear, or black, section of the bus, near the dividing line between the white and black sections. On Montgomery's public buses, the first ten rows were for white people, the last twenty-six for blacks. In many cities in the South, the line dividing the sections on buses was fixed. This was not true in Montgomery; by custom, the driver had the power, if need be, to expand the white section and shrink the black section by ordering blacks to give up their seats to whites. First come, first serve might have been the rule of public transportation in most of America, but it was not true in Montgomery, Alabama, in 1955. To the blacks, it was just one additional humiliation to be suffered, because the system did not even guarantee the minimal courtesies and rights of traditional segregation. (Excerpt taken from "Rosa Parks", written by David Halberstam)

Questions for "Rosa Parks"

1.) What is the date that this story takes place?

2.) Where does this story take place? Please state the city and state.

3.) What is Rosa Parks looking for in the drugstore?

4.) How much is the bus fare?

The Castro

The oldest gay center in the city lay in the Tenderloin-the triangle of sleazy bars and cheap hotels bordered by the business district, the theater district, and Market Street. The Tenderloin, like its counterparts in other cities, was far from exclusively gay. The home of winos and bums, it was the transit station of sailors and other impecunious travelers, and it harbored most of the prostitution, both gay and straight, for the entire city. In the late afternoon female prostitutes, male hustlers, and transvestite whores could be seen performing a complicated street corner ballet as they tried at once to evade the police and sort out their initially undifferentiated customers. In the fifties the district had harbored most of the gay bars in the city-but now only hustler and drag queen bars were left. The Kokpit, owned by a queen called Sweet Lips, had been in operation for about a decade. Now lined with trophies and photographs of countless drag balls, it had become a kind of Toots Shor's of drag San Francisco. A few blocks away there was a bar of professional and much more highly specialized nature, where six-to seven-foot-tall black transvestites hustled white men in business suits, who were, necessarily, shorter.

Chronologically speaking, Polk Street, Or Polk Gulch, was the second gay center of the city. It was the decorators' district, and in the sixties a number of gay bars had moved into the blocks lined with antique shops and furniture stores. Since then it had been the major site of the Halloween festivities. On that one night a year the police stood by, leaving the street to a carnival of witches, clowns, nuns on roller skates, and Jackie Kennedy look-alikes or Patty Hearst look-alikes with toy machine guns. Polk Street was a mixed neighborhood-both gay and straight people lived there, and its restaurants catered to both crowds. Its gay bars were thus not conspicuous except at night when

groups of young hustlers stood out on the sidewalks around them.

(Excerpt taken from "The Castro", written by Frances FitzGerald)

Questions for “The Castro”

1.) Where is the oldest gay center of the city located?

2.) Who owns The Kokpit?

3.) Where is the second gay center of the city located?

4.) What holiday is celebrated in the second gay center?

The Company Man

This man who worked himself to death finally and precisely at 3:00 a.m. Sunday morning-on his day off-was fifty-one years old and a vice-president. He was, however, one of six vice-presidents, and one of three who might conceivable-if the president dies or retired soon enough-have moved to the top spot. Phil knew that.

He worked six days a week, five of them until eight or nine at night, during a time when his own company had begun the four-day week for everyone by the executives. He worked like the Important People. He had no outside "extracurricular interests," unless, of course, you think about a monthly golf game that way. To Phil, it was work. He always ate egg salad sandwiches at his desk. He was, of course, overweight, by 20 or 25 pounds. He thought he was okay, though, because he didn't smoke.

On Saturdays, Phil wore a sports jacket to the office instead of a suit, because it was the weekend.

He had a lot of people working for him, maybe sixty, and most of them like him most of the time. Three of them will be seriously considered for his job. The obituary didn't mention that.

But it did list his "survivors" quite accurately. He is survived by his wife, Helen, forty-eight years old, a good woman of no particular marketable skills, who worked in an office before marrying and mothering. She had, according to her daughter, given up trying to compete with his work years ago, when the children were small. A company friend said, "I know how much you will miss him." And she answered, "I already have."

"Missing him all these years," she must have given up part of herself which had cared too much for the man. She would be "well taken care of."

His "dearly beloved" eldest of the "dearly beloved" children is a hard-working executive in a manufacturing firm down South. In the day and a half before the funeral, he went around the neighborhood researching his father, asking the neighbors what he was like. They were embarrassed.

(Excerpt taken from "The Company Man", written by Ellen Goodman)

Questions for "The Company Man"

1.) How old was the man who died?

2.) What kind of sandwich did he always eat at his desk?

3.) What kind of jacket did Phil wear to the office on Saturdays, "because it was the weekend"?

4.) What was the name of Phil's wife?

The Enormous Radio

Jim and Irene Westcott were the kind of people who seem to strike that satisfactory average of income, endeavor, and respectability that is reached by the statistical repots in college alumni bulletins. They were the parents of two young children, they had been married nine years, they lived on the twelfth floor of an apartment house near Sutton Place, they went to the theatre on an average of 10.3 times a year, and they hoped someday to live in Westchester. Irene Westcott was a pleasant, rather plain girl with soft brown hair and a wide, fine forehead upon which nothing at all had been written, and in the cold weather she wore a coat of fitch skins dyed to resemble mink. You could not say that Jim Westcott looked younger than he was, but you could at least say of him that he seemed to feel younger. He wore his graying hair cut very short, he dressed in the kind of clothes his class had worn at Andover, and his manner was earnest, vehement, and intentionally naive. The Westcotts differed from their friends, their classmates, and their neighbors only in an interest they shared in serious music. They went to a great many concerts-although they seldom mentioned this to anyone-and they spent a good deal of time listening to music on the radio.

Their radio was an old instrument, sensitive, unpredictable, and beyond repair. Neither of them understood the mechanics of radio-or of any of the other appliances that surrounded them-and when the instrument faltered, Jim would strike the side of the cabinet with his hand. This sometimes helped. One Sunday afternoon, in the middle of a Schubert quartet, the music faded away altogether. Jim struck the cabinet repeatedly, but there was no response; the Schubert was lost to them forever. He promised to buy Irene a new radio, and on Monday when he came home from work he told her that he had got

one. He refused to describe it, and said it would be a surprise for her when it came.

(Excerpt taken from "The Enormous Radio", written by John Cheever)

Questions for "The Enormous Radio"

1.) What are the first names of the Westcotts?

2.) On average, how many times a year do the Westcotts go to the theatre?

3.) What were the Westcotts listening to on the radio before it stopped working?

4.) What day of the week is it when the radio stops working?

Gender Differences Concerning Thoughts on Love Attitudes and Romance

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In the present study, the question of which gender has more romantic views on love was investigated. Thirty participants were given a 30-question survey regarding their thoughts on love. Using a coded rating system, certain responses were considered to be more romantic and other responses were categorizes as less romantic and more idealistic. Results of this study showed that males, more often than females, supplied the romantic response to the survey questions. These findings might imply that males are the more romantic gender.

Which gender has more romantic views on love? Oftentimes, women think of their sex as the more romantic gender and complain that their partners are not romantic enough. Yet, is this truly the case?

Repeatedly, it has been found that in matters dealing with selecting a partner, females place more emphasis on education and jobs, whereas with males, attractiveness and affection was rated higher. In Davies (2001) research, he noted that women are traditionally more conservative and look to marry a partner who will be a good provider. In one study, it was found that men were more idealistic, and also more cynical about love, whereas women were more pragmatic (Davies, 2001). Moreover, in Davies (2001) study, he established that more men than women are prone to find Eros (romantic, passionate love) to be socially desirable.

A correlation can be seen in the animal kingdom. Commonly, the role of the female is to procreate. Therefore, females seek a male mate for fertilization so that they can bear children. Thus noted, it could be inferred that human women are also simply looking for a partner that can aid them in fulfilling their purpose(s), whether it be children, wealth, or companionship.

Researchers Knox, Zusman, Kaluzny, Cooper (2000) conducted a study on gender differences in ending love relationships. In their study, most women reported "medium difficulty with their recovery with men reporting more difficulty than women." One cannot necessarily say that these men are more romantic simply because they had more difficulty recovering from a break-up. However, it could be implied that committed men may allow themselves to get more emotionally involved in a relationship.

After observation and literature review, the question of which is the more romantic sex was presented. Having found interest in this subject, I decided to research this question. I hypothesize that if a random sample of males and females are given a survey on their ideas of love, males will be found to be more romantic.

Method

Participants

Fifteen males and 15 females from Lindenwood University's Human Subject Pool were participants in this experiment. In total, there were 30 participants. Demographic information, other than sex, was not of particular interest in this experiment, but was noted to look for any possible trends. Participants were asked their sex, age, and to choose a status of single, involved, or married. The participants were given an informed consent form, which detailed the experiment and explained that, as a participant, they

would be asked, in written form, questions about their love attitudes. They were also informed that at any time they were free to dismiss themselves from the experiment.

Materials

A quiet room with a table and chair were provided. The survey was 30 questions long and typed in 12-point Times New Roman font on standard 8 ½" x 11" white computer printer paper. The survey asked the participant to rate their feelings concerning questions about love using a coded rating system of "strongly agree" (SA); "mildly agree" (MA); "undecided" (U); "mildly disagree" (MD); "strongly disagree" (SD). A sample question from the survey was "When you fall "head over heels" in love, it's sure to be the real thing." (See attached survey as Appendix A) The pages of the survey were unstapled and the questions were not numbered. A new black-inked medium ballpoint pen and an unmarked folder were also supplied. On standard 8 ½" x 11" white computer paper in 12-point Times New Roman font, a typed informed consent form and feedback letter were employed as well.

Procedure

The participant was led into the room by the experimenter and was asked to be seated on the chair at the table. Already prepared on the table was an informed consent form, a pen, and the survey, which was turned face down. The experimenter told the participant that once he or she has left the room, the participant should first read the consent form; if after reading the consent form, the participant chose not to participate, they were to exit the room. If this occurred, the experimenter thanked him or her for their time and excused them. The experimenter also instructed that, upon agreeing to participate by signing the consent form, the participant may turn the survey over. The

participant was instructed to place his or her completed survey into the unmarked folder and exit the room. All of the proceeding instructions must take place while the experimenter is outside of the room to reduce any feelings of being coerced to contribute to the experiment on the participant's part. The experimenter waited outside of the room while the participant completed the survey. Upon the participant exiting the experiment room, the experimenter then gave the participant a feedback letter and asked if he or she had any questions regarding the experiment. If so, the experimenter answered the questions to the best of his or her knowledge. Once all explanations were given, the experimenter thanked and excused the participant.

This was a between-subjects experiment. One inherent problem with a between-subjects design is the individual differenced of the participants. I planned to overcome this by testing many participants. The difference between the groups I tested was their sex.

Results

In order to test the hypothesis that men are more romantic than women, an independent t-test was conducted with the participant's sex as the independent variable and the participant's survey responses as the dependent variable. The overall results revealed no statistically significant effect of gender on a participant's romance level, $t(28)=1.701$, $p>.05$. However, when comparing the means scores of each sex on the survey, a significant difference was found. Each response on the survey was given a numerical value as follows: "strongly disagree" equaled 5; "mildly agree" equaled 4; "undecided" equaled 3; "mildly disagree" equaled 2; and "strongly disagree" equaled 1. The mean for male responses was higher on 16 of the 30 questions, which is over half.

Of the remaining 14 questions, the women's mean was higher on 11 questions and on three questions, males and females had the same mean. On certain questions, the difference between the two means was somewhat higher. On question number 5, which read "common interests are really unimportant; as long as each of you is truly in love, you will adjust", the mean for males was 4.00, whereas the mean for females was 2.20, making a difference of 1.80, which was also the highest difference between means. Question number 14, which read "usually you can really love and be happy with only one or two people in the world", resulted in a mean of 2.33 for males and 3.27 for females, making a difference of 0.94. Another notable difference was on question number 28, which read "love is often a violent and uncontrollable emotion", the male mean was 3.13 and the female mean was 2.00, making a difference of 1.13.

The participants were also asked whether they were single, involved, or married. Of the male participants, 10 were single, four were involved, none were married and one male participant was unsure as to whether he was involved or single. As for the female participants, 5 were single, 9 were involved, none were married and one female also was unsure as whether she was involved or single. The fact that more female participants were involved than were male participants could be a factor in the results. The participant's age was also requested on the survey. For males, the ages ranged from 18 to 30 year old, with 30 being the most significant outlier. For females, the ages ranged from 19 to 24, with 24 being the most significant outlier.

Discussion

One interesting finding was that the average for males and females was the same on three questions, 15, 16, and 25. Question 15 read "regardless of other factors, if you

truly love another person, that is good enough reason to marry that person" and the mean was 2.87. Question number 16 read "it is necessary to be in love with the one you marry to be happy" and the mean was 4.40. Question 25 read "most divorces probably result from falling out of love rather than failing to adjust" and the mean was 3.00. This is worthy of note, because all three questions regard marriage.

An incidental finding after the fact was that the response for both sexes was quite high on several questions. On question number 8, which read "as long as two people love each other, the educational differenced they have really do not matter", the mean was 4.13 for males and 4.00 for females. On question number 16, which read "it is necessary to be in love with the one you marry to be happy", the mean was the same for both sexes at 4.00. For question number 20, which read "somewhere there is an ideal mate for most people", the mean for males was 4.47 and for females it was 4.33. Question number 24, which read "when you are in love, you are motivated by what you feel rather than by what you think" and question number 24, which read "love is best described as an exciting rather than a calm thing also had means over 4.00 for both sexes.

One limitations of the study could have been the participants understanding of question number 28, which reads "love is often a violent and uncontrollable emotion". Some participants may have seen the word violent and initially inferred it to mean cruel or vicious and not passionate, intense and powerful, as it was intended to be understood.

For future replications of this study, some improvement could be made. The survey could include more of a variety of questions by perhaps asking the participants about their romantic practices. Also, the sexual orientation of the participant could be looked at to see if that makes a difference in how they score on the survey. The sex of

the researcher may have affected the results. One possibility is that my sex as a female may have swayed the male participants to response more romantically to look impressive. To repair this flaw, the sex of the researcher could be kept confidential by administering the experiment on a computer.

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Gender Differences in Attitudes of the United States Initiating War Against Iraq

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Extensive research has shown that men have an attitude of war that is different from women's. Based on such research, I hypothesized that more men than women would support the United States' initiation of war against Iraq. The study involved 30 participants, in which there were 15 males and 15 females. All of the participants were administered a nine question survey that obtained information about how they felt about the United States initiating war against Iraq and if they supported it or did not support it. The results revealed no statistically significant effect of gender on a participant's attitude of war.

This study was designed for the purpose of determining whether there is a gender difference in attitudes of the United States initiating war with Iraq. I chose to research this topic because it is presently a very important issue in the news and peoples' lives. In addition, among society there is a mixture of opinions concerning the war.

Lee (1993) examined 151 American college students at New York State University. Of the students, 104 were nonminorites and 47 identified themselves as minorities. Participants completed a survey, measuring their attitudes toward the Gulf War. A scale from 1 (disagree) to 9 (strongly disagree) was used. The results indicated that minority students were less in favor of and more opposed to American involvement in the Gulf War than the nonminority students.

Schroeder (1993) surveyed 189 eleventh graders from New York in order to assess the effects of such variables such as race and gender on attitudes toward the Persian Gulf War. The participants completed a war attitudes survey that used a five point Likert scale. No statistical differences were found between groups defined by age or parental involvement in the military. However, group differences were found based on gender and race. As predicted, Caucasians and males were significantly more tolerant of war, but no interaction was noted.

Grussendorf, McAlister, Sandstrom, Udd, & Morrison, (2002) carried out classroom surveys on a total of 3122 students in the United States and four European countries. The survey used statements that assessed the participants agreement with attitudes relating to war, diplomacy, and killing. A five point Likert scale was used. The results revealed that males were consistently more likely than females to agree that war is necessary.

Tessler and Nachtwey (1999) replicated a published analysis that focused on the relationship between sex and attitudes toward international conflict. The study utilized nine public opinion data sets collected through surveys. The results indicated that there were no significant differences in the attitudes expressed by men and women toward issues of war and peace. It was concluded that religiosity influences attitudes toward war and peace more so than variable such as sex.

Bendya and Finucane (1996) used five different data sources to examine the nature of the gender gap in attitudes toward the Gulf War. In each survey a majority of men and women favored war, but in each survey women were less supportive. The

gender gap was widest as the likelihood of war increased and was somewhat smaller as the United States military successes accumulated.

Extensive research has shown that men have an attitude of war that is different from women's. Based on such research, I felt that if participants were given a survey that assessed their opinions, more men than women would support the United States' initiation of war against Iraq.

Method

Participants

The study involved 30 participants, in which there were 15 males and 15 females. Six of the participants were from a country other than the United States. They were undergraduate students at Lindenwood University and were recruited through the Human Subject Pool Board. The students received extra credit in their class for participating in the research.

Materials

A nine question survey was administered to obtain information about how the participants felt about the United States initiating war with Iraq and if they supported it or did not support it. As can be seen in Appendix A, some sample questions included: What do you think is the most significant reason that the U.S. initiated war with Iraq? Do you think George Bush has ulterior motives for initiating the war with Iraq? Do you Support the United States going to war with Iraq? In addition to these types of questions, I was interested in what country the participants were from and their gender.

The study was conducted at Lindenwood University in Young Hall, room 105. Room 105 is the psychology lab and it is comparable to a small classroom setting.

Tables, chairs, pens, informed consent forms, feedback letters, and a large manila envelope are materials that were required for the research.

Procedure

Individuals were first given an informed consent form. The consent form explained that they had the choice whether or not to participate, and would be asked to answer a variety of questions concerning the current conflict between the United States and Iraq. They were advised that war and politics are very controversial topics in society; therefore some questions could be potentially offensive or upsetting. If the participant felt uncomfortable they did not have to answer the question, and the form explained that all information would be anonymous and kept confidential. After the participant read and signed the consent form, the survey was administered. The survey took approximately five minutes to complete. When the participants were finished they placed the survey in a large manila envelope, which ensured anonymity. They were then given a feedback letter that thanked them for their input, explained why the experiment was conducted, and information regarding who they could contact if they had any questions or concerns. In addition, participant receipts were given that enabled them to receive the extra credit for their class.

This study was a between subjects design because males' and females' attitudes were being compared. Both groups were treated equally because they were provided with identical surveys. The individuals participated depending on the times they signed up for on the Human Subject Pool Board. Monday though Friday between the times of 11:00 A.M. to 3:00 P.M in a small classroom setting were the opportunities available for participating.

Results

In order to test the hypothesis that more men than women would support the United States' initiation of war against Iraq, a chi-square test was conducted with the participant's attitude of war as the dependent variable and gender as the independent variable. The results revealed no statistically significant effect of gender on a participant's attitude of war, $\chi^2_{(2)} = 1.019$, $p = .601$.

In addition, descriptive statistics were conducted to further analyze the data. Forty-three percent of the participants believed that the United States initiated war against Iraq because of nuclear weapons of mass destruction, 26.7% believed it was because of Saddam Hussein, 20% thought the war was a result of the September eleventh hijackings, and 10% reported other. Fifty-seven percent of the participants believed President George Bush had ulterior motives for initiating the war, 23% believed he did not, and 20% did not know.

Discussion

The results were inconsistent with the hypothesis that more men than women would support the United States' initiation of the war against Iraq. An explanation for the results is that the study was conducted when the war was fully underway and the United States was extremely successful in their military action. There were casualties, but overall the U.S. was victorious in their missions. As proven in previous research, men and women are more likely to support a war when it is ongoing and successful.

It was interesting to discover that almost 60 percent of the participants believed that President Bush had ulterior motives for initiating the war against Iraq, but nevertheless supported the war. A possible explanation for the results is that when the

study was conducted many participants asked what the word "ulterior" meant. Potentially a number of other participants did not understand the word, but were too embarrassed to ask what its meaning was. In a future study, the words hidden or concealed should be used in place of ulterior on the questionnaire to prevent misunderstanding.

In addition, it was surprising to find that 67% of the international students who participated in the survey did not support the United States' initiation of war against Iraq. This finding may have affected the overall results of the study.

If this study were conducted again, I would administer the questionnaire to all of the participants on the same day. I conducted the study over a period of a week and a half. The war was fully underway and on a daily basis there were updates and news stories that may have affected people's attitude of the war.

The conclusions of the study cannot be generalized to the population. The sample population was relatively small; therefore further studies should be conducted with a larger sample to fully test the hypothesis that more men than women support the United States' initiation of the war against Iraq.

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Appendix A

Questionnaire

1. Are you aware of the conflict between the United States and Iraq?
   ____ Yes
   ____ No
   ____ Somewhat

2. Where do you receive the majority of your information? (Please choose only one answer)
   ____ TV
   ____ Radio
   ____ Newspaper
   ____ Internet
   ____ Other Explain:_____

3. Do you personally know someone that has been sent on an assignment in the last year to the Middle East?
   ____ Yes
   ____ No

4. What do you think is the most significant reason that the U.S. initiated war with Iraq? (Please choose only one answer)
   ____ September 11th Hijackings
   ____ Saddam Hussein
   ____ Al-Qaida
   ____ Osama Bin Ladin
   ____ Nuclear weapons of mass destruction
   ____ Other Explain:_____

5. Do you think George Bush has ulterior motives for initiating the war with Iraq?
   ____ Yes
   ____ No
   ____ Don't Know

6. If you answered yes in the previous question, what do you think his ulterior motive is? (If you answered No or Don't know skip this question)
   ____ Oil
   ____ Revenge on Saddam Hussein for once plotting to kill his father
   ____ Publicity/portray himself as powerful
   ____ Other Explain:_____

7. Do you support the United States initiating war with Iraq?
   ____ Yes
   ____ No
   ____ Don't care either way

8. What gender are you?
   ____ Male
   ____ Female

9. What country are you from?
   _____

Gender Differences in Shopping Habits and Goals of Shopping

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A review of the literature suggested there could be gender differences in the goals and shopping habits of consumers. The hypothesis is that female college students will take part in the activity of shopping for the sake of shopping while male college students will take part in the activity of shopping to purchase specific items. I tested this hypothesis by giving out questionnaires concerning one's shopping habits and goals to volunteer undergraduate college students of both genders from Lindenwood University in St. Charles, MO. The findings did support the hypothesis. Individual statistics from each question show support for gender differences. The findings may benefit both consumers and the department stores by informing them of any gender differences in the habits and goals of college students who shop. With this information, department stores may find it beneficial to adjust their marketing strategy accordingly.

There could be gender differences in the goals of college students while they are shopping. The five peer reviewed journal articles I reviewed seemed to lean towards the conclusion that there are gender differences in the goals of shopping habits but the research did not specifically pertain to college students. The literature review of Herrmann (2002) found some statements concerning gender and shopping. It portrayed women as the dominant shopper. "Women have never been absent from studies about consumer practice. On the contrary, the separation of production from consumption has

positioned women as the primary consumers. The protagonist of the most frequently told story of consumption has been the bourgeois housewife, she who consumes not as an individual, but as a family member (Herrmann, 2002 pg. 539)." The literature went on to state "they fail to explain why, according to the claim of a Third Wave feminist, the only real difference between women and men is that women shop and men don't (Herrmann, 2002, p. 539)." These statements support the idea that gender differences exist in the activity of shopping.

The purpose of the Meyer and Anderson (2000, pg. 243) research was "to examine the extent to which conformity motivators influence shopping behavior among preadolescents, especially with regard to clothing purchase criteria and shopping independence." A convenience sample of 200 male and female preadolescents was used in the study. An interviewer asked the preadolescents questions and then the interviewer recorded their responses on a survey form. Results showed that the majority of preadolescents shop with one or both of their parents rather than by themselves. "Approximately 61% of males and 68% of females shop mostly with their mothers… and shopping alone with fathers represented only a very small percentage of the responses (Meyer & Anderson, 2000, pg.243)." These statistics along with the finding that "t-test results indicate that significantly more females than males go to the mall with friends for recreation (Meyer & Anderson, 2000, pg. 243)" seems to support this paper's research hypothesis by indicating there are gender differences in shopping habits.

In a recent review of the literature, Carsky and Dickinson (1995) proposed a new shopping model of consumer decision-making designed for a changed marketplace. They found some limitations to the proposed model including " if household members do not

like shopping or do not like a particular kind of shopping, they must weigh the costs of the shopping, including the analysis of the utilities to be derived from the relevant alternative activities foregone, against the economic benefits of using the shopping model or elements of the model (Carsky & Dickinson, 1995, pg. 442)." Emperical research is still needed to validate the model. This research did not focus on gender differences but did validate the idea that there are differences in the motivations of shoppers.

In another recent review of literature, Underhill (2000) concluded shopping is meant mostly for females. "For many women there are psychological and emotional aspects to shopping that are just plain absent in most men (Underhill, 2000, p. 33)." However, "men do take pride in their proficiency with certain durable goods—cars, tools, boats, barbecue grills, computers (Underhill, 2000, pg.33)." Underhill (2000) also concluded that women demand more of shopping environments than men do. "Males just want places that allow them to find what they need with a minimum of looking and then get out fast (Underhill, 2000, pg. 33)." This research strongly supports the hypothesis that there are gender differences in the goals and shopping habits of consumers.

Klein(1998) concluded that the big gender difference in shopping is that most women enjoy shopping, while most men claim to dislike shopping and do so only out of necessity. "When asked to agree or disagree with the statement, 'shopping is an experience that is relaxing and enjoyable for me. I make time to shop and browse,' 37 percent of men agreed, compared with 67 percent of women (Klein, 1998, pg.34)." Also, when asked if they enjoy shopping for clothes and that it's fun and exciting to see what's new in the store, 29 percent of men agreed and 48 percent of women agreed (Klein, 1998). Klein (1998) also stated the factor of convenience is more important to men than

to women. This research also supports the hypothesis that there are gender differences in the shopping habits and goals of consumers by providing statistics that show different factors are important to the two different genders. All five of the journal articles research supported in some way the following hypothesis.

The hypothesis is that female college students will take part in the activity of shopping for the sake of shopping while male college students will take part in the activity of shopping to purchase a specific item(s). I plan to test this hypothesis by giving out questionnaires concerning one's shopping habits and goals to volunteer college students of both genders from Lindenwood University in St. Charles, MO.

Method

Participants

Participants were 15 male and 15 female undergraduate students. Some of those participating in the study received extra credit points for their introductory class in anthropology, sociology, or psychology. I recruited the majority of my participants through the Lindenwood University Human Subject Pool. I posted a sign up sheet on the Human Subject Pool bulletin board with specific times in which students could sign up for. The sign up sheet listed the room number in which they were to report to at their chosen time. In order to collect enough data I used a convenience sample to recruit the rest of the participants. All questionnaires were administered by a female researcher.

Materials

The two-page questionnaire I used in the study asked multiple choice questions which included questions concerning your gender, how many times you go shopping on average in a month and addresses whether you tend to look around in the store. The

complete questionnaire is attached as Appendix A. I used a classroom setting to give out the questionnaires. Materials I needed for this experiment included a classroom equipped with desks, a table to put my papers on, pens, and typed papers such as the sign in sheet, consent forms, questionnaires, and feedback letters.

Procedure

For the participants who volunteered to participate through the human subject pool, I used the following procedure. When the undergraduate students arrived at the designated classroom I greeted them and asked them to sign the sign-in sheet. Then they picked a desk to sit at. I then handed them a consent form with the directions to read it and ask me any questions they may have. Once they signed the consent form I collected it and handed them a questionnaire. I gave them the directions to take their time and feel free to ask my any questions they may have. Each student then answered the questions on the questionnaire. Upon completion I collected their questionnaire and handed them a feedback letter. At this time I shut the classroom door to ensure no one outside the classroom could hear the contents of the feedback letter. I went over the feedback letter by verbally summarizing the main points of gratitude, purpose and benefits of the study along with the contact information. I then handed them their participant receipt which they could turn in for extra credit points. At this time the session was over and students left the classroom.

For the participants who participated through the convenience sample no extra credit was offered. Much of the procedure was the same. All of these participants also were in a classroom setting. I approached the person and inquired whether or not they would like to volunteer to participate in my study. If they agreed, I handed them a

consent form and told them to ask me any questions they may have. When they completed the consent form I collected it and handed them a questionnaire. Once the questionnaire was completed, I collected it and handed them a feedback letter. I told them to ask me any questions they may have and made sure they knew my contact information was on the feedback letter. This experiment was a between-subjects design.

Results

According to the statistics calculated for each individual question on the questionnaire, there is evidence that supports the hypothesis that female college students will take part in the activity of shopping for the sake of shopping, while male college students will take part in the activity of shopping to purchase specific items. The following are the statistics for each question. According to a t-test for the question "How many times a month do you shop at a store in a mall setting?" the mean for male participants was 2.06 and 2. 33 for the female participants. Therefore, female participants reported on average shopping more at a store in a mall setting than male participants. For the question, "How many times a month do you shop at a stand alone store setting?" the mean for male participants was 3.00 and 3.46 for female participants. Therefore, female participants reported on average shopping more at a stand alone store setting than male participants. See Figure 1 for a histogram illustration.

For the next question concerning what you know about what you are looking for at a stand alone type store setting when you go there, seven male participants answered they knew exactly what they wanted compared to four female participants. Seven male participants answered they have somewhat of an idea of what they want while ten female participants answered in that way. One female participant answered she had no idea what

she wanted and one male participant checked all four answers. For the same question except for a mall type store setting two male participants answered they knew exactly what they wanted compared to four female participants. Twelve male participants answered they have somewhat of an idea of what they wanted compared to five female participants. One male participant checked all four answers. The fact that six female participants answered they have no idea what they want compared to zero male participants who answered this way supports the hypothesis that males have more of an idea of a specific wanted item than females do.

The next question concerning the item's price had 6.6% of both male and female participants answer they buy something they need even if it is regular price. 13.3% of male participants answered when there is a sale compared to 26.6% of female participants. 80% of male participants answered both compared to 66.6% of female participants. For the question of when you engage in the activity of shopping 26.6% of male participants answered they go directly to what they want and leave after the purchasing of the item and fewer female participants at 13.3% answered in this way. 73.3% of male participants answered they look around before they look at what they need compared to 33.3% of female participants. The majority of female participants at 53.3% answered they looked around at the store they are trying to make a needed purchase and then proceed to other stores to look around while no male participants answered in this way. Clearly, this supports the idea that there are gender differences in the shopping habits of college students.

For the question concerning money, 46.6% of male participants responded they have a set limit of how much money they are going to spend when they set out to go

shopping compared to 26.6% of female participants. 20% of male participants responded they do not plan on how much money they are going to spend compared to 40% of female participants. 33.3% of male participants answered they spend however much money it takes to buy the things they want compared to 26.6% of female participants. 6.6% of female participants answered other. For the question of who you engage in shopping with 13.3% of both male and female participants answered alone, 6.6% of female participants answered with family, 60% of male participants and 40% of female participants answered with friends. 26.6% of male participants answered other along with 40% of female participants. For the question of when you go shopping, 6.6% of both female and male participants answered they plan on shopping on a specific date. 86.6% of male participants answered they go shopping only when they need a specific item compared to 73.3% of female participants. 6.6% of male participants answered other along with 20% of female participants. According to a t-test for the question on average, the amount of time you spend shopping at one time the mean for the male participants was 3.13 and 3.46 for the female participants.

Discussion

As predicted, the answers on the questionnaires supported the hypothesis that female college students will take part in the activity of shopping for the sake of shopping while male college students will take part in the activity of shopping to purchase specific items. An inherent problem with this design was individual differences between the participants but I tried to limit that by having all participants be undergraduate students from Lindenwood University. Confounding variables included different amounts of

background noise for the different times of administering the questionnaire due to the school environment. There are several ways in which this research could be improved for a replicate study in the future. The researcher could limit individual differences between participants by perhaps matching the groups in relation to their level of education and their annual income. Tighter control over the amount of background noise and using the same room and time period could help decrease confounding variables. Also, future research needs to include a significantly higher number of participants. Future findings from a replicated study with more participants could benefit both consumers and the department stores by informing them of any gender differences in the habits and goals of college students who shop. With this information, department stores may find it beneficial to adjust their marketing strategy accordingly.

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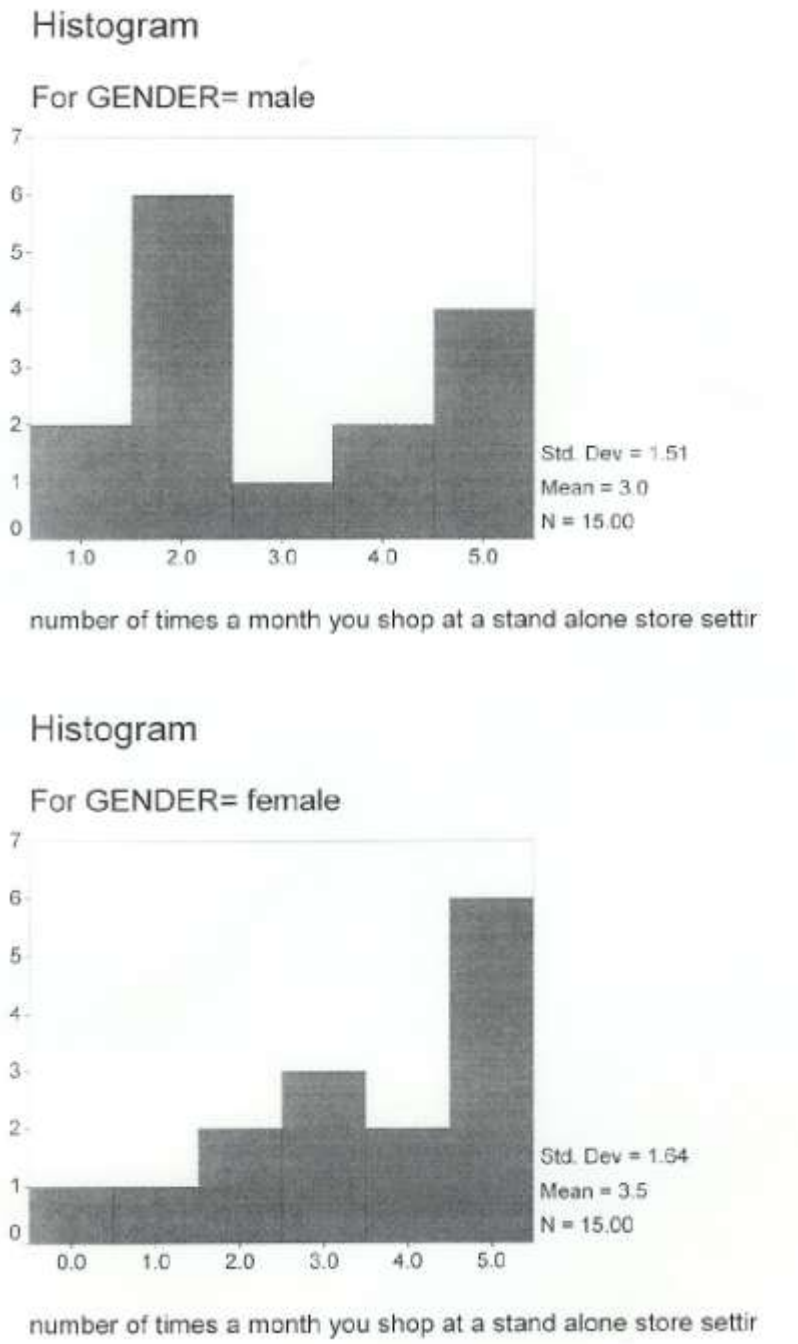
Figure 1. The frequency of the number of times you shop at a stand alone store setting separated into genders.



Appendix A

Questionnaire

Please check the best answer.

Are you an undergraduate college student? ___yes ___no

Your gender is ___male ___female

Do you ever engage in the activity of shopping? ___yes ___no

If you do, how many times a month do you shop at a store in a mall setting?

___on average less than once ___once ___twice ___three ___four

___more than four ___other please be specific

How many times a month do you shop at a stand alone store setting such as Walmart, Target or Walgreens?

___on average less than once ___once ___twice ___three ___four

___more than four ___other please be specific

When you go to a stand alone type store setting do you know?

___exactly what you want ___have somewhat of an idea of what you want

___have no idea what you want ___do not want anything except to look around

When you go to a mall type setting store do you know?

___exactly what you want ___have somewhat of an idea of what you want

___have no idea what you want ___do not want anything except to look around

Do you buy something

___when you need it even if it is regular price ___when there is a sale

____both ___other please specify

When you engage in the activity of shopping do you

___go directly to what you want and leave after purchasing the item

___look around before you look at what you need

___look around at the store you are trying to make a needed purchase and then proceed to other stores just to look around

___other please specify

When you set out to go shopping do you

___ have a set limit of how much money you are going to spend

___do not plan on how much money you are going to spend

___spend however much money it takes to buy the things you want

__other please specify

Do you engage in shopping

___alone ___with family ___with friends ___other

Do you

__plan on shopping on a specific date

___go shopping only when you need a specific item

___other please specify

On average, the amount of time you spend shopping at one time is

___ten minutes or less ___eleven to thirty minutes ___thirty one to sixty minutes

___one to two hours ___two to four hours ___more than four hours

Would you say you

___only shop when it is necessary

___shop when you could use something but the item is not necessary

___shop just for the enjoyment of shopping

___other please specify

Thank you for filling out this questionnaire.

Gender and Ability to Distinguish between Sugar-Free and Sugar Peppermints

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Do men and women have the same ability in distinguishing sugar free peppermints from regular, with sugar, peppermints? Many would say that women have a stronger sense of taste and smell, possibly due to motherly instincts. Fourteen male and fourteen female students from the Human Subject Pool at Lindenwood University participated in the study. The students were asked to taste two peppermints and record, which they thought was sugar free. The results revealed no statistically significant sex difference in the student's ability to identify the sugar-free candy. However, there was a significant finding in order effects. Seven out of the eight participants who could not tell differences between the mints, were administered the sugar-less mint first.

Is there a difference in men and women's ability to distinguish between sugar free candy and regular candy that contains sugar? I have heard people say that women have a stronger sense of taste. Research shows that women are more likely to be super-tasters than males (Hunter, 1998). Super-tasters have more taste buds than medium or non-tasters. Women are more able to taste PROP (6-n-propylthiouracil), which means sweet food tastes sweeter and bitter foods tastes more bitter. Super-tasters are more sensitive to different tastes.

Much of the research about the differences in men and women's taste ability supports that women tend to be better tasters. Women might be more sensitive to taste

and smell due to innate motherly instincts. "More women than men are super-tasters, perhaps because bitter is the skull and crossbones of the natural world, and evolution once favored mothers with superior poison-detecting systems (Gadsby, 2000)."

Tasting ability is said to be genetic. Scientist have had difficulty locating which areas, gene, or protein is responsible for the sensory of sweet taste. Nicholas J.P. Ryba with the National Institute of Dental and Craniofacial Research in Bethesda, Md. and Charles Zucker of the Howard Hughes Medical Institute at the University of California, San Diego both played a part in locating the sweet-receptor gene in 1999. Later research by Y. Gopi Shanker of the Mount Sinai Team and another group headed by Jean Pierre Montmayeur of Harvard Medical School found genes that resembled those revealed of Ryba and Zucker. As a result of their research a gene called T1r3, is a likely basis for the tongue's sweetness sensor as cited in (Netting 2001).

Based on these findings and thoughts, I hypothesized that more women then men will be able to distinguish the sugar free peppermints from the regular peppermints that contain sugar.

The experiment lasted about five to seven minutes. The students were asked, in this order, to eat a pretzel for one minute, suck on a peppermint for one minute, eat a pretzel for one minute, and lastly suck on another peppermint for one minute. The participants ate a pretzel before each peppermint as a goal to make the conditions for each student similar. The students were given verbal directions throughout the experiment. The order to which each student received the peppermint was counterbalanced. Half of the students received the sugar free mint first and the other half received the sugar mint first. Counterbalancing should minimize the order effects. After

sampling both mints the students were asked to record which mint they thought was sugar free.

Method

Participants

The target number of participants was 20 or more students. The students were recruited from the human subject pool at Lindenwood University. An equal number of men and women would be beneficial and useful for comparing the gender differences in tasting ability.

Materials

The experimenter needed 30 of the following items: consent forms, feedback letters, student receipts, answer sheets, questions sheets, white napkins, and 1ft. x 6-inch paper towels. The paper towels are for setting the peppermints and pretzels on. The white napkins are for covering the peppermints so the students will not be influenced by the appearance of the peppermints. The experimenter also needed seven pens, six chairs, a stopwatch, and one large table in a quiet area and a notebook.

The experimenter used a bag of Rold Gold pretzels. Before sucking on each peppermint the students were asked to eat a pretzel. Each student received two pretzels total. The kind of pretzel doesn't matter as long as everyone gets the two pretzels of the same brand. In this experiment the participants sampled Rold Gold Larger Pretzel twist. The experimenter also needed one bag of Bob's regular sugar peppermints and 2 bags of Bob's sugar free peppermints. Each student that participates got one sugar free peppermint and one regular peppermint.

Procedure

This study is a between groups experiment because the difference between males and females is being tested when tasting peppermints.

The experiment consisted of sessions with no more than six students at a time. Before the students were able to sit down at the table the table was already set up for each student. Each student's setting consisted of these things: one paper towel on the table with (from right to left) a pretzel, then the first peppermint, another pretzel, and then the last peppermint. The first and second peppermints were different because one was sugar and the other was sugar free. The order to which the students received the mints were counterbalanced to minimize the order effects. The mints were arranged a little higher on the paper towel then the pretzels. This arrangement allowed the experimenter to cover the mints with a napkin without covering the pretzels. The mints were covered up with a white napkin to where the pretzels are visible at the bottom of the paper towel.

Then from right to left, the answer sheet was upside down underneath the paper towel. It was sticking out about 3 inches above the paper towel so the participants could clearly see where the paper was but cannot see the words. The answer sheet included three things: A student code at the top, the statement "Circle which one was sugarless?" and a choice of A or B at the bottom. The answer sheet was only wide enough to fit the information needed above.

Then on the left of the answer sheet was a question sheet that was upside down to where the words weren't visible. At the top of the question sheet were directions that asked the students to circle their answer. Also at the top of the question sheet was an option to circle whether they were male or female. The question sheet asked "If you had a

choice in candy which would you choose?" The choices were, regular with sugar, sugar free, or no preference. It also was sticking out about 3 inches so it was clearly visible. The answer and question sheets were about 4 inches apart. Lastly, each participant had a consent form and pen on the right or left of him or her lying flat with plenty of room to read and sign the form without disrupting the set ups.

The experimenter charted and coded the sequence of the mints. For example, at the top of the answer sheet there was a color and number (blue 2). This was the code that was discussed earlier when describing the answer sheet. The experimenter needed a notebook aside from the experiment to write blue 2 and whether the sugar (A) or sugar free (b) was first. So, in the answer key Blue 2 b meant that if the participant circled b then the participant was right in choosing which one was sugar free.

After all six spots are set up the students may enter and sit at any spot he/she chose. As the students entered they were given verbal warning not to disturb the set ups and not to lift up the napkins. When they found a spot they were asked to read and sign the consent form. After they read the consent form the experimenter briefly went over it again so the students clearly understand the information presented in the consent form. Then the students were asked if they had any questions as the consent forms were being collected. The experiment began when the students were done asking questions or if the participants didn't have any questions.

To start the experiment, the students were given a verbal overview of how the experiment would run. The students were told, starting from their right, they will be asked to eat a pretzel, then suck on a mint, then eat another pretzel, and then suck on the last mint. They will have a minute to do each task. Also, remind them not to lift up the

napkin and look at the mints. The over view should took less than a minute. Before starting, the students were asked if they had any questions and remind them that they will receive more instructions as they move to each task. Also remind the students of their actual task which to figure out which one is sugar free.

If and when the students were ready they were given the go ahead to eat the first pretzel while being timed for one minute. Every student had to eat the whole pretzel in one minute. When 30 seconds had elapsed they were told they still had 30 seconds as the experimenter gave them further instruction on how to pick up the first mint. They were to slightly raise the napkin and slide their hand under to find the first mint on the right. They were instructed that on the go ahead to suck on the mint, they are to closed their eyes, tilted their head up, and then put the mint in their mouth. They were reminded as they put the mint in their mouths not to chew or bite the mints. They were to only suck on the mints. The students had one minute to suck on the mint.

After 30 seconds had elapsed, they were told they still had 30 seconds, and started to receive instructions on how to take the mint out of their mouth. They were told to have a grasp of the napkin with one hand and the mint with the other hand. Then they took the mint out of their mouth and placed it under the napkin with their eyes closed. It was still important that they do not look at the mint. When the participants placed the mint back under the napkin then the participants repeated the same procedure for the second pretzel and mint.

After the student finished with the last mint, they were asked to turn over the first paper, sticking out from the paper towel on the right. That was the answer sheet. The experimenter let them know that A was the first mint on the right and B was the second

mint on the left. They were asked to read the question and answer it. They were instructed that as soon as they answered to turn over the paper. After everyone had turned over their paper, they were instructed to pick up the paper sticking out on the left and answer that question. That was the question sheet. They were reminded to answer whether they were male or female and to answer the question. After they were finished they were to flip that paper over too. When everyone was done then the experimenter administered a feedback letter. They were verbally told the experimenter's name and contact information was on the feedback letter if they would like to know more about the study. They were told the hypothesis, which is more women then men will be able to distinguish the sugar free mint from the peppermint that contains sugar. Any questions were answered. Lastly they were given student receipts showing they participated in the study and were thanked for coming.

Results

In order to test the hypothesis that more women then men would be able to distinguish the sugar free peppermints from the regular, with sugar mints, a chi-squared test was conducted. The participant's answers were the dependent variable and gender (male or female) was the independent variable. The results revealed no statistically significant effect of gender on the ability to distinguish sugar free peppermints from regular peppermints, $\chi^2(1)=.000$, $p=1.000$. See Appendix 1.

Other findings include, a chi-squared test conducted with sequence of the candy and whether the participants recorded the correct answer. The results revealed a statically significant effect of the sequence of the candy on the ability to distinguish the sugar free peppermints from the regular peppermints, $\chi^2(1)=5.184$, $p=.023$. See Appendix 1.

A t-test was initially used when analyzing the results but it was found to be not significant when comparing gender with those who answered correctly or not, t(27), p=2.052.

The students were also asked whether they would prefer sugar free candy, candy with sugar or no preference. Twenty-one students circled candy with sugar and 7 circled no preference.

Discussion

The findings did not suggest the hypothesis that more women would be able to distinguish between the sugar free peppermint and the sugar mint. Exactly four men and four women could not distinguish between the mints.

However there was a statistical finding in the order of effects. Seven out of the eight people who chose the wrong mint were administered the sugar free mint first. The independent variable (the two mints) was counterbalanced by presenting the order of the mints differently to each person. In this experiment counterbalancing demonstrated that the order of which the participant received the mints affected their ability to distinguish between the two mints. An alternative way to view this contradiction in counterbalancing might include the fact that 19 out the 28 participants chose the second mint they tasted. Perhaps, there was a recency effect and the participant's taste buds were more sensitive at the end of the experiments. To solve the problem a longer period between the two mints might help or counterbalancing of the order of pretzels along with the mints.

Many of the participants stated that they found it hard to distinguish among the mints. However, only 8 participants were unable to distinguish the sugar free peppermint.

If this experiment were replicated the experimenter would need to have the participants record their gender on everything. In this experiment the experimenter made a mistake of not having the students record their gender on the question sheets. The findings might have been beneficial in supporting the hypothesis or the results. However, this might suggest that the participants in the study prefer strong tasting foods.

There should be different people that administer the experiment to minimize order effects and any possible biases. In this experiment one person administered the mints to all the students.

Other research that might add to this study would include studies about sweeteners and sugar preferences. The sugar free mints had Nutrasweet and the regular mints had sugar. Perhaps Nutrasweet dulls the taste buds, hence making it harder for the participants who received the sugar free first to distinguish among the mints. No studies about sweeteners were found that could contribute to this experiment.

The participants were unable to distinguish among the mints, which means more people in society could eat sugar free foods as a change in diet without noticing. People who diet would benefit from knowing that there isn't a significant difference in the taste of sweeteners and sugar.

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The Role of Gender on the Accuracy of Change Detection

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Does gender play a role in the accuracy of change blindness when observers are presented with a Rensink, O'Regan, and Clark (1997) flicker paradigm? I presented male and female subjects with two sets of A and B photographs that depicted a model in a natural setting with some sort of obvious change occurring between scenes A and B. Participants were asked to record any noted changes. I hypothesized that females would be more successful in accurately identifying the changes between scenes A and B than males. Results of the study reveal that there is no statistically significant effect of gender on a participant's accuracy in change detection.

Recently a number of studies have shown that under certain circumstances, very large changes can be made in a picture without observers noticing them. The word that is used to describe these phenomena is change blindness. Change blindness occurs most often when a large retinal disturbance takes place. The most common of these retinal disturbances are events such as the blinking of an eye, a brief flicker of lights, or even a film cut in a motion picture sequence.

The majority of the studies done on the phenomena of change blindness have predominantly focused on the three different aspects of spatial attention: the locus of attention (where in the visual field is the center of attention?), the extent or distribution of attention (how widely is attention spread over space?), and detail level (is the attention set for the 'forest' or the 'trees'?)(Scholl & Simons, 2001). However, none of these

experiments have examined the role of gender on the occurrence of change blindness. Before describing such a study, I will briefly summarize some of the most extensive past research on change blindness.

In the first experiments that triggered an interest in change blindness observers were told to indicate when a previously memorized letter showed up in a random string of letters. The screen would quickly flash a new string of letters periodically and the observers would indicate when they saw their assigned memorized letter among them. Response time was recorded for the detection of a specified target letter. The main findings were that the more changes made to the string of letters during each switch the less likely the observers were to notice the target letter among the random string of letters (Hauber, 1983).

In the more recent experiments involving change blindness, participants were presented with high resolution, full color everyday visual scenes presented on a computer monitor. While their eye movements were being measured, the computer would make changes in the scene as a function of where the observer looked. When the participant's eyes moved from one spot on the photograph and focused on another, an element of the photograph would change in some way: a car parked outside a house would change color, change position and so on (McConkie & Currie, 1996).

The results of this experiment showed that when the participant's eyes shifted or blinked and the change in the photograph occurred during this time, surprisingly large changes could be made without the participants noticing them. In an attempt to explain these phenomena, McConkie and Currie (1996) assumed that change blindness had something to do with mechanisms the brain uses to process the combination of

information that eye fixations form in succession. For example, every time the eye moves, the retinal image shifts, so in order for the brain to create a stable image that can be processed and decoded, the brain leaves out even the most obvious of changes in scenery.

This was the most popular explanation for change blindness until a subsequent set of experiments showed that in fact, the change blindness phenomena was not specifically related to eye movements. Rensink, O'Reagan, and Clark (1997) used a paradigm that became known as the "flicker" technique. Instead of making changes in a photograph each time the eye moved, a brief flicker was introduced between successive images. A scene was shown to participants for approximately 250ms followed by a brief blank screen for 80ms and then for 250ms a slightly modified version of the first scene was shown again. This brief blank scene introduced between the two photographs was similar to an eye movement. The participants were told that between scenes A and B a change was occurring. They were asked to search for this change.

It was found that when the participants viewed the changes without the blank screen inserted between photographs A and B, they were able to detect the changes immediately. However, with the addition of the flicker, it was often extremely difficult to locate the change. Once these changes were pointed out to the participants, they became perfectly visible (Rensink, O'Reagan & Clark, 1997).

What was so profound about the flicker technique is that it showed that change blindness could occur without the change being synchronized with eye movements. The experiment by Rensink, O'Reagan and Clark (1997) showed that change blindness was not specifically related to eye movements and the brain's attempt to stabilize the image

for interpretation (change blindness) occurred because of the brief disruption that is inserted between two versions of one scene.

In the experiment that follows, I report a study that examines the role of gender in successful change detection. An equal number of male and female participants were shown two sets of photographs consisting of two scenes. A similar design to the Rensink, O'Regan, and Clark (1997) flicker paradigm was used to present the photographs. Photograph A was shown for 250ms followed by photograph B for 250ms with the presentation of a blank screen between A and B for 80ms. Participants were informed that some element of the scene was changing between photograph A and B and that every time the flicker occurred, they were to identify it on the provided questionnaire. I hypothesized that females would be more successful in accurately identifying the changes between scenes A and B than males based on the theory that women pay more attention to detail than men.

Method

Participants

Participants were fifteen male and fifteen female undergraduate students ages 18 and older. The participants were recruited through the Lindenwood University Human Subject Pool as well as from a Sensation and Perception class at Lindenwood University. The participants recruited through the Human Subject Pool received extra credit points for their participation in the study.

Materials

A manual 35mm Pentax camera, and Kodak 400 speed color film was used to take four photographs of a female model in two different natural settings. In the first set of pictures the model wore her shoulder length hair in a ponytail and was seated at a computer that had words visibly present on the whole screen with a red cup on the desk on her right side. In the second picture, the model wore her hair down, the computer screen was only half filled with words, and the cup on the desk to her right was changed to blue. In the second set of photographs the same female model stood holding onto a red vacuum cleaner wearing a blue shirt. In the second photograph the model stood holding the red vacuum wearing a red shirt. The photographs were developed and scanned onto a computer so the images could be placed onto a 3.5 floppy disk.

The research took place at Lindenwood University in a large classroom with enough desks to seat over 20 participants. The room was equipped with a computer that was able to project images onto a large screen.

Two consent forms were provided to the participants. One consent form was for the participant to keep, and the second was handed into the researcher. 30 surveys were handed out to the participants. There was a place to mark their gender (male or female), as well as their age at the top of the survey. There were two questions, one on the front side of the page, and the second on the opposite side. Both questions will ask the participants to list any changes he/she has detected from one set of photographs to the other.

Procedure

As the participants enter the classroom they received two consent forms (one for them to keep and one for the researcher to keep on file). They were asked to seat themselves every other seat leaving distance between themselves and other participants. Once the consent forms were completed the experimenter collected one copy of the consent form from each participant and placed them in a manila envelope than then sealed the envelope so the participants privacy and identity were kept anonymous. The experimenter then explained to the participants that they were about to view four photographs and will have to detect and record changes between the two sets of photographs. The participants were given the chance to ask any questions regarding the study and the experimenter answered these questions thoroughly being careful not to give away the content of the photographs.

A one-page survey was then handed out to the participants and they were asked to fill out the top portion of the survey that requests the participant to circle their gender and approximate age (Appendix A).

The experimenter will then begin showing the first set of two photographs. The participants will be presented with a high-resolution scene of a female model seated at a computer desk, her hair was in a pony tail, the computer screen was filled only half way with typed letters, and a blue plastic cup was resting on the desk to her right. This scene will be shown for approximately 250ms followed by the presentation of a gray screen for 80ms followed by the presentation of the high-resolution scene again for 250ms. The second presentation of the scene included the following changes: the model's hair was down instead of tied up in a ponytail, the computer screen will display a full page of

letters rather than a half, and the cup on the desk to the model's right was changed from blue to red. The participants were then asked to record any changes that they noticed between the first scene and the second scene in the provided space on the survey.

Due to the fact that this experiment is a within-subjects design, the experimenter was concerned with the disadvantages of this particular design and was careful to avoid problems such as carryover effects. To avoid this problem the photographs always featured the same model, but the sets of photographs featured this model in two very different settings. The experimenter also counterbalanced the photographs by showing them in a different order. Sometimes the Photos A and B were shown first, and sometimes they were shown second behind photos C and D.

The participants were then asked to view another set of two photographs. The first high-resolution scene involved a female model wearing a blue shirt, a necklace and standing upright and holding a red vacuum cleaner. This scene was shown for 250ms followed by a grays screen for 80ms, followed by the second scene in which the following changes occurred: the female model was wearing a red shirt rather than a blue shirt, and she was no longer wearing a necklace in photograph two. The participants were asked to record any changes they detected between the two scenes in the space provided on the survey.

Following the completing of the surveys, the experimenter collected all of the surveys and placed them into a manila envelope separate from the envelope containing the consent forms. The experimenter then allowed the participants to ask any questions or voice any concerns regarding the experiment. The participants were also given the chance

to view the photographs a second time and had the experimenter point out the changes to them.

Results

In order to test the hypothesis that women, rather than men, would be more accurate in detecting changes in a natural setting a t-test was conducted with the independent variable being the gender (male or female) of the participants, and the dependent variable being the responses to the change detection questions in the questionnaire (Appendix A). To analyze the collected data from the questionnaire a *t*-test was conducted to test differences between the two means. The results revealed a statistically non-significant effect of gender on a participants accuracy in change detection, $t\ (29)=2.47, p>0.5$. According to the results male participants were not any more accurate ($\underline{M}=1.60$) than the female participants ($\underline{M}=2.40$) when detecting changes made between the sets of photographs (see table two and three).

Discussion

While the findings of this study were found to be not statistically significant, it still demonstrated an important point. While this study did not find gender to have an effect on the accuracy of change detection, it was very clear that change blindness was very present in each group of participants studied. In the first set of photographs there were three possible changes that could have been detected by participants. The mean score for all participants (male and female) in the first set of photographs was 1.23. This is still very low considering all participants could easily detect the changes between the photographs after the 80ms gray screen was removed or the change was pointed out to them. A second observation made during the study was the fact that many of the

participants noticed *something* changed but did not know exactly *what* had changed. For example in the first set of photographs, when the model goes from having her hair up in a pony tail to having her hair down, several participants recorded that the model was a different girl, or she was no longer smiling, however they did not attribute the difference to a change in her hairstyle. As noted in the study done by Rensink, O'Regan, & Clark (1997) when the change occurs, it produces a visual transient, which attracts attention to the change location. The transient then provides information that change *has* occurred, and it *where* it occurred, but it does not provide information about *what* the change was (Rensink, O'Reagan, & Clark 1997). The change will only be immediately noticed if an observer happens to have been paying attention to the changing element at the exact moment that it changes. If the observer is not paying attention to the changing element at the exact moment it changes the chances of successfully detecting change is very limited.

If I were to do the study over I would make a few changes that would help eliminate confounding variables and possibly change the results of the study. One of these changes would be the addition of more participants. I do not believe that I had an accurate representation of both the male and female gender. I would also use a different method when taking the initial photographs to be used in the experiment. Due to small imperfections in the positioning of the camera there were a few camera angles and zoom distances that differed from picture to picture. This could have easily caused a confounding variable, which in turn affected the results of the study.

Finally, the interest in change blindness in psychology has led to many studies in how and why change blindness occurs. Studies such as the flicker paradigm study done by Rensink, O'Reagan, and Clark (1997), have provided important findings as to the

causes of change blindness. These experiments are what initially interested me in the phenomena of change blindness. Even though the presented study of the effects of gender on change detection concluded that the results were not statistically significant, it was still an interesting and rewarding study.

Will scientists and psychologists ever fully understand the phenomena of change blindness? Past studies show that we have the impression of seeing everything in perfect detail because our brains lead us to believe that we have access to every detail in our environments, when in fact, we do not. This explains the apparent paradox between the illusion our brain presents to us making us believe we are aware of every detail in our visual environments, and our consistent inability, in change blindness experiments, of knowing what has changed.

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Appendix A

Visual Memory
Questionnaire

Please circle the answer that best describes you.

Gender: M F

Age: 0-17 18-24 24-35 36-50 50 or older

Photographs #1 and #2

After viewing the two photographs in the sequence, please record any changes that occurred from photograph #1 to photograph #2 in the space provided below.

Visual Memory Questionnaire page 2

Photographs #3 and #4

After viewing the two photographs in the sequence, please record any changes that occurred from photograph #3 to photograph #4 in the space provided below.

Table 2

Participant #	M or F	Group 1	Group 2
101	F	1	1
102	F	0	1
103	F	2	1
104	F	2	1
105	F	1	1
106	F	0	1
107	F	2	1
108	F	3	1
109	F	2	1
110	F	1	1
111	F	2	2
112	F	2	1
113	F	0	1
114	F	0	1
115	F	2	1
116	M	0	1
117	M	2	1
118	M	0	1
119	M	2	1
120	M	1	1
121	M	1	0
122	M	2	1
123	M	0	1
124	M	2	1
125	M	0	1
126	M	2	1
127	M	2	2
128	M	1	1
129	M	1	1
130	M	1	1
TOTALS		**37**	**31**

Table 3

Part. #	**F/M**	**SCREEN**	**CUP**	**HAIR**	**SHIRT**	**NECKLACE**	**TOTALS**
101	F	1	0	0	1	0	**2**
102	F	0	0	0	1	0	**1**
103	F	1	0	1	1	0	**3**
104	F	1	1	0	1	0	**3**
105	F	0	1	0	1	0	**2**
106	F	0	0	0	1	0	**1**
107	F	1	1	0	1	0	**3**
108	F	1	1	1	1	0	**4**
109	F	1	1	0	1	0	**3**
110	F	1	0	0	1	0	**2**
111	F	1	1	0	1	1	**4**
112	F	1	1	0	1	0	**3**
113	F	0	0	0	1	0	**1**
114	F	0	0	0	1	0	**1**
115	F	1	1	0	1	0	**3**
Totals		**10**	**8**	**2**	**15**	**1**	**36**
116	M	0	0	0	1	0	**1**
117	M	1	1	0	1	0	**2**
118	M	0	0	0	1	0	**1**
119	M	0	1	1	1	0	**3**
120	M	1	0	0	1	0	**1**
121	M	0	0	1	0	0	**1**
122	M	1	0	1	1	0	**2**
123	M	0	0	0	1	0	**1**
124	M	1	1	0	1	0	**2**
125	M	0	0	0	1	0	**1**
126	M	1	1	0	1	0	**2**
127	M	1	0	0	1	1	**3**
128	M	1	0	1	1	0	**1**
129	M	1	0	0	1	0	**1**
130	M	0	1	0	1	0	**2**
Totals		**8**	**5**	**4**	**14**	**1**	**24**

Can You Tell The Difference

Brian Roth

Lindenwood University

Theorists have been led to believe that there is a gender difference when it comes to how you eat. In my present study I recruited sixteen females and fifteen males who participated in a survey and taste test to see if there was a gender difference between males and females in regards to identifying store brand food and name brand food. I found that there is no gender difference in the ability to name brand food and store brand food. I plan on presenting my study to several grocery stores and showing them my results. The grocery stores could then further my study and publish their results to marketing firms and help them on how to decide on advertising and marketing products.

Will males and females differ in being able to tell the difference between name brand food and store brand food? I chose this topic because males and females differ in so many obvious ways; it will be interesting to find out if they differ in not-so-obvious ways. I also chose to do this research because of the price differences between name brand food and store brand food. Will my participants be able to tell a taste difference?

Drewnowski (1997) says taste responses are influenced by a range of genetic, physiological and metabolic variables. Drewnowski (1997) also says the impact of taste factors on food intake further depends on sex and age. He used taste functions that were distinguished between taste acuity and taste sensitivity. Drewnowski also dealt with sweet taste preferences, sensory responses to fats, and the mechanisms of pleasure.

Bates, Prentice, and Finch (1999) say there are gender differences in food choices. They used surveys, a health and lifestyle interview, a four day weighted diet record, and a fasting blood sample for biochemical indices for their study. Their conclusion was that there was a gender difference in food choices. Unfortunately I was unable to go into that much detail with my study because of time and money constraints.

Steptoe and Wardle (1999) shows that the four most important motivational factors in choosing food are sensory appeal, health, price, and convenience of purchasing. So they are saying these factors influence what you buy. Although this doesn't mention anything about sex differences, it gives us important information on how people choose what they buy. In Steptoe and Wardle's study the comparison was between high and low education attainment groups. Neither Income nor occupations were suitable for segmenting the sample in this survey.

Pirouznia (2001) shows that some factors that could influence adolescent eating behaviors include peer influences, nutrition knowledge, mass media, and parental dietary habits. The mass media promotes mostly name brand products, so the mass media could determine if name brand food is consumed. This study deals with adolescents. I don't have any adolescents in my study, but the involvement of the mass media as promoters of name brand food products, was enough to make this relevant for my study.

Bisogni, Connors, Devine, Carol, & Sobal (2001) says that many participants used descriptors for the identities related to eating that reflected self-images of personal attributes other that eating practices. They used open-ended, in depth interview to examine identity and eating from the perspectives of adults.

These previous studies I mentioned lead you to believe that there is a difference in eating habits. I hypothesize that there will also be gender differences in eating habits. Specifically I hypothesize that females will be able to tell a difference between name brand food and store brand food more so than males since females pay more attention as to what they are eating. I used a taste test and short survey to test my hypothesis.

Method

Participants

I needed a total of thirty-one participants for my study, sixteen were females and fifteen were males. There will be a wide range of age for this study; I want to get a feel for the differences in males and females along a wide spectrum of age ranges.

I plan on recruiting my participants in different ways. I will be making use of the human subject pool that is offered at Lindenwood University. These participants will all be college students with common ages ranging between eighteen and twenty-two. I will encounter a few people that may be older than that. I will also recruit my family to participate in my study, as well as friends and co-workers to come up with a grand total of thirty-one participants.

Materials

My hypothesis that females will be able to tell the difference in name brand food and store brand food more so than males will be tested by using a taste test. A survey will be distributed asking several questions about name brand and store brand food (see Appendix A). Some sample questions are: Which do you prefer name brand food or store brand food, and which do you normally consume name brand food or store brand food? The participants will also get two bags of pretzels along with the survey. When instructed they will taste each of the pretzels and determine which one is name brand and

which one is store brand. The brand of pretzels will be Snyder's and Schnuck's brand. I will have consent forms for each participant to sign. Also in the case of the human subject pool, there will be a sign in sheet and a participant receipt for each participant. I will need a table or desk with chairs for participants to complete the survey along with pens for the participants to use to fill out survey and sign forms. I will also provide feedback information forms to each participant after he/she has completed the survey.

Procedure

After participants have been recruited to participate in my study I will provide them with two consent forms (one for them to keep and one to hand in to me). They will read it over and if they are willing to participate in my study they will sign and date it on the bottom. At that time I will hand out the survey along with the two bags of pretzels (A&B), with each bag containing five pretzels. They will complete the survey within 10 minutes then they will hand in the survey to me. I will provide them with a feedback letter at the completion of their time. If they are participating in the human subject pool, I will have them sign in and provide them with a participants receipt. Since I will be testing the differences between two groups (men and women) this will be a between-subjects design. After collecting all of my data I will start analyzing the data and conduct a Chi-Square to see if my hypothesis will be supported. I will also run descriptive statistics on other questions.

Results

In order to test the hypothesis that females will be able to tell the difference between name brand food and store brand food more so than males, a chi-square analysis was conducted with the correct guess of name brand as the dependent variable and gender

as the independent variable. The results revealed a no statistically significant effect of gender on being able to correctly guess name brand food, $\chi^2_{(1)} = .519$, $p > .05$. This led me to accept the null hypothesis.

More results found that 25 participants compared to only six participants consume name brand food, while 29 participants prefer name brand food compared to only two that prefer store brand food.

Discussion

I found that there is no significant difference between gender when it comes to name brand pretzels and store brand pretzels. A possible explanation for this is that the study limited the food choices by only providing the participants with two types of pretzels. Some participants may have needed more food choices to make their proper decision. For example, the study could have included potato chips, cookies, pretzels and crackers then I could measure the differences using all the choices of food.

The finding that twenty-five participants normally consume name brand while twenty-nine prefer name brand is an interesting incidental finding. Price of store brand products could be the reason why people chose store brand over name brand. Four people chose that they prefer store brand but consume name brand. This will be an interesting study I could take on.

After looking at the data I realized that most people chose store brand pretzels as the name brand pretzels. Twenty-one participants chose store brand as the name brand while only ten guessed the name brand correctly. I could do further research in this area and if my results remain constant I could submit my results to grocery stores across the country that could use it as they advertise their products.

Some limitations of my study include the sample size. I would have really liked to get more people because the larger the sample size the more significant my results would be. The study also limited the food choices to pretzels only; maybe when this research gets replicated it could include several different types of food.

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Appendix A

Survey

1) What is your sex? M___ F___

3) Which Bag contains Name Brand Pretzels? Bag A___ or Bag B___

5) Which do you normally consume? Name Brand food____ or Store brand food___

6) In general which do you prefer?

Name brand food products___ or Store brand food products___

Greeks Compared to Non Greeks and Alcohol Consumption

Melani Saito

Lindenwood University

For my experiment, I studied the difference between students who are involved in a Greek organization compared to those who are not. Forty undergraduate students from Lindenwood University were used. They filled out a survey that I have prepared about Alcohol Consumption, asking a variety of questions such as, how many nights a week they go out, how much money they spend on an average week on alcohol, and where they go when they want to go drink. Results show that there is no significant difference between those students involved in Greek organizations compared to those who are not, but there was a significant difference found that males who are not involved in Greek organizations and how much money is spent on alcohol in an average week.

For my experiment, I will research the drinking habits of college students. I will compare students who are in Greek organizations (sororities and fraternities) to students not involved in a Greek organization. Other factors that will be taken into account are, what year the student is in, and the gender of the student. My hypothesis is that there is a difference in the amount of alcohol consumed between the two groups.

Drinking among college students is a major concern that many people are interested in. This study will inform people about the drinking habits of undergraduate Lindenwood University students.

Heavy drinking is not a concern for some students, however. According to Kuo, Lee, Nelson, & Wechler, sixty percent of college students across that United States say

that they drink in moderation or do not drink at all. In contrast, Brower states that, "college students have been drinking excessively since colleges began, so the best thing for a university to do is just get out of the way."

In another related study, Clements stated that there heavy drinking in college does have some prevalence in alcohol abuse later on in life.

Another study done by Keeling, states that colleges do try to educate it's incoming freshmen on the dangers of alcohol, and how to say no when peers are saying, "everybody does it." But what it really comes down to is the students conforming to the social norms.

My study will inform people of the drinking habits specifically of those who attend Lindenwood University. It will also bring up to date statistics of the amount of alcohol consumed by students in Greek organizations on Lindenwood's campus.

Method

Participants

Forty undergraduate students were recruited from Lindenwood University. Twenty of the students will be from a Greek organization and twenty will not. From each group ten will be male and ten will be female. I recruited them by using my personal contacts and just by asking random people if they would like to participate.

Materials

Materials that will be used for my experiment include surveys that I will pass out to all of my participants and pens so the subjects can fill them out. Various rooms were also used such as my dorm, the cafeteria, and a classroom in Young Hall. For a sample of my survey, see Appendix A.

Procedure

Over the course of five days, I passed out surveys to students that were willing to participate in my study. The survey was very short and they all filled them out in less than five minutes in my presence. After all of my data were collected, I then started to analyze the results using SPSS.

Results

A univariate analysis of variance test was conducted to test my hypothesis. To test my hypothesis, three different dependent variables were taken into account: the number of drinks consumed on an average night, the number of days a week alcohol is consumed, and, how much money is spent on an average week. For the number of days a week a student consumes alcohol the mean for Greeks was 2.9 days compared to the non Greeks whose mean was 3.5 days a week. The average number of drinks that is consumed in one night for Greeks compared to non-Greeks is a very small difference: the mean for Greeks is 4.8, and the mean for the non-Greeks is 4.75. For the amount of money that is spent on alcohol for these two groups, there is a very significant difference. Greek students state that in a given week approximately $28 is spent on alcohol, where non-Greek students declare that they spend $37. This information supports my hypothesis because in each category, there is a difference between the two groups of students and what was being studied.

For a copy of the ANOVA tests that were run on my experiment, see Appendix B.

Discussion

As I hypothesized, there is a difference in the drinking habits of students involved in Greek organizations compared to those students who are not. Other factors such as sex

differences was also found. The male scores were significantly higher than females in all variables concerning how much money is spent on alcohol, how many days a week they go out, and how many alcoholic beverages are consumed in an average night of drinking.

Another finding was the grade that the students are in. Normally freshmen and sophomore students are not of the legal drinking age, but since alcohol is so easily available, there are some statistics that include this group of underage students. Students who are in their senior year are most likely to have the highest average of the three dependent variables.

Surprisingly, of the forty students surveyed, six of them do not have jobs, but the results show that there is little difference in the amount of money that is spent on alcohol in an average week. Students who stated that they did not have a job spend approximately $27.50 on alcohol, but those who do have jobs declared that $33.38 in a given week.

The four choices that were given in the surveys for the different kinds of alcohol that is being consumed, the only two options that were chosen were beer and hard liquor. Over 67% of the participants say that for the most part, they just drink beer.

For the option of where to drink, students mostly said that they enjoy going to a bar to drink. This statistic is mainly concerns the older students such as the juniors and seniors. For the younger ones of the group, they say that they like to stay at home, or go to a friends house. Unexpectedly, quite a few seniors say they would rather stay home and drink than go to a bar.

Binge drinkers are defined as a male having more than five drinks in one night and a female having more than four. From both groups in my study, the Greeks and the

non-Greeks, and the males and females, more than half of them would be considered by definition, binge drinkers.

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Marcus, D.L.

Appendix A

Alcohol Consumption

1. Year in School: Freshman Sophomore Junior Senior

2. Sex: Male Female

3. Are you involved in a Greek organization?: Yes No

4. Do you have a job?: Yes No

5. Do you enjoy drinking?: Yes No

6. On average, how many nights a week do you consume alcohol? _____

7. Approximately, how many alcoholic beverages do you consume on an average night of drinking? _____

8. Where do you usually go to drink?

    a. A bar

    b. A friend's house

    c. Home

    d. Other – Please Specify _____

9. On average, how much money do you spend on alcohol in a week?: _____

10. What kinds of alcohol do you usually consume?

    a. Beer

    b. Hard liquor

    c. Wine

    d. Other – Please Specify _____

Appendix B

Univariate Analysis of Variance

Between-Subjects Factors

		Value Label	N
Sex	F	Females	20
	M	Males	20
Greek or Non Greek	G	Greek	20
	NG	Non Greek	20

Tests of Between-Subjects Effects

Dependent Variable: Number of days a week, consuming alcohol

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5.400(a)	3	1.800	1.580	.211
Intercept	409.600	1	409.600	359.649	.000
Q2	.900	1	.900	.790	.380
Q3	3.600	1	3.600	3.161	.084
Q2 * Q3	.900	1	.900	.790	.380
Error	41.000	36	1.139		
Total	456.000	40			
Corrected Total	46.400	39			

a R Squared = .116 (Adjusted R Squared = .043)

Between-Subjects Factors

		Value Label	N
Sex	F	Females	20
	M	Males	20
Greek or Non Greek	G	Greek	20
	NG	Non Greek	20

Tests of Between-Subjects Effects

Dependent Variable: Number of drinks consumed in one night

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	1.875(a)	3	.625	.424	.737
Intercept	912.025	1	912.025	618.322	.000
Q2	.625	1	.625	.424	.519
Q3	.025	1	.025	.017	.897
Q2 * Q3	1.225	1	1.225	.831	.368
Error	53.100	36	1.475		
Total	967.000	40			
Corrected Total	54.975	39			

a R Squared = .034 (Adjusted R Squared = -.046)

Between-Subjects Factors

		Value Label	N
Sex	F	Females	20
	M	Males	20
Greek or Non Greek	G	Greek	20
	NG	Non Greek	20

Tests of Between-Subjects Effects

Dependent Variable: How much money is spent in one week on alcohol

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2340.000(a)	3	780.000	6.091	.002
Intercept	42250.000	1	42250.000	329.935	.000
Q2	1440.000	1	1440.000	11.245	.002
Q3	810.000	1	810.000	6.325	.017
Q2 * Q3	90.000	1	90.000	.703	.407
Error	4610.000	36	128.056		
Total	49200.000	40			
Corrected Total	6950.000	39			

a R Squared = .337 (Adjusted R Squared = .281)

Question…Investigate…Discover

Research Proposals

Gender Differences Concerning Thoughts on Love Attitudes and Romance

Sarah E. Brady

Lindenwood University

Which gender has more romantic views on love? Oftentimes, women think of their sex as the more romantic gender and complain that their partners are not romantic enough. Yet, is this truly the case?

Repeatedly it has been found that in matters dealing with selecting a partner, females place more emphasis on education and jobs, whereas with males attractiveness and affection was rated higher. In Davies (2001) research, he noted that women are traditionally more conservative and look to marry a partner who will be a good provider. The majority of females in the animal kingdom's main role is to procreate. Therefore, females seek a male mate for fertilization so that they can bear children. Thus noted, it could be inferred that women are also simply looking for a partner that can give them fulfill their purpose, whether it be children, wealth, or companionship. In one study, it was found that "men were more idealistic and also more cynical about love, whereas women were more pragmatic" (Davies, 2001). Moreover, in Davies (2001) study, he established that more men than women are prone to find Eros (romantic, passionate love) to be socially desirable.

Researchers Knox, Zusman, Kaluzny, Cooper (2000) found in their study about recovery from a love relationship that ended, most women reported "medium difficulty with their recovery with men reporting more difficulty than women." One cannot necessarily say that these men are more romantic simply because they had more difficulty

recovering from break-up. However, it could be implied that committed men may allow themselves to get more emotionally involved in a relationship.

After observation and literature review, the question of which is the more romantic sex was presented. Having found interest in this subject, I decided to research this question. If a random sample of males and females are given a survey on their ideas of love, males will be found to be more romantic.

Method

Participants

Ten males and 10 females from Lindenwood University's Human Subject Pool will be participants in this experiment. Five males and five females from the St. Charles community will be participants as well. In total, there will be 30 participants. Demographic is not of particular interest in this experiment, but will be noted to look for any possible trends. Participants will be asked their sex, age and to choose a status of single, involved, or married. The participants will be given an informed consent form, which will detail the experiment and explain that, as a participant, they will be asked, in written form, questions about their love attitudes. They will also be informed that at any time they will be free to dismiss themselves from the experiment.

Materials

A quiet room with a table and chair will be provided. The survey will be 30 questions long and typed in 12-point Times New Roman font on standard 8 ½" x 11 white computer printer paper. The survey will ask the participant to rate their feelings concerning questions about love using a coded rating system of "strongly agree" (SA); "mildly agree (MA); undecided (U); mildly disagree (MD); strongly disagree (SD). A

sample question from the survey is "When you fall "head over heels" in love, it's sure to be the real thing." The pages of the survey will be stapled together with a single staple in the top left corner. A new and freshly sharpened number two wood pencil with an attached eraser and an unmarked manila folder will also be supplied. On standard 8 ½" x 11 white computer paper in 12-point Times New Roman font a typed informed consent form and feedback letter will be employed as well.

Procedure

The participant will be led into the room by the experimenter and will be asked to be seated on the chair at the table. Already prepared on the table will be an informed consent form, a pencil, and the survey, which will be turned face down. The experimenter will tell the participant that once he or she has left the room, the participant will first read the consent form; if after reading the consent form, the participant chooses not to participate, they may exit the room. If this occurs, the experimenter will thank them for their time and excuse them. The experimenter will also instruct that, upon agreeing to participate by signing the consent form, the participant may turn the survey over. The participant will be instructed to place their completed survey into the unmarked manila folder and exit the room. All of the proceeding instructions must take place while the experimenter is outside of the room to reduce any feelings of being coerced to contribute to the experiment on the participant's part. The experimenter will wait outside of the room while the participant is completing the survey. Upon the participant exiting the experiment room, the experimenter will then give the participant a feedback letter and ask if they have any questions regarding the experiment. If so, the experimenter will then answer the participants question to the best of his or her

knowledge. Once all explanations are given, the experimenter will thank and excuse the participant.

Implications

To analyze the data of this experiment, I will a one-tailed, independent t-test. If the hypothesis were found to be true, that males are indeed more romantic than females, the expectation is that it would not be a dramatic difference. If the hypothesis were found to not supported, the results would, again, only have a slight difference. The results of the study could have a fascinating transformation on societal views, opening the sexes to regard their counterparts in further ways. As mentioned previously, oftentimes, women think of their sex as the more romantic gender and complain that their partners are not romantic enough. If men are found to be more romantic, this research will be useful in an argument. Hopefully this study will facilitate the sexes to better understand each other, their needs, and the way they think and feel about love.

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Gender Differences in Cleaning Your Hotel Room

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At home, the majority of women do more cleaning involving such household tasks as cooking, washing the dishes, keeping the floors clean, and so on while the men tend to achieve little of the household cleaning load with the exception of managing the finances and doing household repairs. However, when in a hotel room setting a man will throw away trash, straighten up the bathroom by putting the used towels in a pile, and engage in other straightening activities more than a woman will. I want to look into this because I found it interesting that in my personal experiences women will do more cleaning tasks than men at home but when in a hotel room men will engage in more cleaning tasks than women. I would like to research the rationale for this phenomenon.

When I looked at peer reviewed journal articles I found none pertaining specifically to gender differences in cleaning a hotel room but did find several concerning the unequal distribution of household chores. Youli (1996) wrote about how girls at a young age are trained to do household chores and are told they have to get married when they grow up and at the same time observe their brothers being allowed to play outside and not be obligated to do household chores. Bartkowski (1999) showed that household chores were distributed unevenly in the Protestant families that he studied. Women were in charge of the majority of the household chores including cooking and cleaning. Studies that used people of various religious backgrounds would also be helpful. Lobel, Slone, Ashuach, and Revach (2001) showed that even with the number of women in the

workforce the women still perform a substantially greater amount of household chores than men. Thus I predict that even though women do more household chores at home. From my personal experience, I also hypothesize that men will engage in more household chores in hotel rooms than women will.

Method

Participants

Participants will be 200 males and 200 females ranging in age from 18 to 60. They will be recruited by an ad which will be run in the newspaper and be available via the internet on the newspaper's website. Participants will be picked randomly from the responses from the ad. Experimental sessions will be conducted by both female and male researchers.

Materials

Researchers will need a hotel to use for the participants to stay in, video equipment set up in every room to tape the participants, monitors to watch the video, staff for the hotel including housekeepers, pencils, pens, paper, calculators, and everything needed in a regular hotel room such as towels, snacks, and refreshments. The hotel room which would be used would be one that meets standardized cleanliness and a medium to high level of comfort.

Procedure

When they arrive at the hotel where the experiment will take place, they will be asked to sign informed consent papers that make them aware that they could be videotaped throughout the session. Each participant will have their own room and no one will be allowed to have other people in their room at night. They will be told that the

study involves how servers react differently to guests depending on how they are dressed. The hotel rooms the participants will be staying in would have big enough private bathrooms in their individual hotel rooms in which they could change their clothes.

Participants will be asked to dine in the hotel restaurant several times in different types of clothing, such as casual and formal wear. However, the real experiment will be the researchers' observation of the cleaning habits of the individuals via the video feedback. Observations will be divided into genders, male and female. A standardized checklist with clear definitions will be available for each gender and records will be taken any time any of the participants throw away trash, pile the used towels together, and keep dirty clothes together as opposed to scattered throughout the room or other cleaning tasks. At the end of the three days, two nights study the checklists will be added up to statistically determine which gender performed more cleaning tasks throughout the experiment. Upon completion of the experiment I would thank each participant for their time and make sure each participant is debriefed by explaining to them the true purpose of the study was to find out if there were gender differences in relation to cleaning your own hotel room and how the study could benefit both hotel chains and their customers. Each participant would also be asked to give their written permission for the researchers to keep the videotape footage for further study. I would also have contact information given to them in order for them to be able to reach the researcher in the future.

Implications

By using a t-test analysis I would expect to find results that show men perform more cleaning tasks than women do while in the hotel room. These results would consist of statistics that would show a majority of the participants who were men engaged in more household tasks while in the hotel room than did participants who were female. The results would indicate that hotel rooms that had male occupants were more likely to take less time to clean and get ready for the next patron than would hotel rooms that had female occupants. This information could help hotel chains better manage their assignment of the number of housekeepers who are responsible for the cleaning of specific hotel rooms. This could lead to less cost for hotels and perhaps in the long run cheaper rates for its patrons. If the results did not support the hypothesis then there would be no evidence from this study that there are gender differences in cleaning your hotel room.

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Gender Stereotypes Within Children's Play

Melani Saito

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For my research I will study the interaction habits of boys and girls. I wanted to watch these children and observe this behavior: to see if girls interacted with girls more than boys, and boys would play with boys more than girls. Bigler & Liben and Fagot & Hagan's Journal articles support my hypothesis of the children interacting with their own sex more. But Shirley and Heywood would disagree and support the idea that there is no difference. I wanted to study this because I think that it would be interesting to find that children really do play with their own sex. These findings would be interesting to me because my childhood was the exact opposite of what I am hypothesizing.

Method

Participants

For my study, I will use thirty children, fifteen boys and fifteen girls. All of the children will be between the ages of two and five. I plan on recruiting my participants from personal contacts, and also by letting local daycares and asking them to let parents know about the study, maybe by putting up flyers or simply by telling them.

Materials

Materials needed for this study include various types of toys. In particular, I will use toys stereotypical for girls and boys such as dolls and toy cars. I will also use toys that may not be stereotypical of either gender, such as coloring books. I will also be using a one way mirror looking into a playroom with three large tables with five chairs around each table. There will also be a play mat for the children to play on the floor. There will

also be four different toy boxes placed in each corner of the room filled with the toys as mentioned above. Other materials that I will be using in this research will be a pen and paper so I can write down my observations.

Procedure

For this research I plan on scheduling three play sessions in one week, on Monday, Wednesday, and Friday. The children will arrive at 4 p.m. and last until 5 p.m. When the children arrive, that parents will be asked to wait in another room. The procedure will be explained to the parents, but not to the children, because I want the kids to act and play as naturally as possible. They will just be told to play with the other children. Then I will simply observe the children for the hour and write down my observations. When the hour is over, the children will reunite with their parents I will tell the parents that I will be contacting them via e-mail or regular mail about the results of my experiment, if they are interested in the results.

Implications

For this experiment, I would assume that even though my hypothesis will be supported, boys and girls will probably interact at some point in time. These results could be beneficial to parents wanting their children to meet other kids and play with them. Parents may have been unaware before.

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The Effects of Alcohol on the Social Aspects of High School Students

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Although the legal drinking age is twenty-one, the age that a person begins to consume alcohol is decreasing. In a study in 1997, the average age of first alcohol use was 13.2 years old (Maney, Higham-Gardill, & Mahoney, 2002). Drinking alcohol at a young age can lead to social problems and even delinquent behavior. It has been said that adolescent alcohol misuse has been shown to be part of a constellation of problem behaviors including delinquency and illicit drug use (Barnes, Welte, & Hoffman, 2002). Not only does it aid in future delinquency but also antisocial personality and health problems. Several studies have been done to discover the age and occurrences in which adolescents begin drinking and the possible consequences including but not limited to delinquent behavior, illicit drug use, sexual activity and longitudinal studies that project adult alcoholism. The main question in this particular research is to investigate if high school students who consume alcohol have a higher rate of social problems than those students who do not consume alcohol do. The reason for this research is the personal observance of adolescents who abuse alcohol, which resulted in problems with school and family life.

Sometimes getting answers from students to rely on research can be faulty. Results from a study involving three high schools showed that students grossly overestimated the prevalence of substance abuse when compared to self-reports of use (Hammermeister, Roland, & Page, 2002). The only way to find out about activity among high school students is to ask the students, so those are chances researchers are willing to take. As we

try to understand some of the responses that we may gather in our research, we can use Albert Bandura's Social Learning Theory as a guide. Bandura believed that people modeled behaviors, attitudes and emotional reactions from others. This is evident in the behavior of teenagers.

Other issues when dealing with alcohol and social problems are the variables of sex and how often they drink. Are adolescent boys more affected by alcohol use than girls? A study conducted by Maney et al. (2002) mentions that adolescent males are significantly more likely to drink at risk than adolescent females. The same article mentions that high-risk adolescents (those who drank more than twice per year) reported having trouble with parents, school troubles, and experiencing more social problems. My hypothesis is that adolescents who consume alcohol do have more social problems such as school problems, trouble at home and delinquency.

Method

Participants

The ideal participants will be public high school students ages 14 to 18 in three different high school environments. The three different high schools will be one metropolitan area school, one county school and one rural school. With 100 participants (50 male and 50 female) from each school, there will be 300 participants total.

Materials

The only physical materials that will be used are a list of survey style questions that will consist of a mixture of self-report questions and questions about other peers and chairs for the students to sit in. Some example questions could be "How often in the last month have you drank alcohol?" or "Do you drink at parties if your friends are?" The

questions will contain a Likert scale format and multiple-choice format. The actual survey will be administered interview style.

Procedure

Upon arriving at the schools, there will be both a male and a female researcher interviewing the students. The interviews will be administered in health or physical education classes where the subject of alcohol abuse may be a topic that is covered in classroom material. The researchers will interview the students in two different settings. First, there will be a round of individual interviews. In this case, the male interviewers will interview the male students and the female interviewer will interview the female students. After all of the individual interviews have taken place, there will be group interviews. There will be 10 students in each interview group. The interviewers will not only record the answers to the questions but also observe the characteristics of people answering questions. This information will support answers to interview questions and will be coded. For example, attitude, quietness, etc. are some levels of characteristics to rate when evaluating data. After all of the group interviews have taken place, there will be an open forum for students to ask questions of the researchers. The dependent variable for this research would be whether adolescents consumed alcohol or not.

Implications

By doing a one-way ANOVA analysis, I would hope to find that my hypothesis is supported. Being similar to other studies but varying slightly with the interview approach, the chances of having supporting data is likely. By gathering data that supported my hypothesis would mean that more students are having social problems when they drink alcohol in high school. This could help implement a new kind of alcohol

awareness program that concentrates solely on alcohol instead of a broad "drug" awareness program. With alcohol, next to cigarettes, being the most widely accepted of drugs, it is difficult to include those in a "drug" awareness program. Alcohol is so influential among students because they may feel cooler or more accepted by others when drinking in social situations. This study would be beneficial in showing that alcohol needs its own awareness program to effectively teach students. If the results are not supported than alcohol will continue to be talked about in a general drug awareness program and the social problems in the lives of adolescents may or may not continue as a result.

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Alcohol and Sexual Behavior

Brian Roth

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It is known that alcohol and open sexual behavior are related. Does alcohol intake make young adults more receptive to engage in sexual activity? This is an amazing topic that is rather controversial and there are many opinions and debates about this topic. My goal is to find out by conducting this experiment whether there is a relationship between alcohol intake and sexual behavior among young adults. I plan to find that the intake of alcohol by young adults does make you more receptive to sexual behavior, because alcohol alters your thinking and allows you to act more freely. This research will hopefully make people aware of what is happening in the real world. I want to give people a general awareness about this topic. Santelli, Robin, Brener, and Lowry (2002) shows that the relationship between alcohol and other drug use and first sexual intercourse is well established. Santelli et al. (2000) says substance use and sexual risk-taking often occur in the same social venues. Coren (2003) shows specific patterns of substance use during adolescence can predict risky sexual behavior in young adulthood. Bonomo, Coffey, Wolfe, Lynskey, Bowes, and Patton (2001) shows physical injury and high-risk sexual behavior under the influence of alcohol are common in teenagers. These past findings that I mentioned all seem to support my hypothesis of the intake of alcohol by young adults does make you more receptive to sexual behavior.

Method

Participants

I will be using participants that are the age of 16-25 as of June 6th 2003 when the study will be conducted. I will recruit 50 male and 50 female participants by having them volunteer their time to the experiment through a research firm. There will be 25 males and 25 females in Group A which will consume two alcoholic drinks per hour for four hours when the study starts. The other 25 males and 25 females will be assigned to Group B which will not consume any alcohol at the start of the study, but instead will consume water at their own pace.

Materials

The materials that will be used to carry out this study include a credit card to purchase the alcohol at the bar. Participants will also be wearing a micro camera on their body that will record all of their actions. The tape that goes in the camera will also be used in this study. All of this will be provided to the participants when they participate in the study. Participants will also be provided with a pen so they can fill out their consent form and they will be given a feedback letter at the completion of the study.

Procedure

Upon arriving at the lab the participants will be randomly assigned to two groups of 50 (25 males and 25 females in group A and 25 males and 25 females in group B). All participants will be told to wear a micro camera somewhere on their body to record all of their actions while out at the bar. They would then turn their cameras in the next morning so our researchers could study the tapes they provided for us. This study will happen on two consecutive Saturday nights. The participants will be counterbalanced

meaning that the first Saturday night Group A will indulge in the alcohol while Group B will not. The following Saturday night Group B will indulge in alcohol while Group A will not. Once the study is completed and all the tapes have been turned in our researchers will then study the tapes to measure any sexual activity that has occurred. Sexual activity will be defined as little as kissing and all the way to sexual intercourse. After the completion of the study and all tapes has been analyzed the tapes will then be destroyed.

Implications

The results I would expect to find would be that the participants who consumed alcohol will engage in sexual activity more so than the participants that weren't consuming the alcohol, so if they are given a score of 1 when they engage in sexual activity I would expect the total score of the two groups that were drinking to be much higher than the two groups that weren't drinking. If my hypothesis weren't supported I would find no significant difference in either of the two conditions. To test and analyze the data I collect I would use a paired t-test. I would simply add up the score of one for engaging in sexual activity and 0 for not engaging in sexual behavior. Then I would have to determine whether the Null Hypothesis should be rejected by comparing calculated value of t to the critical value of t. If I reject the Null Hypothesis then my independent variable did have an effect, so drinking did have an effect on sexual behavior. If I fail to reject the Null Hypothesis I will conclude that there is no effect on drinking and sexual behavior. This study will be built on in future studies. Sexual activity and alcohol consumption is not a new concept and research will continue to grow in this area. By conducting this survey I hope to give general knowledge to the community so they will

be able to make their decisions after looking at this study. If all goes well I plan to travel to different high schools and universities to present my results so I can give the young adults a learning experience.

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Marijuana and the Sociability Factor

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This present study is designed for the purpose of determining whether smoking marijuana increases a person's sociability. I chose to research this topic because from personal experience (through friends and acquaintances, not myself personally), it seems that people who smoke pot are more sociable than those who do not.

As a whole, society generally views substance use as deviant and taboo. However, for many high school and college students, the use of marijuana is considered normal and simply a part of life. Despite the fact that the smoking of marijuana is illegal, many young people engage in this activity for various reasons such as relaxation, peer pressure, social reasons, among others.

In a study conducted on a group of male North Queensland students, it was found that students usually started smoking marijuana simply because they were curious about the substance. However, after the students made the decision to engage in the activity, the peer group became an important factor in continuing in such behavior (Davey, 1990). Peers act as reference points for acceptable and controlled substance use (Davey, 1990).

Researchers have found that association with drug using friends is a consistently significant predictor of substance use, particularly among adolescents and young adults (Curran, White & Hansell, 2000). Like seeks like, and drug users choose other drug users to be their friends, rather than friendships causing drug use (Curran, White & Hansell, 2000).

Contrary to popular belief, the social effect of drug use is not necessarily negative. Studies have shown that peers and acquaintances play a role in the initiation of substance use. However, the same evidence also supports that ties with others, especially those with similar characteristics correlate with better mental health (Ford, 2001). According to Ford (2001), by regulating behaviors and attitudes through the creation and exercise of constraints, or by providing individuals with a belief that life has meaning and purpose, social integration may no only promote mental health, but physical health as well. Some studies have found that marijuana use is associated with a short-term positive self-concept, and positive effects on self-acceptance (Ford, 2001). When marijuana is not used as a coping mechanism, it has been found to decrease depression. Generally, the social aspect of substance use is a positive factor, as membership in such a group and the perceived support that it provides has salutary effects on mental health.

Extensive research has shown that group activity has a positive effect on mental health. Based upon such research I expect to find that the smoking of marijuana does increase one's sociability.

Method

Participants

There will be 200 participants, 100 male and 100 female, all of whom are between the ages of 18 and 25. One hundred of these students will be marijuana users (50 female and 50 male), while the other 100 (50 female and 50 male) will not be. They will be recruited from the undergraduate student population of Lindenwood University, Washington University and St. Charles Community College. A female researcher will conduct the experimental sessions.

Materials

There will be a standardized survey containing questions designed to obtain information about the participant's social life (including friends, and social pastimes), as well as marijuana use. Some sample questions include: If you use marijuana, how many times a day (in a 24-hour period) do you use it? When you use marijuana, do you do so with other people around? If so, how many other people? Are you friends with people who use marijuana? How long do you have to know somebody before you consider him/her to be your friend?

Some of the equipment that will be required for this experiment includes desks and chairs for the participants, computers where the survey will be taken, informed consent forms, copies of the debriefing, as well as participant receipts. The study will be conducted in a classroom setting in Young Hall, Room 104 at Lindenwood University.

Procedure

There will be two groups of students being tested: non-marijuana users and marijuana users. Non-marijuana students are defined to be somebody who has not engaged in marijuana use more than two times in the past year. During the study, the students will be seated in a classroom where they will be given two informed consent forms to fill out. The student will keep one of the forms for themselves, and the experimenter will keep the other form. The students will then be randomly seated in front of a computer where they will proceed to complete the survey electronically to ensure complete anonymity. The random seating is another measure to ensure that the participants will remain anonymous. They will proceed to fill out the survey to the best

of their knowledge in regards to their social life and marijuana use. After the survey is completed, each student is given a debriefing, explaining the purpose of the study and giving the student information about people to contact if they have any questions or concerns.

While taking the survey, the students will be told to be as honest as possible when answering the questions. This is a between-subjects design because the non-marijuana users and the marijuana users are being compared to each other. The participants will be using computers to complete the survey so that each person's survey is in the same form. While the participants are completing the survey, there will be at least one researcher or a researcher's assistant available to answer any questions the participants might have about the survey. The students will all be tested in a classroom setting at 1:00 pm on a Wednesday, and lunch will be supplied to each student prior to completing the survey.

Implications

If my hypothesis were supported, then the results of the study would show that marijuana users are more sociable than non-marijuana users. The marijuana users will answer 'yes' more often than non-marijuana users to questions that pertain to having an open mind, not being shy when meeting new people, and the enjoyment of engaging in group activities. If my hypothesis were not supported, then the results of the study will show that non-marijuana users are more sociable or equally as sociable as marijuana users and they will answer 'yes' more often or equally as marijuana users to the same types of questions.

I would use a t-test to analyze the data statistically because I am making a comparison between two groups of students.

In relation to society, the results of my study could be applied to people who are anti-social. It is a completely far-fetched idea, but if the results of my experiment support my hypothesis, then marijuana usage may be the solution to the problems faced by people who have trouble making friends. These friendless people could take up smoking marijuana in order to become more sociable and meet new people. In the grand scheme of things, the results supporting my hypothesis could provide an explanation as to why this activity is so popular amongst the younger generation.

If the results of my experiment did not support my hypothesis, then further research should be done to find out why high school and college aged students choose to partake in this activity.

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The Effectiveness of Personality Tests in Predicting an Individual's Job Performance

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This study is designed for the purpose of determining whether personality tests are effective in predicting an individual's job performance. I chose to research this topic because of my interest in industrial psychology. In addition, there are a number of businesses that require potential employers to complete a personality test.

Bates (2002), addresses the fact that personality assessments can be extremely useful in hiring the right person for a particular job. Employment tests seem to be on the rise and roughly 40 percent of employers use them. In addition, human resource professionals should expect to pay a significant amount of money for quality assessments, but in the long run it can cost less than hiring the wrong person. Bent (1996), emphasizes that personality tests should only be used as a supplement to other sources of information. No test is perfect and a person should be evaluated on additional criteria. Flynn (2002), informs employers that tests that are improperly handled can leave companies vulnerable to lawsuits. First, the employers must make sure that the test has gone through a validation procedure. Secondly, the language used in the test must not be biased (assuming everyone has the same education, culture, etc.). Additionally, there have been cases in which individuals have felt the test invaded their privacy.

Extensive research has shown that personality tests can be extremely useful if they are properly handled, but should be used only as a supplement to other sources of information. Based on such research, I believe that if a group of applicants is given a personality test, it will be effective in predicting their job performance as an employee.

Method

Participants

The study will involve males and females that are applying for various positions at a Target store in O'Fallon, Missouri. Target was chosen because it has it has a variety of employment opportunities available. Individuals applying for cashier, stock, and pricing positions will be participating. There will be a total of 90 participants being studied. 30 participants will be hired for each position, in which 15 will be hired with an interview and personality test and 15 hired solely on the basis of an interview. A female researcher will conduct experimental sessions.

Materials

Participants will be given Paul Costa's and Robert McRae's NEO-PI-R (Neuroticism-Extraversion-Openness-Personality Inventory Revised). It is a self-report inventory that assesses the Big Five Traits of neuroticism, extraversion-introversion, openness to experience, agreeableness, and conscientiousness. It consists of 240 items and for each item the participant will indicate the extent to which he or she disagrees on a five-point scale. In addition, each of the Big Five traits is divided into six facets. As a result, there is an individual profile of 30 scores. Some sample questions include: I have an eye for detail; I do things my own way; I do not have a good imagination; I do just enough work to get by.

The study will be conducted at Target in a small office setting, where a table, chair, and pen will be provided for the participants.

Procedure

The study will be following the employment process of a Target store in O'Fallon, Missouri. There will be two hiring procedures. For one group of people, a personality test will be given along with an interview. For the other group, only an interview will be required.

Both groups will be given the same interview questions by the same female interviewer, but the NEO-PI-R will be administered to one group by the interviewer. All 240 test items will be identical for each candidate. They will have approximately one hour to finish the test. When finished, they will hand it in to the interviewer so that the researcher can calculate their scores.

Implications

If my hypothesis were supported, the group that was given the NEO-PI-R will have more efficient employees. If my hypothesis were not supported, the group that was not administered the NEO-PI-R will have more efficient employees, or there will be no difference in the two groups.

Efficiency will be measured on the following criteria: number of complaints received, number of days the person called in sick, maintains an appropriate appearance, shows up for work on time, and takes breaks according to how long they are expected to. Specifically, the cashier can be evaluated on how many times their drawer has been even and how long of lines they have. The stock associate can be evaluated on the number of items they check in per day and if they are being placed in the appropriate areas. The pricing associate can be evaluated as to the number of times merchandise is signed incorrectly and how long it takes for them to price merchandise.

Using the NEO-PI-R, specific points are represented for the individual's answer to a question. The results can be graphed and it is detectable if they scored low or high in the Big Five Traits. For example, if a person were applying at Target for a job in which they would ring customers' merchandise, you would expect that they would score high on the trait of extroversion and agreeableness. Their scores could reflect their potential in a particular position. In addition, a t-test would be used to analyze the data statistically because I am comparing between two groups; one hired solely on the basis of an interview and another hired as a result of their scores on the NEO-PI-R, along with the interview.

Personality tests can provide extra information about ability, skill, and overall functioning in a place of work. In interviews, people can present themselves differently from how they truly behave at work. People tend to portray themselves in the best possible light and hiding any weaknesses. In addition, personality tests can save a company time and money. Hiring someone who presented well at an interview only to find problems with their work performance can be expensive and frustrating. Selecting the right people for a role ensures the investment of time and money is put into the right people. On the other hand, personality tests should only be one form of the employment process. They can help in the selection of applicants, but it is not the primary basis for selecting an applicant.

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Effects of Tipping Styles on the Quality of Service

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Occasionally people enjoy, or engage in dinning out at restaurants. People go out to celebrate birthdays, holidays, promotions, and many other special events. However, along with celebration follows showing the server appreciation by tipping. People have their own reasons for tipping big or leaving the server a penny. Some guests tip 5 percent and some tip 50 percent. Most people tip at the end of the meal as compared to the beginning. Some would say that might keep the server on their toes. Many people tip on the speed of the food, if the server kept their beverages full, or how nice and personable they were. The quality of the service and the atmosphere could account for a large portion of the inconsistency in the tips a server receives. Adding gratuity decreases the quality of service provided by the server.

What if the tables were turned, and the server already knew the tip was "in the bag". Before a family of 3 sat down the server is aware that "the more I ring up on the bill the bigger the tip I will get because gratuity is added." The server might not be concerned with earning their money or the quality of service. It seems that the whole history of serving is based on earning wages. The server might be less friendly and unconcerned with the individuals who come in alone or the people who just stop in for coffee. Many guest oppose added gratuity because the guest wants control and the ability to regulate service (Martin, 1997). Gratuity leaves the guest more vulnerable to unsatisfactory service and an unpleasant visit to the restaurant. Adding gratuity decreases the quality of service provided by the server.

Gratuity benefits everyone but the costumer. Restaurants often support applying gratuity to each check because it helps regulate revenue, guarantees the employee's wages, and helps at tax time (Martin, 1997). Adding gratuity makes it easier for the company to keep track of the money flow in the business and with the Federal Government. However, adding gratuity decreases the quality of service provided by the server.

Methods

Participants

The participants will include nine confederates that will be responsible for paying the bill. The participants would consist of 60 Lindenwood University First Semester Freshmen with few than 21 credits. The participants will include 60 people with a Bachelors degree that have been out of college for 3 to 6 years. The participants will also include 60 faculty members between Lindenwood University and St. Charles community College who are 35 years or above. This selection was chosen to have a wider variety of participants across a larger age field. This might find other finding that tipping and tipping standards might be difference with age. The participants will be given a pre-test to evaluate their ideas of quality service. An example question would be: How important is it to keep the guests beverage full? They would have a rating scale from one to ten, ten is very important. The participants will be grouped based on their test. Each group will consist of at least on3 person from each age group that defines the quality of service differently then the rest. For example, a freshman that thinks friendliness and full sodas is good service, a college graduate that has been out for 4 years thinks that speed of the food and the atmosphere are important, and lastly a Lindenwood Professor who is 41 thinks

that taste of the food is the most important would all three be together. The participants who dine together should all be evaluating something different during the visit.

Materials

The materials include nine restaurants. Three five star, three four star, three three star restaurants. The participants will be rotated between groups and restaurants to lower order effects.

The materials also include 180 pretest, 60 black pens, 180 consent forms, 180 small checklist, 180 feedback letters, and money for the meals and tips.

Implications

I speculate that the participants will give lower rating of quality when gratuity is added. My hypothesis is the quality of service decrease with added gratuity so my hypothesis would be supported. However, they will not be aware whether or not the gratuity is added because there will be a confederate at each dinning experience. They will not be aware that money has anything to do with the experiment. I will use a paired t-test to evaluate the data because there is one Independent variable which how the server is paid. There are two levels, server is aware of gratuity at the beginning, and the other is the server gets tipped at the end.

If my hypothesis that the quality of service decreases with added gratuity is supported then the results could influence restaurant owner's decision to add gratuity to checks. Restaurant owners might take another approach with their servers or the policy of gratuity. The experiment could help the costumers dinning experience by leaving the tip in their control. This could help prove that adding gratuity sacrifices the quality of the business which often is why people come back to eat again.

Dogs as Reducers of Anxiety in Social Situations

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For many years animals have played a large part in the average family unit. Animals become more than just pets and begin to be considered a family member or a best friend. With such close relationships developing between owner and pet it would not be far fetched to say that animals could act as a social mediator for those who suffer from chronic anxiety in social situations.

I believe that pets can greatly reduce stress and anxiety during social interactions with those who suffer from social anxiety. Since dogs are the most commonly seen pets in an outside setting most studies have been with dogs rather than other pets such as cats. A study done by McNicholas and Collis (2000) looked into how dogs are a catalyst for social interactions. Two studies were conducted to tests the strength of this effect. In the first study, a highly trained dog was used to ensure that the dogs unruly behavior did not attract unwanted attention from passers-by. The participant was asked to take the dog with him or her (both sexes were used as participants in the study to rule out gender influence), during his/her normal daily activities. These activities were not confined to conventional dog walking, and the participants were encouraged to bring the animal wherever they went. It was found that being accompanied by a dog significantly increased the frequency of social interactions with strangers.

In Study 2, the participants also used a well-trained dog; however, in this study researchers tested how physical appearance of the dog and owner affected frequency of social interaction. Participants were asked to wear either dirty and torn clothes or a suit,

and the dog they were walking wore either a torn leash and studded collar, or matching leash and collar. The appearance of the dog had little effect; however, the owner who wore a suit interacted with others significantly more than the owner wearing torn clothes.

A second study by Lowell and Keats (1992) stated that the company of a dog is better than the presence of a close friend in reducing stress. In this study, dog owners were asked to complete a series of difficult math problems in a limited amount of time. Researchers discovered that when the owners' dog sat beside him/her the participants scored far higher and could complete the task in a faster time than when his/her best human friend or no one sat beside him/her. The researchers also observed that the dog had a calming effect on its owner. The researchers monitored breathing and heart rate before, during, and after the test and discovered that all three were lower in the presence of the dog. Both of these studies help support my hypothesis that dogs will help lower stress and anxiety in social situations for those with social anxiety.

Method

Participants

Participants will be four females and four males ages 20 and older who suffer panic attacks due to social phobias. These participants will be recruited through ads in a newspaper as well as Internet and television advertisement. The participants will be extensively pre-tested by a licensed psychologist and will be required to meet the diagnostic criteria for panic attacks and social phobia according to the DSM-IV. Participants will also be pre-tested to ensure that they are in fact comfortable around dogs. Participants will be required to interact with a dog similar to the one that will be used in the study in a laboratory setting. Their respiratory and heart rate will be

monitored to detect any signs of stress or discomfort stemming from the presence of the dog. Those participants who are uncomfortable around dogs will not be used in the study.

Materials

Since most animals seen in a public area such as a park, are dogs, I will use only dogs in my study. I will use four well-trained Labrador retrievers all will be black in color. This particular breed will be chosen due to the fact that they are recognizable by most people as a friendly breed and they are very approachable. All of the dogs will be black in color in order to rule out any bias due to color favoritism. Each dog will wear a red collar and red retractable leash.

The participants will be asked to gather in a building with two large rooms with chairs and tables. Eight consent forms would be handed out, one for each participant. After filling out the consent form each participant would be given a paper so I would be able to contact them with the results of the study if they were interested. The participants would be brought to a large park located near the original meeting place where there would be plenty of people walking, jogging, and so on. Approximately ten confederates would be used to approach the participants and engage them in conversation.

A self-report diary will be given to the participants to fill out before, during, and after they go out to the park with their dog. They will be wired so their heart rate and respiratory rate could be monitored at all times. I will have approximately 50 sheets of paper that will be divided into sections so I can record heart and respiratory rate at different intervals and also a section for me to record any signs of anxiety or positive social interaction. I will use a pen to record any information. At the end of the experiment a survey with 15 questions asking participants to rate how they felt during the social

interactions presented by confederates will be handed out to each participant. Eight of these surveys will be used, one per participant.

Procedure

Before the procedure, the participants will be asked to read and sign the consent form. Four participants (2 males/2 females) will be introduced to the dogs, while the other four (2-males/2 females) will be the control group and will go out into the park without dogs. The participants who will be accompanied by dogs will be introduced to their animal and given at least 30 minutes to get acquainted with the animal. Then the participants will be asked to fill out the first entry in their self-report diary describing how they are feeling. After they complete the first entry in their diary their heart and respiratory rate will be taken and recorded.

The participant will then be asked to go out alone into the park and take the dog for a leisurely walk. At this time confederates will be asked to approach the participant. The first participant will briefly stop, compliment the participant on their dog, ask a simple question such as "what is the breed of the dog," and walk away. Those participants without dogs will be approached by a confederate and asked a simple question such as, "Do you have the time?" or "Can you give me directions to the restrooms?" The heart and respiratory rate of the participant will then be taken and recorded. Each confederate will take his or her turn approaching the participant. Each confederate will spend more and more time talking to the participant and interacting with them. At one point three confederates will be surrounding the participant attempting to engage him/her in conversation. Each time a person is interacting with the participant

his/her actions, respiratory and heart rate will be observed and recorded. Any random person who approaches the participant will be observed and the data recorded.

The participant will be asked to record in his/her self-report diary how he/she feels after each time he/she interacts with a person. After 30 minutes of walking in the park the participant will be asked to report back to the original meeting place. Once returned to the room with tables and chairs the participant will be asked to fill out the last entry in the self-report diary and his/her respiratory and heart rate will be taken. The participant will also be asked to fill out a survey which will ask 15 questions regarding their stress levels when they were approached by people, and whether or not they felt less, more, or the same amounts of anxiety in situations presented by confederates.

One by one each participant will follow the same procedure. The four participants entering the park without animals will talk to the same amount of confederates, and will spend the same amount of time in the park as the participants accompanied by animals.

Implications

If the results of the experiment support my hypothesis I would expect the participants accompanied by animals to experience less anxiety and lower stress levels than those participants who were not accompanied by animals. I would also expect the participants with animals to exhibit less signs of anxiety such as increased heart and respiratory rate, fidgeting, sweating, and unnecessary body movement during social interaction.

If the results of the experiment did not support my hypothesis I would expect to find that there is no difference in anxiety and stress experienced by the participants with

dogs and those without. Both groups would find no difference in anxiety with an animal then they would normally without one.

I believe that if my hypothesis is supported then those people who suffer from social phobia could benefit from having a canine companion with them during situations that require them to interact with others. It would allow them to have more freedom and help them to overcome their social anxiety.

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