Undergraduate Journal of Psychology

Memory Illusions of Pictorial Occlusions

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Boundary extension is a tendency to remember pictures as if they showed more of a scene than they actually did. An experiment was conducted to determine the generality of this effect to occlusions caused by overlapping objects. Thirty two participants were presented with 6 photographs depicting pairs of objects. In half of the pictures one object was partially occluded by another object, and in the other half they were both entirely visible. After the presentation a drawing task and a recognition test were administered. Participants exhibited a tendency to remember the occluded objects as if they were not occluded. The objects that were not occluded were remembered correctly. Two explanations of this phenomenon, object completion and perceptual schema hypothesis, were suggested. Comparison of the results of the present study with the boundary extension phenomenon suggests that the extent of the studied effect depends on the nature of the occlusion (natural vs. artificial).

Memory Illusions of Pictorial Occlusions

The unreliability of our cognitive system has always been an attractive topic, not only for research laboratories, but also in real-world settings in which accuracy of human cognition plays a great role. Perceptual illusions were the first to stimulate our interest, and they have received a lot of attention during the last two centuries. Research in illusions of memory began only a few decades ago and it is also becoming very popular. Analyzing errors of memory and perception can help us understand principles according to which these systems function. A particularly valuable source of information are illusions that lie on the border between perceiving and remembering (Roediger, 1996). They provide information on how memory and perceptual processes interact.

The effect of boundary extension is one of these illusions. Research demonstrated that after viewing a photograph, observers tend to remember seeing more of a scene than was actually presented (Intraub & Richardson, 1989). They remember the background as taking up more space and the objects as smaller, as if the picture showed a wider angle view. The distortion is unidirectional, evident both in recall and recognition tests, independent of the orientation of presented photographs (Intraub & Berkowitz, 1996) and of the time of exposure to the picture (Intraub, Gottesman, Willey, & Zuk, 1996). Neither prior warning nor a demonstration of the phenomenon eliminates the effect (Intraub & Bodamer, 1993). The effect is most prevalent in conditions involving close-up views as opposed to wide angle views (Intraub & Richardson, 1989) and it occurs only in scenes in which the background is perceived as a part of the scene (Intraub, Gottesman, & Bills, 1998).

The explanation of the boundary extension phenomenon that received most support in the previous research was the perceptual schema hypothesis (Intraub, Bender, & Mangels, 1992; Intraub & Richardson, 1989). According to this theory the visual system is designed to provide us with a continuous view of the world. It integrates partial views by activating our schemas, which contain information on what is likely to exist just beyond the edges of the view. As a result of schema activation, the observers remember not only what was actually present, but also what they understood to have existed.

Viewing scenes in pictures is not a typical visual experience of the world. The edges of a photograph provide an artificial occlusion to the scene. The current study was designed to determine whether the phenomenon of boundary extension could generalize to more natural occlusions, which are caused by two partially overlapping objects.

Research in perception shows that shapes are perceived regardless of the lack of local information. When objects are occluded, visual completion processes fill in the gaps in the information and enable us to interpret the objects as complete (van Lier, 1999; Kellman, Yin, & Shipley, 1989). The present experiment tested how the occluded objects are remembered.

To ensure that the findings of this study can be easily applied to the real world, the stimulus materials used in the experiment were photographs of everyday objects instead of geometrical figures, which are most commonly used in research in occlusion. Each picture showed two objects. Participants were presented with six pictures, half depicting overlapping objects and the other half non-overlapping objects. After the presentation the participants were asked to draw the pictures from memory. The drawing task was followed by a recognition test. It was hypothesized that the participants would remember occluded objects as if they were presented without occlusion. No distortion of memory was predicted for the objects that were not occluded.

METHOD

Participants

Participants were 32 male and female introductory psychology students from a state university, who received course credit for participation.

Stimulus Materials

The stimuli were six color photographs (4"x 3") depicting pairs of objects against a bright wooden background. The scenes on the photographs included: (a) an apple and a mug, (b) a battery and a lighter, (c) a light bulb and a tin, (d) a notebook and a diskette, (e) two lotion/soap containers, and (f) a potato and an onion. Four versions of each scene were photographed and are presented in Figure 1. The versions differed in the position of the objects with respect to each other: (I) one object occluding approximately two thirds of the other object, (II) one objects occluding approximately one third of the other object, (III) both objects entirely visible with no space between them, and (IV) both objects entirely visible with a little space between them. The stimuli were presented on a color 19" monitor. The stimuli presentation was controlled by SuperLab.

Figure Captions

Figure 1. Photographs used in the experiment. Either version II or version III of each scene was shown in the presentation. All four versions were used in the recognition test.

Design and Procedure

Students participated individually in a session of approximately 20 minutes. They were seated about 40 cm from the screen. During the presentation the participants were presented with six scenes showing pairs of objects. In three of the scenes one object occluded one third of the other object and in the other three both objects were entirely visible with no space between them. Those pictures that belonged to the first category for half the participants belonged to the second category for the other half and vice versa.

Each picture was presented for 3 s. A black and white patterned visual noise mask appeared after each picture and remained on the screen for 1s. Participants were instructed to focus their attention on each scene and remember it in as much detail as possible.

Recall.

Immediately after the presentation each participant received a response booklet, a pencil, and an eraser. Each page of the booklet contained a simple title (names of the objects in the photograph) indicating which picture was to be drawn on the page. The participants were instructed to draw all six pictures they saw during the presentation in as much detail as possible. They were told that they could use words to clarify their drawings, and that they could make changes to their pictures at any point during the drawing test. The drawing test lasted until the participant indicated that they had finished drawing all pictures.

Recognition.

The drawing task was immediately followed by the recognition test. The recognition test consisted of six sets of photographs. The sets were shown in the same order as the photographs in the presentation. Each set contained four versions of one of the previously presented scenes. One picture in each set was the presentation picture. All four versions were shown simultaneously on one screen. The participants were told to choose the photograph, which they saw during the presentation and circle the corresponding number on the response sheet. To proceed to the next set of pictures, the participants had to press a key on the keyboard. The participants were encouraged to spend as much time on each set as they needed in order to give their best answer.

RESULTS

Recall

Of the six drawings from each participant, half were drawings of the presentation scenes that showed occluded objects and the other half were drawings of the scenes with no occluded objects. The author and a naïve judge independently assigned each drawing to one of two categories: (1) drawings depicting an occlusion and (2) drawings depicting no occlusion. On four occasions, when the judges disagreed, a third opinion was consulted. Table 1 presents the percentages of drawings falling into each category.

Table 1

Percentages of drawings in the "occlusion" and "no occlusion" categories.

		Drawings	
		Occlusion	No occlusion
Presented photographs	Occlusion	38%	62%
	No occlusion	4%	96%

A chi square test was used to test for differences between the "occlusion" and "no occlusion" categories. Participants showed significantly greater tendencies to draw occluded objects as if they were presented with no occlusion than to draw the objects correctly with occlusion, $\chi 2$ (1)=5.38, p<.05. Participants were also more likely to draw the scenes with no occluded objects correctly (i.e. without occlusion) than to draw one of the objects as occluded, $\chi 2(1)$=77.69, p<.0001. However, presentation pictures containing occluded objects tended to produce more "occlusion" drawings and fewer "no occlusion" drawings than pictures with no occluded objects, $\chi 2(1)$=6.80, p<.01.

Recognition

The percentages of recognition responses for each of the four versions of the photographs are shown in Table 2. In cases when scenes containing occluded objects were shown during the presentation participants were equally likely to give "same" responses to the "occlusion" versions of the picture as they were to the "no occlusion" versions, $\chi 2(1)$=0.167. When scenes with no occluded objects were presented, the participants showed a significantly greater tendency to give "same" responses to the "no occlusion" versions than to the "occlusion" versions of the picture, $\chi 2(1)$=70.56, p<.0001. However, presentation pictures with occluded objects elicited more "same" responses to the "occlusion" versions and fewer "same" responses to the "no occlusion" versions than the presentation pictures with no occluded objects, $\chi 2(1)$=8.03, p<.005.

Table 2.

Percentages of recognition responses for the "occlusion" and "no occlusion" versions of the photographs.

		Photograph versions	
		Occlusion (versions I and II)	No occlusion (versions III and IV)
Presented photographs	Occlusion (II)	52%	48%
	No occlusion (III)	8%	92%

DISCUSSION

Participants tended to remember having seen two complete objects on the photographs regardless of whether the presentation scene showed an occlusion or not, although this tendency was stronger in cases when the presented pictures contained no occluded objects. In the drawing test most participants did not recall the occlusion that was previously presented. Although the participants saw an object occluded by another object, they tended to draw two complete objects separated in space. However, when no occlusion was shown, the lack of occlusion was correctly recalled in almost all cases.

Recognition responses demonstrated a similar distortion. In case of presentation pictures with no occlusions, the size of the effect obtained in the recognition test was similar to the effect obtained in the recall test; i.e. most participants correctly accepted pictures with no occluded objects. The effect was smaller for presentation pictures that showed occluded objects. In these cases, participants were as likely to accept pictures showing an occlusion as they were to accept pictures showing no occlusion. The fact that the recognition test yielded more correct responses

than the recall test is consistent with previous research findings, which demonstrated that our performance on recognition tests is usually better than on recall tests. It is evident in both tests that the demonstrated failure to remember the position of objects with respect to each other works only in one direction. The participants always tended to reduce the amount of occlusion that was presented.

One possible explanation of this phenomenon is the Gestalt principle of object completion (Peterman, 1932). The distortion of memory for pictorial occlusions in this case Participants tended to remember having seen two complete objects on the photographs regardless would be interpreted as a tendency to complete the incomplete forms of the occluded objects. An alternate explanation involves the perceptual schema hypothesis (Intraub & Richardson, 1989). This view, when applied to the illusion of memory demonstrated by the present experiment, would suggest that perceiving an occluded object activates our schema of this object. The schema provides us with information on what is likely to exist in the occluded part of the object that we are not able to see. As a result, we remember not only the part of the object that we actually saw, but also the other part that we inferred to have existed.

The results of the experiment suggest the generality of the boundary extension phenomenon to more natural types of occlusions caused by overlapping objects. However, boundary extension produces a much stronger effect than the demonstrated forgetting of object occlusion caused by another object. The difference could be a result of the different nature of occlusions involved in the two phenomena. Edges of a picture provide a more artificial occlusion of the scene than an object standing in front of the other object and blocking the view. It seems that the more natural the occlusion, the better it is remembered. The analysis of photographs used in the experiment offers additional evidence to support this claim. The picture of the diskette and the notebook gave the highest number of correct responses. This was the only picture that had an additional conceptual component: the diskette leaned against the notebook as opposed to standing by itself like all other objects on the photographs. This information could have made the occlusion even more "natural" than the other occlusions in the study. As a result, the photograph elicited fewer incorrect memories than the rest of the photographs did. Subsequent research should investigate the effect of nature of occlusions on the extent of memory distortions.

In conclusion, memory for pictorial occlusions has a tendency to unidirectional distortions toward less occlusion. It seems that not only do we interpret our visual experiences as if we could see more than we actually do, but we also remember more than we saw.

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Question Context and Gender Influence on Depression Screening Scores

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Self-reported depression screening in a hypothetical primary care situation was examined. One of 2 questionnaires were given to 61 college students. Version A listed depression symptoms exclusively; version B listed a mixture of depression and somatic symptoms. Both versions closed with questions designed to reveal the respondent's attitude toward the questionnaire. Using variables of gender, version, and potentially depressed status, no significant attitude differences were noted. However, a mildly positive mean attitude score was calculated, indicating approval of the screening experience. A second analysis demonstrated significantly higher depression scores for females than males. A trend toward an interaction between gender and version was found. Females completing version A reported significantly more symptoms than females completing mixed version B. Results suggest that (a) false positive reporting occurs in females using instruments consisting of depressive symptoms exclusively, or (b) depressive symptoms contrasted with somatic symptoms are discounted by females.

Question Context and Gender Influence on Depression Screening Scores

Depression is a significant health care issue. Kessler et al. (1994) reported a 14.7% lifetime prevalence of affective disorder in the United States. In a review of five epidemiologic reports, Katon and Sullivan (1990) state that between 4.8% and 9.2% of primary care patients are afflicted with major depression. Primary care providers have a greater likelihood of encountering a patient with depression than with any other chronic illness (Kettl, 1998). In addition, depression has been implicated in slower recovery from illness and in immune system related diseases, such as asthma and heart disease (Carlin, 1998). Interest in attempts to identify the most cost-effective methods of diagnosing depression will likely increase in proportion to our awareness of its impact on health care spending. Up to 90% of persons with depressive illness can be successfully helped (Regier et al., 1988). However, Magruder-Habib, Zung, and Feussner (1990) have shown that the victim of depression, and more importantly his physician, may not recognize that major depression is a component of the presenting complaint. More than half of those patients eventually recognized as having a psychiatric need initially seek treatment for a physical need (Bridges & Goldberg, 1985), most often from a primary care physician (Spitzer et al., 1994).

One potentially cost-effective approach to assisting physician recognition of depression would be to increase implementation of depression screening instruments. For this reason, several screening tests have been developed (Schade, Jones, & Wittlin, 1998), saving time for both patient and doctor (Baughman, 1994).

Schade et al. (1998) conducted a review of fifty-nine studies pertaining to the application of depression screening instruments. Over forty instruments were considered in these studies, most frequently the Geriatric Depression Scale (GDS), the Beck Depression Inventory (BDI), the General Health Questionnaire (GHQ), the Zung Depression Scale (SDS), and the Center for Epidemiologic Studies Depression Scale (CES-D). Several studies focused on instruments designed for primary care practitioners, including the Symptom Driven Diagnostic System for Primary Care (SDDS-PC) and the PRIME-MD. Overall, the instruments were shown to be

useful insofar as identifying probable depressive illness. Baughman (1994) and Ogles, France, Lunnen, Bell, and Goldfarb (1998), whose studies were not included in Schade's review, also found depression screening useful. However, Allen-Burge, Storandt, Kinscherf, and Rubin (1994) demonstrated a gender difference in its outcome--a larger portion of depressed females than depressed males were detected by the screening. They theorized hesitation on the part of males to acknowledge non-somatic symptomatology due to cultural norms. Also, as Regier et al. (1988) have shown, a stigma exists in our country regarding psychiatric as opposed to non-psychiatric conditions.

An interesting development occurred in five studies reviewed by Schade (1998). These studies were concerned with determining whether it was possible for depression screening instruments to maintain their validity while reducing their total number of questions. In each study, this appeared to be true. In fact, surveys utilizing as few as four questions, and in some studies even fewer, were nearly as accurate as the entire instrument from which they were extracted. This is important, as many screening instruments could take longer for a primary care physician to read and interpret than the patient's entire visit. The PRIME-MD screen uses the following two questions to flag for potential depression: "During the past month, have you often been bothered by little interest or pleasure in doing things?" and "During the past month, have you often been bothered by feeling down, depressed, or hopeless?" (Spitzer, et al., 1994).

Rucker, Frye and Cygan (1986) administered the Beck Depression Index - Short Form to patients in their internal medicine clinic and obtained an improvement in their ability to treat depression. At the same time, no patient complaints about the screening procedure were noted.

Several questions may be posited concerning patient attitudes towards depression screening. First, it is hypothesized that females will feel more positively about screening than males, due to the cultural norm of male avoidance of affective issues. Second, different screening formats may impact respondent attitudes. It is possible that the inclusion of somatic symptoms on a short depression screen will yield a more positive attitude score because it is not entirely focused on a mental health issue. Third, it is hypothesized that respondents flagged by one of two common depressive symptoms will respond more negatively to the screening than those who indicate no depressive symptoms, due to the greater possibility that they are depressed and may have a more negative outlook in general.

Two hypotheses pertaining to depression scores can be stated: (a) females will report significantly more depressive symptoms, and (b) respondents will report fewer depressive symptoms when they are contrasted with more socially acceptable somatic symptoms than when they are not.

METHOD

Participants

Sixty-one students (36 females and 25 males) attending a southeastern urban university were randomly divided into two groups, with one group receiving questionnaire A and the other questionnaire B. The majority of these students received credit in their psychology laboratory course for their participation.

Materials and Procedures

Consent forms and one-page questionnaires were completed in small groups. Two document envelopes were labeled such that completed consent forms and questionnaires were

compiled separately. The consent form described the purpose of the study, provided a description of the questionnaires, and gave an approximate time requirement for their participation. Those who signed the consent form were then randomly given questionnaires A or B (see Appendices A and B for sample questionnaires).

Questionnaire A included eight depression symptom questions (concentration trouble, feeling irritable, loss of appetite, feeling down emotionally, loss of interest in things, sleeping too little or much, feelings of rejection, and fatigue), whereas questionnaire B included only four (fatigue, feeling down emotionally, loss of interest in things, and feelings of rejection). Four additional somatic symptom questions were included in questionnaire B (chest pain or irregular heartbeat, headaches or dizziness, joint pain, and persistent cough), allowing for greater somatic/mental illness contrast. Participants indicated an answer by responding either: "no," "very rarely," "sometimes," or "frequently."

Both versions of the questionnaires listed 12 questions pertaining to participants' attitudes about answering the symptom questionnaires. This list of questions was identical in both versions. Attitude questions were completed by ranking each feeling on a scale from 1 to 9, with 1 labeled as "strongly disagree," 5 labeled "neutral," and 9 labeled "strongly agree." Response bias was controlled by rewriting six of the questions such that a negative response implied a positive attitude. Reverse scoring was used on these questions (nos. 2, 3, 5, 9, 10, and 12). Two demographic questions were located at the end of the questionnaire pertaining to gender and ethnicity.

The questionnaires had previously been pilot tested by three adults and altered for the purpose of clarity. They were pilot tested by two adults following this alteration.

Analyses

The responses "no" and "very rarely" were collapsed to indicate a negative response, and "sometimes" and "frequently" were collapsed to indicate a positive response. Participants responding positively to either of the symptoms 'feeling down emotionally,' or 'loss of interest in things' were flagged as being potentially depressed. The four depression symptoms common to both versions were totaled, yielding a score ranging from 0 to 4 for each participant. Scores of 0 or 1 were considered to be low.

The mean attitude score for each respondent was calculated. Using these means, a calculation of the mean attitude score for the entire sample was obtained. Two statistical procedures were performed with attitude scores as the dependent variable: (a) a completely independent 2 (gender) x 2 (version of instrument) x 2 (whether flagged as potentially depressed or not) ANOVA; and (b) a completely independent 2 (gender) x 2 (version of instrument) x 2 (high or low depression scorers) ANOVA. Total depression score was explored as a dependent variable in an additional analysis using a 2 (gender) x 2 (version of instrument) ANOVA and accompanying independent t-tests.

RESULTS

A mildly positive ($\underline{M} =$ 6.32, $\underline{SD} = 1.25$) attitude score for the sample was noted. There were no significant findings in either ANOVA when testing attitude scores. However, a significant finding was seen in gender when total depression scores were tested, with females scoring higher than males, $\underline{F}(1,59) = 4.61$, $\underline{p} = .04$. A trend toward an interaction was found

between gender and version of instrument, $\underline{F}(1,59) = 3.03$, $\underline{p} = .09$. The data are presented in Table 1.

Table 1

Total Depression Scores as a Function of Gender and Version

	Gender	
Version	females	males
Version A	2.05 (1.36)* **	.78 (1.30)
Version B	.93 (1.16)	.80 (.94)

Note: Standard deviations are in parentheses.
*   Indicates a significant gender difference, p < .05
**   Indicates a significant version difference, p < .05

Post hoc analyses revealed that the above trend occurred in females completing version A. Females completing version A indicated significantly higher depression scores than males completing version A, $\underline{t}(28) = 2.37$, $\underline{p} = .03$. Also, significantly greater depression scores were found in females responding to version A than those given version B, $\underline{t}(34) = 2.57$, $\underline{p} = .02$.

No significant differences were noted between females completing version B and males completing version B, $\underline{t}(28) = .35$, $\underline{p} = .73$, nor between males completing version A and males completing version B, $\underline{t}(22) = -.05$, $\underline{p} = .96$.

DISCUSSION

None of the hypotheses regarding the dependent variable of attitude score were supported. The overall positive mean attitude scores for the sample is further evidence for positive attitudes about depression screening, as shown in previous studies. However, these studies did not attempt to address subgroup attitudes, as this study did. The observation that variables such as gender, potentially depressed status and version of screening instrument did not yield significant attitudinal differences suggests that respondents may retain positive feelings about depression screening despite their varying perspectives.

The significant findings pertaining to gender and total depression scores support the first symptom reporting hypothesis as well as the findings of Regier et al. (1988) in which females over 18 displayed higher affective illness than males. This finding was reproduced in the present college age sample, although it must be remembered that standard depression screening instruments as have been used in previous studies were not utilized.

Examination of the finding that females reported significantly more depression symptoms on version A than on the mixed version B implies that symptom reporting may have been influenced by the way the symptoms were presented. A list of associated affective words, such as those listed in version A, may produce an affective carry-over effect when presented to females. For example, the placement of "feeling down emotionally" occurs after the respondent has read "concentration trouble," "feeling irritable," and "loss of appetite," - phrases that produce negative affective associations. In contrast, on version B, the phrase "feeling down emotionally"

occurs after the phrases "chest pain or irregular heartbeat," "fatigue," and "headaches or dizziness," which carry different affective associations. If a greater susceptibility to the affective power of words exists in females, the association of these prior phrases may have influenced females completing version A and elicited false positive reporting. Another possibility is that females discount depression symptoms when they are contrasted with more socially acceptable somatic symptoms, thereby reducing reported symptoms.

Three additional considerations must be given when interpreting the above findings. First, this was a quasi-experimental design with one manipulated variable (version of instrument) which produced only a trend toward significant results during depression score testing. The significant findings of this study pertained to an ex post facto variable (gender).

The second consideration is that of internal validity due to: (a) the relatively small sample with which to perform 4- and 8-cell comparisons with an accompanying potential for statistically regression; (b) unequal groups due to a greater number of female participants; and (c) potential bias in reporting attitude responses, as the majority of participants were psychology students (positive feelings about psychological experiments may have influenced attitudes about the screening experience).

The third consideration examines external validity. As this sample is not representative of actual patients in an actual primary care setting, the results may not be generalizable to persons actually seeking help for symptoms. The academic setting may have implicitly encouraged a competitive perspective and socially desirable responding.

Future studies may utilize actual patients in a health care setting; larger, more equal samples; and standard depression screening instruments. It would be interesting to see if there is indeed an interaction between females and version of instrument. It can be assumed that exploration of depression screening methods will continue to be addressed in depression literature.

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APPENDIX A

Imagine you are a patient in the waiting room of a primary care physician, Dr. Smith. A receptionist hands you a paper and pen, saying "Dr. Smith has asked his patients to fill this out."   Please fill out Dr. Smith's questionnaire.

Are you bothered by:	No	Very Rarely	Sometimes	Frequently
concentration trouble	☐	☐	☐	☐
feeling irritable	☐	☐	☐	☐
loss of appetite	☐	☐	☐	☐
feeling down emotionally	☐	☐	☐	☐
loss of interest in things	☐	☐	☐	☐
sleeping too little or much	☐	☐	☐	☐
feelings of rejection	☐	☐	☐	☐
fatigue	☐	☐	☐	☐

Please score your feelings about the questionnaire below.

1. Filling out this questionnaire is helpful.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

2. Filling out this questionnaire is annoying.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

3. This questionnaire is a bad idea.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

4. I was glad to answer the questionnaire.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

5. I did not appreciate being asked to answer the questionnaire.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

6. I had positive feelings while answering the questionnaire.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

7. If I was a physician, I would want to give my patients the questionnaire.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

8. It would be fine with me if I was asked to complete the questionnaire periodically.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

9. I would have preferred that I was not given the questionnaire.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

10. I would not recommend the questionnaire idea.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

11. I appreciated being asked to complete the questionnaire.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

12. If I was asked to fill out this questionnaire again, I would leave it blank.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

Demographics: male   female

          Native American   African American   Asian American   white   other descent   1A

Appendix B

Imagine you are a patient in the waiting room of a primary care physician, Dr. Smith. A receptionist hands you a paper and pen, saying "Dr. Smith has asked his patients to fill this out."   Please fill out Dr. Smith's questionnaire.

Are you bothered by:	No	Very Rarely	Sometimes	Frequently
chest pain or irregular heartbeat	☐	☐	☐	☐
fatigue	☐	☐	☐	☐
headaches or dizziness	☐	☐	☐	☐
feeling down emotionally	☐	☐	☐	☐
joint pain	☐	☐	☐	☐
loss of interest in things	☐	☐	☐	☐
persistent cough	☐	☐	☐	☐
feelings of rejection	☐	☐	☐	☐

Please score your feelings about the questionnaire below.

1.   Filling out this questionnaire is helpful.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

2.   Filling out this questionnaire is annoying.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

3.   This questionnaire is a bad idea.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

4.   I was glad to answer the questionnaire.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

5.   I did not appreciate being asked to answer the questionnaire.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

6.   I had positive feelings while answering the questionnaire.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

7.   If I was a physician, I would want to give my patients the questionnaire.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

8.   It would be fine with me if I was asked to complete the questionnaire periodically.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

9.   I would have preferred that I was not given the questionnaire.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

10.   I would not recommend the questionnaire idea.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

11.   I appreciated being asked to complete the questionnaire.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

12.   If I was asked to fill out this questionnaire again, I would leave it blank.

strongly disagree				neutral			strongly agree	
1	2	3	4	5	6	7	8	9
☐	☐	☐	☐	☐	☐	☐	☐	☐

Demographics: male   female
                  Native American   African American   Asian American   white   other descent   1B

Recall and Recognition of Television Commercials as a Function of Serial Position

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This study looks at the effects of the serial position of television commercials on college students' memory for brand names. Retention was tested with both free recall, and recognition tests. The results indicated a significant primacy effect (a high retention rate for the first commercials shown), but no recency effect (a high retention rate for the last commercials). These finding were consistent for both recall and recognition. This suggests that a TV show interferes with the ability to remember the middle and last commercial groups. It might be beneficial for manufacturers to place ads in the first block of commercials as it significantly increases the chance that consumers will retain them in memory.

INTRODUCTION

Frequently in studies of recall for lists of items, a U-shaped curve will emerge. Primacy, or the increased incidence of remembering the first items presented on a test, and recency, the ability to better remember the last items on a test are both components of this serial position curve (Glanzer & Cuntiz, 1966). While both are found in word or numerical lists with immediate testing, certain cases have been shown only to have primacy, especially with long term memory. For instance, primacy has been found for very-long term memories from the first year of college with more than a year gap in testing, signifying a connection between long term memory and primacy (Pillemer, Glodsmith, Panter, & White, 1998).

Only lately has research on memory focused on real-world applications such as in consumer recognition of commercials. Tests have shown that consumers can remember commercials at a reasonably high rate over time on both recall and recognition tests. If a distracter is put at the end of learning trials before testing, recency disappears, especially in tests of free recall (Terry & Bello, 1997). Current studies have shown that if continuous distracters are placed between each tested item, then recency can reappear. This was found to be accurate in learning groups of words with intralist distracters and postlist distracters that were the same. However, if the two distractor tasks were different, then recency again disappeared. Adaptation to the type of distractor task was thought to be the reason why this happens with intralist distractors. Possibly familiarity with the task allows for some time-sharing to occur, preserving recency. Novel stimuli seems to disrupt this storage and leads to an inability for recency to be effectively encoded into long term storage (Koppenaal & Glanzer, 1990).

Not as well researched is how commercial sequence in television shows affects memory. Television (TV) shows oftentimes have commercial blocks interspersed within the programs. The TV show can serve as a distracter and actually affect forgetting. In a study outside of laboratory settings, Zhao (1997) has found that commercial placement inside of a "pod", or a grouping of commercials, has a significant effect. Zhao studied this by asking people to recall or recognize brand names for Super Bowl commercials and found that commercial placement inside a block also made a difference in recall and recognition ability in that the first item in each block

was recalled better. He also found that this difference was great enough to profoundly affect enjoyment of the commercial. Position was seen as having an effect comparable to repetition of a commercial, meaning that having a commercial first in the show's first pod might be as beneficial as showing this same commercial two or three times during the next hour. This means that placing commercials earlier in the show may have beneficial effects besides just improving memory. One potential confound in Zhao's research was the fact that many people could have lost interest in the game as it progressed and so commercials might not get equal attention. Also the fact that many advertisers pay premiums for commercials to be seen first in the superbowl, therefore producing more expensive and elaborate commercials could actually influence individuals perceptions of the product. It would not necessarily be the fact that commercials came first in a program or block, but rather that the ones that came first were better made commercials. Another possible confound was this was not a controlled setting and therefore the likelihood that all commercials were seen was almost zero due to the normal amount of breaks taken from a TV show, such as to use the bathroom, which could effect the measured recall levels (Zhao, 1997). A lab study would better suit looking at the ability to remember commercials imbedded in a TV show to ensure that all commercials are viewed. Such a study will enable us to get a clearer picture of any effect that the serial position of commercials will have on recall and recognition.

In this study both recall and recognition tests were used to measure memory. Recall tests are implemented by having the subjects write the exact brand name that the commercial advertised without any aids or clues that could increase memory. Conversely, recognition tests present the subjects with a group of brand names and ask for the subjects to identify brand names of the products that were seen during the presentation, usually by checking off boxes to indicate if they were present in the TV show. Recognition of commercial memory typically produce higher scores than do recall tests. It has been shown that recognition tests do not inflate the number of correct answers, but actually might be more sensitive and discriminating (Singh, Rothchild, & Churchill, 1998). This has serious implications for advertisers. Whether or not to develop commercials that focus on increasing recognition instead of recall is an important question as the competition for the consumers' dollar increases. It is my belief that only a primacy effect will be shown when using tests of either delayed recall or recognition for three groups of commercials imbedded in a thirty-minute television program. Delayed recognition tests should produce slightly higher correct answers, but the learning curves for both the recall and recognition tests should be otherwise similar due to past research indicating that postlist distractors seem to eliminate recency for word, numerical, and even commercial lists when seen in lab settings.

METHOD

Materials.

Five lists of 15 commercials were constructed. Two lists consisted of fifteen-second commercials and three lists had thirty-second commercials. Different commercials appeared in the 15- and 30- second lists. The commercials had been televised, and only advertised products were used (i.e., no public service announcements). Some commercials were for national brands (e.g., Ford and Sears), whereas some were local. The subjects may have previously seen the commercials, although the tapings had preceded the experiment by eighteen months. No list contained multiple products from the same category (e.g., two car ads), although some categories

did repeat across lists. No brand name was used more than once in any testing session. Two or three versions of each list (see below) were produced which varied the sequence of commercials.

A tape of a thirty-minute sitcom was also made. This sitcom was an episode of Fraiser. The actual episode was two seasons old but shown on syndication. All commercials were edited out so that our lists of premade commercials could be inserted.

Participants.

Twenty-eight undergraduates participated in the first experiment to satisfy a lab-course requirement. One student's data was thrown out for failure to follow instructions. Twenty-three students participated in the second experiment. The students were tested in groups of 6-9 in a small classroom in both experiments.

Procedure.

The subjects in Experiment 1 were informed that they would be watching a short sitcom with separately recorded commercials. These commercials would be put in blocks to simulate watching the programs on TV at home, and later the subjects would be tested for memory of the commercials. It was also indicated that the blocks of commercials were of a longer length than is normally shown by TV stations. The commercials were blocked to reduce variability in presentation and analysis. Instructions were read by the experimenter stating that specific memory for brand names would be taken as correct answers. The sitcom was played and commercial lists were inserted at approximately 4, 8, and 14 minutes, respectively, into the program. About two minutes of program followed the final commercial list. The three commercial lists consisted of fifteen 30-second commercials. Counterbalancing of these three lists by sequence within the program was used with three separate groups of students. Blocks were representative of the individual positions. In addition there were two different sequences of commercials which were varied across groups for each list. At the end of the program, the students were instructed to write down all of the commercials that they could recall. Instructions stated that any order of recall would be acceptable.

The students in Experiment 2 were tested for memory of the commercials by a recognition test immediately following the program. The same sitcom was used as in Experiment 1. The commercial lists were comprised of two 15-second lists and one 30-second list. The sequence of lists was counterbalanced with three groups of students. The recognition list was a composite of all 75 brand name items from the five lists available. The students checked each commercial they believed had been shown. Instructions were given that students would be tested for brand name products but the type of test was not named in the instructions.

RESULTS

An item was scored correct of the brand name or some other significant identifying information was recalled on the testing sheet (e.g. "Honda" or "Civic" was acceptable while "car ad" was not). The mean number of commercials recalled in Experiment 1 as a function of serial position is displayed in Figure 1. As shown, there is only a primacy effect in the curve and no recency. Serial positions were grouped in threes for analysis. The main effect of serial position was highly significant, $F (4, 96) = 9.175$, $p<.001$. Planned comparisons using correlated t tests showed that the block of positions 1-3 was significantly better than any of the succeeding blocks, smallest $t (26) = 3.75$.

Scoring in Experiment 2 was made by students checking a box beside a product or store name as either seen or has not seen. Correct recognition meant that checked commercials were actually on the list. Figure 2 shows the mean number of correctly recognized commercials blocked by groups of three. Again primacy was seen with no major effects of recency within the test data. This primacy was seen primarily in the first two groups of commercials, after which there was a large drop in correct answers. Serial position was again significant, $F_{(4, 88)} = 2.43$, $p = .053$. In recognition, planned comparisons showed more correct recognition in the block of positions 4-6 than in the blocks 7-9, $t_{(22)} = 2.48$, or 10-12, $t = 2.36$.
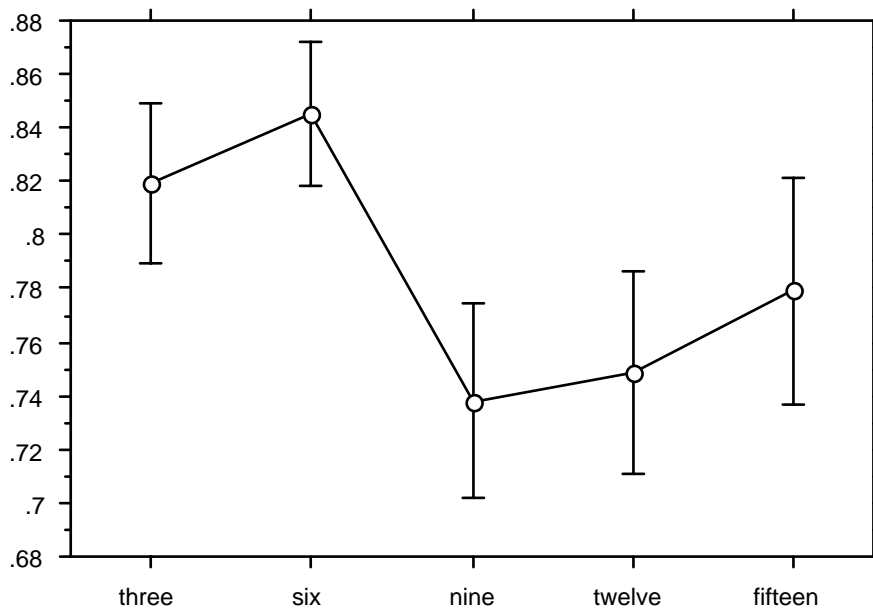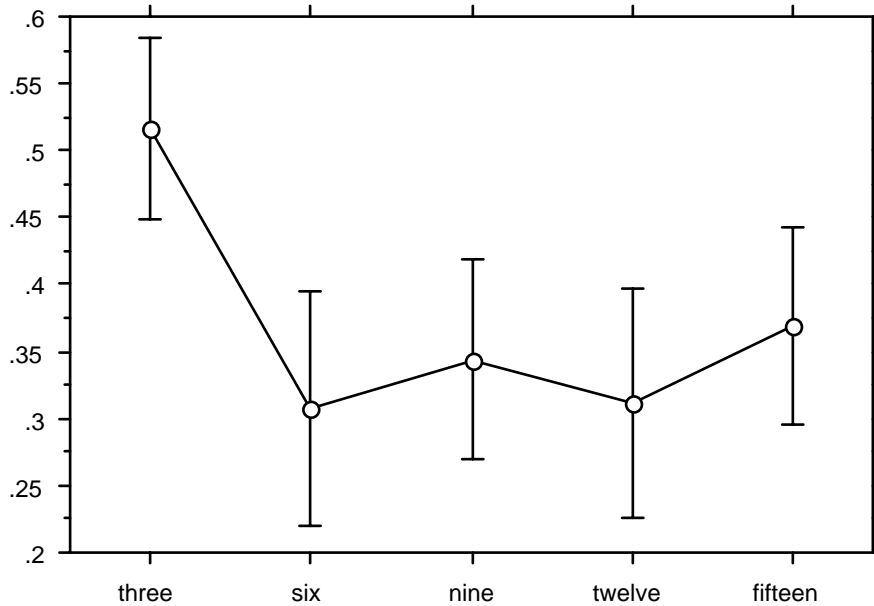
DISCUSSION

Television commercials are interesting material for memory studies for several reasons. With TV commercials you have a time span of memorization and retention longer than is usually attributed to short term memory. You also have a message that actively tries to encourage retention and influence consumer behavior through the use of repetition, associations with images or ideas, and other pneumonic clues. There are many real life applications for memory and commercials because of their regularity and pervasiveness in everyday life. Pure and applied data that can be used to improve everyday memory and ways to help induce long term memory and the ability to recall certain items.

The testing was done with a distracter between commercial lists. That is, the TV program discouraged rehearsal. The primacy effect reinforces the notion that primacy is carried in long term memory despite distracters, whereas recency is not. Poor memory for middle and last items could otherwise be due to boredom, interference from previous commercials, or competition for memory (Pieters & Bijmolt, 1997).

As the present studies were tested under more realistic parameters than other laboratory studies of commercial lists have explored, applied science can especially benefit. This study holds applied research pertinent to both advertisers and marketing firms, not to mention network executives who set the price on each commercial slot due to perceived value. Executives do not currently assign values to specific positions within each show, pricing the commercial slot by time shown in the program, but might look to do so in the future. As each presentation of the video and commercials was fifty minutes, this is also around the time spent watching an average hour sitcom in real life. My studies show that advertisers have a distinct advantage placing commercials at the beginning of a TV show for both better recall and recognition of brand name.

Pieters and Bijmolt (1997) concurred with my data for commercials in a more realistic setting. They found that commercial placement inside a small (4-7) block has a profound effect on the ability to recall and recognize brand names later. Specifically they established that placing a commercial first in the list is better than placing it last. Realistic settings give the advantage of not using only college students and not having the pressures that are present when expecting to be tested in a laboratory setting. A major confound in these real life settings is the high incidence of interference that must be taken into account. Bathroom breaks or family conversations might interfere with the ability to recall commercials in a real life setting. The Zhao (1997) study tried to include natural distractions such as these, but could have lead to adverse effects on the actual memory data. Controlling for these unwanted interactions might be a way in which laboratory studies can be beneficial in this line of research. Our study controlled for sequencing and frequency, or lack of, commercial brands and types so that participants would not have the advantage of seeing a brand advertised twice or get confused by too many different car ads.

A potential confound that this study had was before the participants were tested, they were given instructions telling them they would be tested on commercial name brands later. This allowed them to concentrate on the commercial harder than they might of in a real-life setting and therefore increased the amount of commercials they remembered. It could also have magnified the primacy effect that was found. Because of the high level of concentration on the commercials, this also allows for more prolonged concentration, i.e. if they had not know to remember the commercials then the might have quickly started getting bored and ignored some of the commercials entirely. It would be interesting to not mention the hypothesis or reason for

the study and then collect data. Would their still be a primacy effect? Even if their was no end task distractor would their be a recency effect? I believe that there would be a primacy effect but that "tuning out the end commercials" as background noise unimportant to the study might eliminate recency. As much of the testing on primacy and recency in the past has either told participants what to remember or had obvious targets for memorization,, such as word or numerical lists, it might be interesting to pursue this line of research.

Further research on memory could be conducted as to whether or not this high level of primacy shown in my data could influence retention over longer intervals seen in real life. A way to test this would be to present the TV show and commercial lists. Then have the subjects write a "shopping list", asking subjects to write down a list of several items that they might buy at a grocery store weekly (i.e. products not necessarily seen on the commercial lists), take a fifteen minute break and then test their memories for the commercials that they saw during the TV show. This might show some effects of spontaneous memory that the subjects might exhibit if they were to go shopping after watching TV. Total recall and recognition could be expected to go down, but would there still be a significant primacy effect? Another variation could have students write down their weekly shopping list after watching the TV show and commercials, and see if any of the name brand products appeared in their lists. This might show a quicker influence on consumer behavior that the commercials might have on people who view them. A final variation might categorize specific pneumonic clues that commercials use and test to see if any of these has a significant effect on recall, recognition, primacy, or recency. This could lead to studies helping to understand if the human mind is able to actively encode certain information better or more reliably then others depending on the presentation style. It might even be possible to see if blocks of commercials using the same pneumonic devices might "block" each other out, causing individuals seeing these blocks to actually encode the commercials with less accuracy due to competition for the same encoding devices within the brain. This could have major effects on advertising styles as we know it as the developers of commercial might change the way that they produce commercials or even on which commercials they wish to be seen with in the block.

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Correlation Between Tenure and Individualism

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This research proposal will enable a new employee to determine what is expected and, hopefully, help that individual adapt to their environment more readily, to increase productivity and heighten self-esteem. If a person feels more individualistic on the job they will be more productive performing work related tasks. Fifty housekeepers from NorthEast Medical Center will participate in this study. Each participant will be interviewed with isolated questions of qualitative data that uncover values shared by employees. I will be using the Meyer's (Appendix A) interview guide, of approximately fifteen questions (Meyer, 1993). These fifteen interview questions will range from consideration to authority. A study conducted by Barker and Tompkins (1994) concludes that the longer employees vest in time and energy into the company, the more they identified with their team and organization. I propose there will be a direct correlation between tenure and individualism.

Employees attempt to understand their organization's culture by asking questions, hearing stories, engaging in practices, rites, rituals, and through mere observation (Hansen & Kahnweiler, 1993). Learning what an organization expects from their employees can help an individual decide if their values and beliefs will flatter the culture of the organization. Organizations also try to choose employees that will amalgamate either the current social norms or the organization's culture. Collective studies have been done within this subject area such as (Barker, 1994; Tompkins, 1994), (Chatman, 1995; Barsade, 1995), (Hansen, 1993; Kahnweiler, 1993), and (Meyer, 1993).

Studies of organizational culture often seek to reveal values on which communication and interaction are based. "The unique values displayed in an organization can be elicited through narratives, revealing how members believe they ought to behave as participants in their unique organizational culture, and how they persuasively display those values through narratives" (Meyer, 1995). The set of values present in the narratives told by employees of an organization provide an understanding of one organization's culture (Meyer, 1995).

Meyers held nineteen interviews. Respondents ranged in age from their low twenties to their sixties, with the average age falling in the low thirties. Interviews were conducted to gather data in the form of narratives, to allow members' own symbols to "carry us beneath the objective surface of organizational life, into the underlying value structure and feelings inherently there" (Dandridge, 1983). Two research questions were used to guide cultural observation, data collection, and analysis 1) What values are embedded in stories told by an organization's members and 2) Are the values consistent, or inconsistent with one another (Meyer, 1995). This study allows us to understand how an organization's culture functions through values. The values uncovered were in many ways unique to the organization studied. Caring for children, for instance, would not likely be a strong shared work value at IBM (Meyer, 1995). This type of understanding helps explain why an organization functions as it does, as well as what problem areas exist within values. Clarifying the values stressed in a culture also enhances understanding of the motivations of members (Meyer, 1995).

Two other researchers, Barker and Tompkins (1994) conducted a study examining the characteristics of worker identification with two targets at the same time: the workers self-

managing team and the larger organization, which created the teams. Barker and Tompkins administered the Organizational Identification Questionnaire in such a way as to tap levels of identification with each target and used the results of an ethnographic study of the participants to enhance their analysis. They found workers identified more strongly with their team than with their company, particularly in terms of loyalty. In addition, long-term workers reported more identification with both their team and company than did short-term workers (Barker & Tompkins, 1994). To test Barker and Tompkins hypothesis, those workers would identify more with their team rather than the company. They decided to administer the Organizational Identification Questionnaire developed by Cheney (1982), to ensure high levels of reliability in the studies, since workers performed in self-managing environments (Barker & Tompkins, 1994).

Chatman and Barsade (1995) have conducted a study based on cooperation by contrasting behavior under conditions of personality fit and misfit with culture in an organizational simulation. An organizational culture that accentuates collective goals is considered a "collectivistic" culture, and tends to employ persons with a high liking to cooperate (Chatman & Barsade, 1995). Chatman and Barsade used one hundred thirty-nine first-year masters of business administration students, enrolled in a mandatory introductory organizational behavior course. The first hypothesis: people who have a high disposition to cooperate and who work in a collectivistic organizational culture will be the most cooperative, while people who have a low disposition to cooperate and who work in an individualistic culture will be the least cooperative. The second hypothesis: people with a high disposition to cooperate will behave more cooperatively in organizational cultures emphasizing cooperation rather than an organizational culture emphasizing individualism, while individualists' lack of cooperative behavior will vary less across the two culture conditions (Chatman & Barsade, 1995). The researchers rated 13 dimensions of the organizational culture, four of which were relevant to individualism-collectivism, on a 7-point Likert-type scale and the data showed participants assessed differences in how individualistic $[F(1,57)=25.11, p<.000]$ and in how competitive $[F(1,57)=15.80, p<.000]$ their culture was and in how collectivistic $[F(1,57)=23.14, p<.000]$ and team-oriented the culture was $[F(1,57)=40.27, p<.000]$ (1995).

The result for hypothesis one concludes that when participants and the simulated organizational culture they worked in were both more cooperative than individualistic, these cooperative participants were rated by coworkers, and emphasized collectivism over individualism in recommendations for revising the organizations' performance appraisal rating criteria (Chatman & Barasade, 1995). However, when both the participant and situation emphasized less cooperativeness, lower cooperative behavior emerged for some indicators, but not for coworkers' ratings of cooperative behavior (Chatman & Barsade, 1995). Hypothesis number two appears to reveal that interaction with others is more closely rated to one's personality. Those with higher dispositions to cooperate interact more with others, moreover, to the demands of the situation. People with a low predilection to cooperate are influenced by organizational advancement, and are therefore placed in an "individualistic" culture (Chatman & Barsade, 1995).

Chatman and Barsade used raters to sort the values similarly (Spearman-Brown prophecy formula for rater agreement = .91, average interrater correlation = .53), and the four profiles were combined to create a template of a cooperative culture (1995). The researchers found in there Pilot-study subjects Q-sorted the same 54 values in terms of how desirable each would be in their

ideal organizational culture and as predicted, the more cooperative subjects were, the more they desired an organizational culture emphasizing cooperation ($\underline{r}$ = .33, $\underline{p}$< .005) (1995).

I propose there will be a direct correlation between tenure and individualism. The belief is the longer one has been employed with an organization, the more individualistic they become. The reason why, is because when an individual first begins working for an organization, they are very dependent on their coworkers for information. The longer one is employed with an organization, the more comfortable they become performing work related tasks on their own, without the assistance of others.

Individualism is defined simply by the leading of one's life in one's own way without conforming to prevailing patterns. A person should have the freedom to move about without feeling dependent upon others within their organization. I will measure individualism by asking the participants how may hours a day do they ask for help related to their job. My operational definition of tenure is the length of time, or the conditions under which, something is held, the status of holding one's position on a permanent basis, such as teachers, civil service personnel, etc... on the fulfillment of specified requirements. Tenure will be measured by the amount of months employed in current job position. I will also be measuring individuation, which is an individuals behavior of desired attention, or no attention at all by (Maslach et al., 1985) Individuation Scale. There will be a positive correlation between employee tenure and percentage of time socializing with coworkers. Along with a negative correlation between employee tenure and the percent of time employee's talk about work related issues with their coworkers.

If this is correct, these correlations would support the research proposal that the longer an employee has been with an organization, the less time they spend conversing with their coworkers. In addition, these correlations would indicate that communication of an employee, with high tenure, with coworkers is more likely to occur for social purposes, rather than to discuss work related issues. This would mean the longer an employee has been with an organization, the more comfortable they become completing work-related tasks without the assistance of others. My findings will be a positive correlation between the hours an employee actually spends with coworkers and the hours an employee feels they should spend with coworkers. This correlation would imply that the more time an employee spends with their coworkers, the more value they place on the importance of teamwork, which would be a more collectivistic type person.

There must be emphasizes concerning qualitative data received through the interviews because we must know the employee's values and characteristics of the organization. Uncovering employee values can help individuals match their strengths with an organization's expectations. It is very important to assess characteristics of the organization to help understand the organization's structure. It is common sense to realize every organizational structure is unique and cultures function differently from business to business as a result. When an organization identifies characteristics of their company, it can help them hire employees who will compliment the culture of their organization. Hiring employees who "fit" into the current way of doing things can reduce job dissatisfaction and job turnover. Reducing job turnover rates can save the company money by training fewer employees.

Studies that researchers have conducted with narratives include participants writing stories and analyzing them in the form of texts (Brown & McMillan, 1991). Stories told by participants in casual conversations at a horse track to understand the levels of organizational culture along the lines of power and authority, gender, and ethics (Helmer, 1993). Framing devices have been

developed to better analyze curt cases based on sexual harassment (Clair, 1993). Meyer's study (1994) wanted to know the values and make-up of an organization. However, this proposed study will need to know the organizational values, but will these values promote individuation in an individual and if so how and why? Scoring high on the Individuation scale will reveal high self-esteem and as predicted more stories told, see (Heath individuation model). Telling more stories not only reveals values of an organization, but individuation based on the way they tell the stories. Individuated participants show higher self-esteem and do not become shy, or timid in a social event (Maslach et al., 1985).

METHOD

Participants

Fifty housekeepers from NorthEast Medical Center will be asked to volunteer in this study. To ensure cooperation at the end of the interviews, each participant will participate to win fifty dollars.

Materials

I will be using the Meyer's (Appendix A) interview guide of roughly fifteen questions to acquire organizational values shared by the employees. A power Macintosh 6100 microcomputer with a 15" color monitor will be used to store narratives, each story told will be recorded and document word for word. A tape recorder to acutely collect data from interviewees will be used, along with a note pad and pencil to write down short important facts. A questionnaire will be give to the participants to collect data on tenure and individualism; along with (Maslach et al., 1985) Individuation scale.

Design and Procedure

I will causally walk up to the housekeepers and ask them isolated questions of qualitative data that would uncover what employees like most about their job, what values employees share with other employees, and what makes them different from their coworkers. Once all of the interviews have been conducted, I will take each value and develop an operational definition to explain its meaning. Then, I will train two coders to identify these values and instruct the coders to categorize these values individually to help poorly defined categories be recognized and corrected, if need be. This will help eliminate methodological problems and ensure intercoder reliability by assessing the degree to which a result could be achieved, or replicated by other experimenters. There is no known documented sources for Meyer's interview guide detailing reliability and validity to my knowledge. However, Meyer's (1994) interviewers guide is typically scaled by a total of ten values found in stories, which were told by over 50 percent of participants, giving a total of 555 stories told in all. He then took the number of stories told about each value (10) as a percentage of total stories told, ranking them from 94.7 percent to 52.6 percent of persons.

EXPECTED RESULTS

I believe my qualitative results will show seventy percent of the participants will value flexibility and independence on the job. These participants' answers will fall under the operationalized value that I will label autonomy. Thirty percent of my participant's answers, I

believe, will say that it was the intrinsic, or extrinsic rewards gained from work performance. However, I will say it is possible fifty percent of the participants will feel they share the value of consideration, or show concern for patient's needs and feelings. Forty percent will feel that their distinctive character qualities and idiosyncrasies describe the differences between themselves and their coworkers; and about ten percent will feel there is no difference between themselves and their workers.
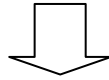
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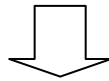
APPENDIX A

Heath Individuation Model

```
┌─────────────────────┐
│   More than one     │
│   organizational    │
│   stories told      │
│                     │
└─────────────────────┘
          ⬇
┌─────────────────────┐
│   Higher score on   │
│   individuation     │
│   scale             │
│                     │
└─────────────────────┘
          ⬇
┌─────────────────────┐
│  High self-esteem,  │
│  more productive    │
│        on           │
│      the job        │
└─────────────────────┘
```

<u>HEATH LINE</u>

```
┌─────────────────────┐
│     Less than       │
│       One           │
│   Organizational    │
│   Stories told      │
└─────────────────────┘
          ⬇
┌─────────────────────┐
│   Lower score on    │
│   individuation     │
│       Scale         │
│                     │
└─────────────────────┘
          ⬇
┌─────────────────────┐
│  Low self-esteem,   │
│ less productive on  │
│      The job        │
│                     │
└─────────────────────┘
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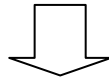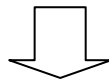
Interview Guide

1. What is your position here?
1. How would you describe a typical day at work for you?
2. How do people describe their work here?
3. How do you feel about working here?
4. What is the best thing that typically happens in a day at work?
5. What is the worst thing that typically happens in a day at work?
6. How do you perceive the way decisions are made around here?
7. Describe a recent work event that demonstrates to you an instance of poor communication.
8. What kinds of conflicts occur at work?
9. Describe a recent work event that demonstrates to you an instance of good communication.
10. In your opinion, how do people treat one another in this organization?
11. What is the funniest event to happen recently at work?
12. What changes (if any) would you make in the way communication takes place around here? Why?
13. What would you point to as strengths of communication here? Weaknesses?
15. Are there any communication issues that we have not talked about, or I have not asked about, that come to mind?

Physiological and Theoretical Perspectives on Korsakoff's Syndrome

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Korsakoff's syndrome is an amnesic disorder affecting approximately 2.5% of chronic alcoholics. It is related to decreased thiamine intake and absorption resulting in lesions in cortical and subcortical structures important for memory and higher cognitive functions. This paper discusses the characteristics, physiological aspects and theoretical explanations of Korsakoff's syndrome.

Korsakoff's syndrome, or Wernicke-Korsakoff syndrome, is named for S.S. Korsakoff, a Russian physician in the 19[th] century who worked with alcohol-induced brain-damaged patients. This neurological disorder is associated with chronic alcohol abuse, characterized by tolerance, physical and psychological dependence on alcohol. Julien (1998) discusses the withdrawal period experienced by chronic alcoholics during periods of abstinence from alcohol. The withdrawal period is characterized by rebound hyperexitability, tremulousness, hallucinations, confusion and psychomotor agitation (Julien 1998). In many cases, chronic alcoholism leads to Korsakoff's syndrome, which is marked by anterograde amnesia, retrograde amnesia and widespread cognitive impairment (Berman, 1990). This paper discusses the manifestation, physiological aspects, and theoretical explanations of Korsakoff's syndrome.

Characteristics

Korsakoff's syndrome occurs in 1.7 to 2.8 percent of chronic alcoholics (Arria, 1992), and is the "most commonly identified neurological disorder associated with chronic alcohol abuse" (Langlais, 1995, p. 113). The specific manifestations of the cognitive and memory deficits associated with Korsakoff's syndrome are attention deficits, visual and verbal memory loss, difficulty with abstract thinking, and decreased motor coordination. When compared with normal subjects, "patients with Korsakoff's syndrome have more difficulty completing fragmented pictures or determining whether two odors, colors, or short musical passages are the same or different" (Langlais 1995, p. 125). Executive functions such as the ability to plan, organize and regulate behavior are also impaired (Arria, 1992).

Physiological Aspects

Theories suggest that Korsakoff's syndrome is the result of an alcohol-related thiamine (B1) deficiency. In many cases, chronic alcoholism leads to a poor diet, resulting in less thiamine intake and poor thiamine absorption. Thiamine plays an important role in "maintenance of enzymatic function, maintenance of cell membrane structure, excitability of nerve cells, and conduction of nerve impulses" (Langlais, 1995, p. 114). One of the enzymes which requires the availability of thiamine, transketolase, is necessary for myelin synthesis. When myelin begins to break down, the result is motor impairment, which is one of the first signs of Wernicke's encephalopathy, the condition preceding Korsakoff's amnesia. When the brain suffers from a deficit in thiamine, the result is Wernicke's encephalopathy, "an acute disorder, characterized by confusion, uncoordinated gait, and abnormal eye movements" (Langlais, 1995, p. 113). These patients typically have lesions in the diencephalon, (more

specifically cell death in the thalamus and hemorrhaging in the mammillary body), the cerebellum and the brain stem.

The exact molecular mechanisms causing changes in the brains of chronic alcoholics are unknown. One theory suggests that in states of thiamine deficiency, excess amounts of excitatory neurotransmitters are released, and in combination with reduced energy production, lead to nerve cell death. This theory is supported by experimental treatment with drugs that suppress the release of such excitatory neurotransmitters preventing diencephalic damage and behavioral deficits (Langlais, 1995).

The idea that thiamine deficiency is the primary causal factor in the development of Korsakoff's syndrome is also supported by research from Reinhart et al (1949) in which thiamine deficiency was produced in rhesus monkeys. At autopsy, lesions of the thalamus, mammillary body, brain stem, cerebellum and basal ganglia were found. A similar study of thiamine deficient monkeys showed that they displayed the typical signs of Wernicke's encephalopathy, such as abnormal eye movements, uncoordinated gate, and confusion (Langlais, 1995).

Treatment for Wernicke's encephalopathy includes abstinence from alcohol and thiamine replacement therapy, and is usually successful in stopping the progression of the disease. However, when left untreated, Wernicke's encephalopathy will result in Korsakoff's amnesia in 25% of affected patients.

Theoretical approaches

Cermak (1990) presents three theories with which to explain cognitive decline in patients with Korsakoff's syndrome. These are the continuum theory, the premature aging theory, and the right hemisphere theory. These theories could prove very insightful in discovering the brain structures damaged as shown by specific types of cognitive decline and eventually developing a systematic schema of this decline and how to prevent it.

The continuum theory posits that the area involved in damage resulting from alcohol abuse, mainly the diencephalic structures, is the part of the brain most sensitive to the toxicity of alcohol. Thus, the cognitive changes in alcoholics without Korsakoff's syndrome will begin to emulate the cognitive deficits found in patients with Korsakoff's syndrome. The theory suggests that alcohol abuse lies along a continuum between occasional drinkers and those with Korsakoff's syndrome (Cermak 1990). Ryan and Butters (1980) reported that alcoholics without Korsakoff's syndrome failed the same memory tasks as alcoholics with Korsakoff's syndrome. Control subjects performed considerably better than either the alcoholics with Korsakoff's or the alcoholics without Korsakoff's (Ryan 1980). This study supports the theory that damage resulting from alcohol abuse lies along a continuum.

The premature aging theory states that all areas of the brain are subject to the same gradual attrition due to the toxicity of alcohol. The thought is that chronic alcohol abusers will behave on the same cognitive level as older persons who do not abuse alcohol. Also, those alcoholics who have severe cognitive impairments will be on the same cognitive level as patients with dementia due to general cerebral deterioration (Cermak, 1990). Brandt et al (1983) offered empirical support for this theory. They presented younger alcoholics, older alcoholics, and a control group with pairs of numbers and pairs of geometric shapes. After the subjects had time to study the pairs, they were given a non-related task and then asked to recall the paired items. The researchers found that alcoholics performed on a level below the controls of the same age, and older subjects scored lower than younger subjects. The conclusion was that alcoholics retrieve information similarly to non alcoholics ten years or more their senior (Brandt, 1983).

The third theory presented by Cermak to explain cognitive decline in patients with Korsakoff's syndrome is the right hemisphere theory. This theory suggests that the right hemisphere is more sensitive to alcohol toxicity than the left hemisphere. This is brought about by the thought that chronic alcohol abusers perform poorly on nonverbal cognitive tasks as compared to their performance on verbal cognitive tasks. This theory suggests that the cognitive decline displayed by chronic alcohol abusers is similar to that experienced by persons with right hemisphere damage. Cermak et al (1989) tested alcoholics and patients with right hemisphere damage on interpretation of emotion. Alcoholics tested the same as the controls whereas the right hemisphere damaged patients had difficulty with the task. They found that alcoholics performed normally on right hemisphere tasks and their performance was only compromised when the tasks were complex or numerous. Their conclusion from this evidence does not support the right hemisphere theory because Cermak et al observed that chronic alcohol abusers did not display the same type of cognitive decline as persons with right hemisphere damage (Cermak 1990).

The continuum theory suggests that chronic alcohol abuse falls along a continuum between abstinence and Korsakoff's syndrome. The implications of this theory are important in discovering the disease processes of chronic alcoholism as well as Korsakoff's syndrome to develop a systematic and scientific way of diagnosing and treating chronic alcoholics based on what damage has been done to the brain and other parts of the body, such as the liver and digestive tract. The premature aging theory suggests that chronic alcohol consumption leads to rapid cognitive decline, which if implemented in preventative alcohol education could have positive ramifications in reducing the number of patients hospitalized with dementia by acting as a deterrent to making unhealthy lifestyle choices regarding alcohol abuse. The third theory shows that the ability for the right hemisphere to process complex or numerous tasks can be compromised by chronic alcohol abuse. This idea also has medical and social ramifications. If these theories can be integrated into alcohol prevention programs, they could act as incentives for abstinence from alcohol as well as helping those who are afflicted with chronic alcoholism and/or Korsakoff's syndrome by discovering what the disease processes entail.

CONCLUSION

Korsakoff's syndrome is a neurological disorder associated with chronic alcohol abuse, marked by amnesia and widespread cognitive impairment. It is the result of the depletion and decreased absorption of thiamine (B1). Those afflicted with Korsakoff's syndrome experience attention deficits, memory loss, and decreased motor coordination. The treatment for Korsakoff's syndrome consists of abstinence from alcohol and thiamine supplements. If left untreated, patients with Korsakoff's will eventually need to be institutionalized due to dementia. Unfortunately this can be very costly for both the individual and the taxpayer. The theoretical approaches to the cognitive decline experienced in Korsakoff's could be used to develop a systematic and scientific way to approach this disorder as well as act as a deterrent to alcohol abuse in preventative education. Unfortunately Korsakoff's syndrome is a chronic condition for which there is no cure. The damage to the brain from alcohol toxicity is irreversible. It is the goal of researchers to learn more about the physiological mechanisms of this disorder so that alcoholics can be educated about the danger of their abuse and how to modify their behavior so that they do not develop this disease.

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Research Proposal on a Study of the Effect of Support Group Participation on Depression in Bisexual and Homosexual Youth

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This study will examine the relationship between support group participation and depression in homosexual and bisexual youth. Participants shall include (N=50) self-identified homosexual and bisexual adolescents engaging in a weekly support group facilitated by trained adults under the supervision of mental health professionals. Participants will complete an individually administered Beck Depression Inventory (BDI) and a survey designed specifically for this research on three occasions over a 52-week period. Significant relationships are predicted between a) the BDI and group participation; b) the BDI and level of acceptance of sexual orientation; and c) group participation and level of acceptance. These correlational findings will support the view that participation in a professionally guided support group can significantly reduce levels of depression in homosexual or bisexual young people, while aiding their formulation of a positive gay identity.

Effect of Support Group Participation on Depression in Bisexual and Homosexual Youth

The way one's sexual orientation is accommodated into one's sense of self is one of the main developmental tasks of growing adolescents. Social stigma often confounds this task if one's sexual orientation is not heterosexual. As Bell (1999) relates, "However tolerant our society may become, being openly gay still has major implications for future career and family life" (p. 452). Other researchers (Saewyc, Bearinger, Heinz, Blum, & Resnick, 1998) report disabled, racial minority, and even obese adolescents suffer emotionally from societal bias, but young people who identify as bisexual or homosexual are at an even higher risk for psychological, social, and even physical harm. The outcome for these rejected young people too often includes substance abuse, sexual abuse, serious emotional difficulties, paranoia caused by internalized homophobia, trouble in school (e.g., verbal and physical assaults by peers or even teachers), conflict with legal authorities, and suicide (Saewyc et. al. 1998). The sections that follow discuss a) homosexual adolescent suicidality; b) support group activity in America today; and c) how support groups can help nonheterosexual young people.

Homosexual Adolescent Suicidality

Many in society are unaware that 25 to 40% of America's homeless adolescents self-identify as gay or lesbian (Nelson, 1994). These young people prefer the potential hazards of the street to the very real dangers of home. Substance abuse is three times greater among homosexual than heterosexual youth, perhaps reflecting an attempt to cope with the pain of their perceived deficiency (Nelson, 1994). Higher rates of anxiety and other psychological disorders, as reported by Saewyc et. al. (1998) and Nelson (1994), should not be surprising considering that socialized exclusion and invalidation of gay/lesbian young people is a constant factor in their lives well before they reach adolescence. One recent study (Herrell, Goldberg, True, Ramakrishnan, Lyons, Eisen, & Tsuang 1999) concluded that any time powerful external forces pressure nonheterosexual youth to conceal their sexual orientation while internal forces push

them to reveal it, the resulting dissonance can be overwhelming. Nelson (1994) suggested that the internalization of this homophobia could lead to a higher incidence of self-hate and self-destructive behaviors.

In accordance with the consistently higher rates of uncertainty and self-destructive behavior among gay youth is their proportion of suicidal ideation and suicide. Suicide attempts by bisexual/homosexual males have been reported at 28.1% while those by heterosexuals is only 4.2%, representing a sevenfold increase among gay males (Remafedi, French, Story, Resnick, & Blum, 1998). A study conducted in Minnesota public schools (Remafedi et al., 1998) concluded that sexual orientation is not the cause for the greater gay/lesbian rates of suicide. Rather, it has been characterized that homosexual/bisexual youth suffer a higher degree of depression, substance abuse, and family dysfunction, all variables that can contribute to suicidal ideation (Herrell et. al. 1999). The result is 31% of all adolescents who take their own lives are gay or lesbian, threefold the occurrence for heterosexual youth (Herrell et al., 1999).

SUPPORT GROUPS

At this time many support or therapy groups are available to help people cope with the difficulties associated with a number of health, adjustment, or familial concerns (e. g., breast cancer, HIV/AIDS, spousal abuse, and depression). A recent study by Bright, Baker, & Neimeyer (1999) suggested there was a significant difference between seeking help or not, which may explain why over 15 million Americans participate in some form of self-help group.

Smith and Rosenthal (1998) related that in addition to many other developmental tasks, adolescents have the added burden of constructing a sense of "sexual identity which includes not only sexual preference but also perceptions of gender, consideration of appropriate sexual behavior, and sexual self-perceptions" (p. 65). Higher rates of depression for homosexuals exacerbates this construction, but findings that support group participation by the general population can effectively reduce moderate depressive symptoms offer hope for the members of the gay/lesbian community, especially the young (Bright et. al. 1999).

Support Groups for Nonheterosexual Young People

Coping
Overcoming societal prejudices, disapproval, and inaccurate advice requires coping skills most of today's nonheterosexual youth fail to learn adequately. Without these faculties young gays and lesbians may not be able to develop the self-understanding and self-acceptance necessary for them to formulate a positive gay identity. A community-based mutual support group with a warm, unconditional, and positive regard would give these young people the opportunity to develop better tools for coping.

Affirming
Coenen (1998) proposed that within these peer groups the homosexual young person could find positive responses to their questions and concerns, reducing their negative self-perceptions while increasing their self-esteem. The learning of these essential survival skills can aid their management of the external discrimination and internalized homophobia they are subjected to by social stigma. Smith, Kippax, & Chapple (1998) suggested this could be a decided benefit as young homosexuals move from an early awareness of their sexuality, through the resultant

confusion, to an initial embracing of their identity, and finally to a positive affirmation of themselves as a gay or lesbian person.

Access

In larger cities nonheterosexual youth seeking consolation outside the family often find agencies that provide support groups they may attend, anonymously if necessary (Peterson, Compas, Brooks-Gunn, Stemmler, Ey, & Grant 1993). Actual resources available to these gay youth groups vary from urban area to rural. Some community-based mutual support groups are fortunate to have licensed mental health professionals at their disposal to provide professional individual counseling and family therapy while others, usually those in smaller cities and rural areas, have just a handful of sincere adults to offer guidance on a group basis only. Some of these smaller groups are paraprofessional in nature, led by facilitators under the supervision of professionals. Unfortunately in the US, the overwhelming majority of young nonheterosexuals do not have the luxury of either type of group to turn to for help.

Peterson et. al. (1993) suggested that if participation in support groups, specifically for homosexual, bisexual, transgendered, or youth questioning their sexuality, can be shown to have a significant positive effect on their depression and thus better the outcomes for them, then more groups will have precedence to seek funding and other resources to accomplish the same in their communities. The proposed study seeks to identify a significant positive effect of paraprofessional support group participation on depression in self-identified homosexual and bisexual adolescents.

METHOD

Participants

The data for this study shall be drawn from a random sample (N=50) of self-identified homosexual and bisexual males and females, transgendered individuals, and those in the process of affirming their true sexual orientation. All of the participants will range in age from 13 to 23 years. All of the participants will reside in a large metropolitan area with a population in excess of 1 million. These subjects will be active participants in the functions of a community-based agency providing social services, including weekly support groups, to homosexual, bisexual, and transgendered, and questioning young people from 13 to 23 years of age
.

Materials

Levels of depression in this study shall refer to the term as defined and measured by Beck (Beck, Steer, & Garbin, 1988), utilizing his widely used Beck Depression Inventory 1993 Revised (The Thirteenth Mental Measurements Yearbook, 1998). Each participant will provide baseline data by completing the Beck Depression Inventory (Appendix A) (Beck et al., 1988) and a questionnaire (Appendix B) designed specifically for this research. The survey variables will include the participant's demographics, overall mental health, attitudinal information, self-identity, family relations, school-work relations, social adjustment, and whether or not they are medicated for any psychological reasons. The mental health segment of the survey is a five-item version of the Mental Heath Inventory (MHI-5) as studied by Berwick, Murphy, Goldman, Ware, Barsky, & Weinstein (1991). Attitudinal information, self-identity, family relations, school-work relations, and social adjustment segments have been drawn from a questionnaire designed for a study by Edwards (1996), who assessed how homosexual youths cope and adjust.

Procedure

After providing baseline data from the initial administration of the Beck Depression Inventory (BDI) and survey, each subject's attendance and participation in a weekly support group facilitated by individuals trained and supervised by mental health professionals will be recorded on the basis of attendance points. For the purposes of this research an attendance point equalling one shall be awarded for attendance at the group itself, and for attendance at smaller breakout sessions, usually two to three per group meeting. For instance, if a subject attends a group and two breakout sessions on one evening, they shall be recorded as having three attendance points for that date. At the end of 26 weeks and again at the end of 52 weeks, the participants will again complete the BDI along with the survey. Participant data shall be eligible for the final correlational analysis only if the participant earns at least 50% of the attendance points attainable within the twelve-month period of the study.

EXPECTED RESULTS

The data collected from the participants in the three BDI's and three surveys over the 12 month period will be correlated among all the variables recorded. In agreement with national averages, 10 to 35% of the participants are expected to drop out of the study before its conclusion (Gilbert, Fine, & Haley, 1994). For those subjects who complete the study, this researcher expects that a significant negative relationship will be found between BDI scores and attendance points, and BDI scores and level of acceptance of sexual orientation. A significant positive relationship is expected between attendance points and level of acceptance of sexual orientation. The expected significant relationships hypothesized in this study will support the view that support group participation will have a positive effect on the depression of the homosexual and bisexual young people included in this research.

In a study of this nature it would be difficult to obtain a large enough sample of homosexual or bisexual adolescents not participating in a support group which could serve as a control group. Therefore, the results of a within-subjects study many not be generalizable to all gay youths, but should be meaningful for homosexual or bisexual adolescents similar to the participants (Edward 1996). As more and more studies such as the one proposed by this researcher support the efficacy of support groups for adolescents seeking positive affirmation of their sexual orientation, it is hoped more mental health professionals will seek to fulfill the need for them.

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The Effects of Being in a Relationship on Females' Perceptions of the Portrayal of Women in the Media

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Past research has examined the effects of the portrayal of women by the media on females. Research has also investigated how expressions and experiences of jealousy increase as a relationship develops and intensifies. This study tied these two areas of research together by looking at the effects of being in a relationship on a woman's perception of the portrayal of females by the media. It was hypothesized that (1) if a woman had spent more than six months (vs. 1 to 6 months, or no time at all) in a current relationship, then she would rate examples of the media's portrayal of "ideal" women as more personally offensive; (2) a woman who has been in a relationship more than 6 months will rate herself as being more offended (than the women from the two other relationship groups) if her significant other viewed the media material. Thirty-two females from a large southeastern university were surveyed. Each received a survey and accompanying photocopies of six magazine ads featuring beautiful, alluring women. Participants classified their current relationship as (a) no current relationship, (b)1 to 6 mo., or (c) more than 6 mo. They then rated how personally offensive they found the advertisements, and how offended they would be if their significant other were to view the ads (1=not at all, 9=very). Analysis of data did not support the first hypothesis; it did reveal a significant difference in mean group ratings for the second hypothesis, with the More than 6 Months group being most offended.

Recent research has been focused on and devoted to ascertaining the effects on teenage girls and women of portrayal of females by the media. If one thumbs through almost any current magazine, or watches television commercials for that matter, he or she will no doubt see the fashionable representation of women in the media by advertisers. The current ideal woman seems to be "taut, small-breasted, narrow-hipped, and of a slimness bordering on emaciation" (Kourany, Sterba, & Tong, 1992, p.105). This "role-model" may aid advertisers in selling more products, but may very well have adverse effect on women everywhere. One of the unintended effects of using these slim, attractive models in marketing strategies may be that young girls and women compare themselves to the advertising models and, find themselves deficient, causing their self-perceptions and self-esteem to be negatively affected (Martin & Gentry, 1997). Posavac, Posavac, & Posavac (1998) demonstrated that exposure to media images did often result in weight concerns and other self-esteem issues in young women. Their research suggests that negative effects on self-concept result from even passive exposure to media images. It does seem that heavier women report more negative self-evaluation after being exposed to "ideal" images of women (Henderson-King & Henderson-King, 1997). One must remember however, that media images do not similarly affect all women's body esteem. Thinner women and those with higher self-esteem and/or low body dissatisfaction are not as negatively affected by being exposed to media images. Posavac, Posavac, and Posavac (1998) note that the stable personality characteristic of body dissatisfaction heavily moderates vulnerability of the effects of media representations of the "ideal" woman.

Past research in another area has focused on how jealousy develops as relationships intensify. Aune and Comstock (1997) concluded from their research with relationships and jealousy that experience and expression of jealousy increased across levels of relationship development. In other words, as couples spend more time together and become increasingly interdependent, greater feelings and expressions of jealousy may be exhibited in response to perceived threats to the relationship. Jealousy results from the perception of threat to one's romantic relationship. This most often results from the perception of a romantic involvement between one's partner and a real or imagined adversary.

At first sight, jealousy and the media's portrayal of women do not seem to be related. A more thorough look reveals a possible connection between the two. Since most ordinary women have normally different dimensions than the slim, flawless models portrayed in magazine advertisements and television commercials, they may feel these representations of the perfect female body to be a threat to their romantic involvement. Because jealousy increases as time spent in a relationship increases, it seemed likely that women in a long-term relationship might see the portrayal of females by the media as a threat to their relationship. The present experiment examines the effects of being in a relationship on how women perceived the portrayal of other women in the media, specifically the "ideal" women represented in advertising. It was hypothesized that the longer a female has spent in a current relationship, the more negatively she will perceive the portrayal of women by the media. Women may see these portrayals of females by the media as a threat to their relationship. Specifically it was hypothesized that if women had spent more than six months (versus 1 to 6 months, or no time at all) in a current relationship, then they would rate examples of the media's portrayal of "ideal" women as more personally offensive. It was additionally hypothesized that these women would rate themselves as being more offended if their significant other viewed the media material.

METHOD

Subjects

Thirty-two participants were surveyed for the research project (12 participants from the More than 6 Months Relationship group, and 10 from both the No current Relationship group and the 1 to 6 Months Relationship group). All participants were female students from a large southeastern university. All students were enrolled in an introductory level psychology class and participated in the research project to fulfill a course requirement. Participants were randomly assigned the surveys and were surveyed in a classroom on the university campus.

Materials

Each participant received a copy of a survey and accompanying photocopies of six advertisements taken from various magazines. The advertisements all depicted beautiful, slim women in scanty clothing, looking very desirable and seductive. All pertinent advertising information was removed from the images to prevent differences in ratings due to biases toward (or against) any of the manufacturers or products presented. The photocopies were all black and white to ensure that participants were not influenced by the color(s) of one advertisement more so than by the others. The survey instructed participants to complete the survey to the best of their ability and reassured them that all answers were confidential and anonymous. The survey consisted of four questions. Question one asked participants to describe how long they had been in their current relationship (no current relationship, one to six months, or more than six months). Question two asked them to classify their current relationship in terms of seriousness (no current

relationship, non-committed/date other people, or committed/date only that person). The first question was a measure of the independent variable- the amount of time spent in a relationship. The second question, pertaining to the seriousness of the current relationship, was included to measure seriousness as a possible extraneous variable that may affect results, so that its effect (if any) could also be ascertained. Questions three and four related to the accompanying magazine advertisements. The third question asked participants to rate, on a scale from 1 to 9, how offensive they personally found the ads to be (1= not at all, 9= very). The fourth question asked participants to rate, using the same scale employed in question three, how offended they would be if their significant other (or, if single, a hypothetical significant other) viewed the advertisements.

Procedure

A sign up sheet was placed on a bulletin board notifying students of current research projects. Students signed up independently, and arrived at the appropriate classroom at the assigned time. Participants each received a survey and the photocopies of six different advertisements. After completing the survey, the hypothesis, independent variable, and dependent variable were disclosed to the participants. Participants were thanked for their participation, and were free to leave.

RESULTS

The mean rating for questions three and four of the survey were calculated for each Time Spent in Relationship group. For question three (How offended are you personally by these advertisements?), although the More than 6 Months group had the highest mean rating, an analysis of variance revealed that the differences between group means were not statistically significant/reliable, $F_{(2,29)}=1.89$, $p=0.17$. For actual values and results of post hoc tests, please refer to Table 1.

TABLE 1

Mean Scores of Participants' Responses to Questions Three and Four of the Survey

	Personally Offensive*		Significant Other**	
No Current Relationship Group	$\underline{M}$ =4.70 $\underline{SD}$ =2.16		$\underline{M}$ =4.60 $^{>6\ mo.}$ $\underline{SD}$ =2.27	
1 to 6 Months Relationship Group	$\underline{M}$ =3.60 $\underline{SD}$ =1.65		$\underline{M}$ =4.10 $^{>6\ mo.}$ $\underline{SD}$ =2.18	
More Than 6 Months Relationship Group	$\underline{M}$ =5.33 $\underline{SD}$ =2.35		$\underline{M}$ =7.00 $^{no,1\ to\ 6\ mo.}$ $\underline{SD}$ =2.04	
(p)	> .05		< .008	

*Personally Offensive: "How offensive do you personally find these advertisements?"
**Significant Other: "How offended would you be if your significant other (or if you are single, a hypothetical significant other) viewed this material?"
Note: Scores could range from 1 to 9 on offensiveness, with 1 being not at all, and 9 being very offensive.
Also, superscripts denote that a significant difference was found between group scores:

No = No Current Relationship group
1 to 6 mo.= 1 to 6 Months relationship Group
➢   6 mo.= More than 6 Months Relationship Group
➢

For question four (How offended would you be if your significant other, or if single, a hypothetical significant other, were to view this material?), the More than 6 Months group again had the highest average mean rating. The No Current Relationship group had the second highest average rating, followed by the 1 to 6 Months group.   An analysis of variance revealed a significant difference among group ratings, $\underline{F}(2,29)=5.78$, $\underline{p}<.05$. Multiple comparison tests, using the Tukey HSD test $(p<.05)$, were performed, and indicated that the difference between the More than 6 Months groups and the No Current Relationship and 1 to 6 Months groups was statistically significant. The More than 6 Months group had a higher mean rating than did the remaining two groups. From these results, it can be determined that amount of offense taken by females to the media's portrayal of women did increase as time spent in the relationship increased, but that there was no significant difference between the no time in a relationship and the 1 to 6 months in a relationship groups. The seriousness of the participants' relationships was measured as a possible extraneous variable, but all females that reported being in a relationship classified their relationship as committed. No females surveyed classified their relationship as non-committed.

DISCUSSION

        The analysis suggests that time spent in a relationship appears to have no significant bearing on how personally offensive women find the portrayal of females by the media. The other hypothesis, however, was supported. The more time a woman had spent in a relationship, the higher the self-reported degree of being offended if her significant other viewed the magazine ads. However, the increase in rating as a function of time spent in the relationship was not invariant; the 1 to 6 months group did NOT have a higher score than the no current relationship group. Therefore, it can be concluded that a woman may feel more offended if her significant other were to view media ads featuring "ideal" as the relationship reaches some critical point, based on time invested. This increase, however, is not readily apparent between zero to six months spent in a relationship. Perhaps being in a relationship from 1 to 6 months isn't a sufficient amount of time for feelings of threat and jealousy to arise from these types of sources.

        The findings from this study could be beneficial to females in a relationship to give them some insight as to why they may feel negatively towards the ads they see in magazines, etc. Results may also aid in helping females understand why they may get irritated or annoyed at their significant others for viewing this or similar kinds of material. Also, findings may assist females (and possibly their significant others) in understanding why these types of media images may arouse or intensify feelings of jealousy.

        Future research suggestions include surveying males instead of females to determine the effects of how being in a relationship affects how males perceive the portrayal of men (or women) by the media. Since the media portrayal of men does not receive much public attention, it would be interesting to see if they, too, find the media portrayal more offensive as they spend more time in a relationship. Also, it may be beneficial to use a wider time range for time spent in a relationship. One might obtain different results from comparing a couple of months to a year, or a year to several years. This might produce a wider range of scores between groups. Since

most popular media ads and the ads used in this study only portrayed Caucasian women, future research could include females of a different race or ethnicity to see if that affects results. Furthermore, since all the participants' relationships were reported as being committed, it would be advantageous to ascertain if there are any differences in ratings of females in non-committed relationships versus committed relationships.

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Examining Tobacco Use Among College Students

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The purpose of this study was to examine the use of tobacco among college students. Although the overall prevalence of tobacco use in the United States has declined considerably over the past 20 years, cigarette smoking among adolescents and young adults shows only small reductions (Emmons, Wechsler, Dowdall & Abraham, 1998). A multiple-choice questionnaire was developed to assess the incidence of tobacco use among college students. The participants in the study were 67 undergraduate students from the University of North Carolina at Charlotte. Findings suggested that smokers were more likely to use marijuana and alcohol than were non-smokers. This researcher recommends middle and high schools educate their students through effective tobacco prevention programs to help reduce the prevalence of smoking among young adults.

Despite the fact that much is known about the hazards of smoking and that cigarette smoking overall has decreased considerably over the last several decades, smoking among adolescents and young adults seems to be on the rise. Following the release of the Surgeon General's report on the dangers of smoking in 1964, smoking among college freshmen steadily declined reaching its lowest point in 1987. But since that time the percentage of college freshmen who report frequent cigarette use has been increasing (Sax, 1997).

This researcher is interested in identifying the predictors of smoking as she has two children of her own and would like to learn how to prevent her children from forming this dangerous habit. Furthermore, cigarette smoking has been linked to marijuana and illicit drug use (Johnston, O'Malley & Bachman, 1987).

There has been a great deal of research on the use of tobacco among adolescents and young adults. This report discusses five studies the author feels best represent her area of interest. The first, a study by Emmons et al (1998), explored the predictors of smoking in a large national sample of US college students. Examined were five predictor variables: demographic variables, pre-college drinking behaviors, college lifestyle choices, high-risk behaviors, and self-reported happiness and satisfaction with education. The sample, consisting of undergraduate students selected from 140 US colleges, was sent a detailed questionnaire that contained questions about smoking status in the preceding 30 days. This study suggests that high-risk behaviors like drinking heavily, smoking marijuana and having multiple sex partners are the highest correlates of smoking status among college students. These relationships were reported to be stronger for women than for men. Also suggested was that lifestyle choices such as not participating in athletics and engaging in high-risk behaviors (i.e. smoking marijuana) increased participants' chances of being smokers. According to the authors of this study, this finding is in contrast to previous findings that associate binge drinking with participation in athletics.

Also using a predictive approach, Moskal, Dziuban, and Gail (1999) investigated the use of tobacco among college students in the Florida state university system. Using the Health Risk Behavior Survey for University Students (HRBS-U), the authors studied the relationships of gender, marital situation, and minority status to six different smoking behaviors. Those smoking behaviors were: whether the participant had tried cigarettes, whether the participant smoked regularly, whether the participant had ever tried to quit smoking, the age at which the

participant first smoked regularly, the number of cigarettes smoked in the last month, and the number of days smoked in the past month.   Results of this study suggested that white students were more likely to try cigarettes than minority students were and that women were more likely to be regular smokers than men were. Also discovered was that the married students were more likely to be regular smokers than the single students were, and they were less likely to try and quit smoking. Some limitations were noted in this study. Undergraduates of 2-year and private colleges were not surveyed so the findings may not represent these students. Furthermore, the response rate was only 54% and this rate may not be high enough to generalize their findings.

Following are two longitudinal studies that provide us with a clear picture of smoking behavior trends in U.S. college students. First, a study conducted by Sax (1997) measured health trends among college freshmen over a 30-year period. These trends were based on the Cooperative Institutional Research Program (CIRP) survey administered to entering college freshmen nationwide each fall from 1966-1995.   The results in this study represent a sub-sample of approximately 75% of all respondents. One of the trends studied was Drugs and Alcohol that included four items: (1) cigarette smoking, (2) beer drinking, (3) partying, and (4) believing that marijuana should be legalized. A result showed that cigarette smoking was at its highest at the beginning of the survey and its lowest in 1987, but since then has been steadily increasing and in 1995 was at a 20-year high. This study also finds that currently more women than men are regular smokers. Also found were trends of increased cigarette smoking and stress, and a decline in beer drinking and in physical and emotional self-confidence. Finally, it was found that students of public 2-year institutions reported the most unhealthy behaviors and attitudes overall.

Subsequent to the Sax study, Wechsler, Rigotti, Gledhill-Hoyt, and Lee (1998) surveyed 116 nationally representative 4-year colleges in 1993 and again in 1997. The purpose was to assess changes in cigarette smoking behavior among college students. The survey used was the self-administered Harvard School of Public Health College Alcohol Study. Results showed that over a 4-year period cigarette smoking on campuses increased nationwide for all types of students and colleges, and that the number of smokers rose faster in public colleges than in private colleges.

Using a slightly different approach, Hines, Fretz and Nollen (1998) conducted a study on personality attributes of smokers and nonsmokers. The participants were college students enrolled in introductory psychology classes at a mid-western university. There were three measures used in this study. The first, specifically constructed for this study, was the Personal Attribute Measure that asked such questions as "…how being a smoker changes the way you feel about yourself. Being a smoker makes me feel:".   Then the smokers and non-smokers were asked to rate each other on 18 attributes using a 5-point Likert-type scale. Lastly all the participants were asked how many of their relatives and friends smoked. The two other measures used were the Smokers' Survey of Statements about Smoking and the Occasional Smokers' Survey of Reasons for Occasional Smoking. Results of this study suggest that positive self-attributions may be associated with occasional smokers, but not with regular smokers, and that the highly negative opinions of non-smokers about smokers may help them not to start smoking.

This researcher's original observation that more teenagers are smoking today than when she was a teenager is probably accurate. All of the research reviewed seems to be consistent and in agreement with the idea that smoking seems to be very popular with adolescents and young adults, even though smoking seems to be much less popular with older generations.

Interestingly, three out of the five studies mentioned above suggest that women are more likely to be smokers than men are. In addition, the study by Moskal et al (1999) found that white students were more likely to try cigarettes than minority students were. If you put these two findings together, one could hypothesize that among college students, white females are at the highest risk of becoming smokers!

This study of smoking among college students investigates who among college students are most likely to become smokers. Combining the approaches of past research, this study explores the relationships between race, gender and college lifestyle choices as major factors associated with tobacco smoking. This researcher predicts that white females are most likely to be smokers among college students.

METHOD

Participants

Sixty-seven college students between the ages of 18 and 23 taking the introductory psychology course at the University of North Carolina at Charlotte were participants in this study. The participants earned lab credit for their participation.

Materials

A self-administered questionnaire was developed that included multiple choice questions about smoking status, age, gender, class rank, race, marital status, alcohol use, and college lifestyle. See Appendix.

Design and procedure

This study has a correlational design. It examined the relationships between gender, race, high-risk behaviors and smoking status.

The questionnaire was administered to the introductory psychology students on the same day. The participants were instructed not to write their names on the questionnaires and to place their completed questionnaires in a designated folder. Hopefully, not handling the questionnaires in their presence allowed the participants to feel comfortable in answering all questions honestly and truthfully. In order to receive credit, each participant signed an attendance sheet when turning in his or her completed questionnaire. All groups were given the same set of instructions and were not treated differently in any way. The following week, an additional 22 students were randomly chosen on campus and surveyed. All participants were assured that the answers on their questionnaires would be kept strictly confidential and that any reported drug or alcohol use would also be kept confidential.

RESULTS

Originally, the questionnaires were administered to 45 students taking the introductory psychology course at UNC Charlotte. Because of low participant turn out and an insufficient amount of male participants, 22 additional UNCC students (mostly male) were later surveyed. Overall, the sample contained 76% white and 24% minority students, and 41% male and 58% female students with an overall average age of 19. The questionnaires were sorted according to gender and smoking status. Smoking status consisted of Non-Smokers (never smoked or smoked but not in the past 30 days) and Smokers (must have smoked during the past 30 days). Consistent with past research, this study found that 36% of the females and 21% of the males

were smokers. However, a Chi-Square test did not find a significant relationship between smoking status and gender, $\underline{X}^2(2) = 6.12$, $\underline{p} > .05$. Therefore, my hypothesis predicting white females were most likely to be smokers among college students could not be supported. On the other hand, relationships were found between smoking status and alcohol usage (where 90% of current smokers surveyed used alcohol and 51% of the non-smokers used alcohol), $\underline{X}^2(2) = 9.61$, $\underline{p} < .01$, and smoking status and marijuana usage (where 60% of current smokers used marijuana and 19% of the non smokers used marijuana), $\underline{X}^2(2) = 11.63$, $\underline{p} < .01$. These findings support past research (Emmons et al, 1998). Figures 1 and 2 show the above-mentioned relationships.

Figure 1: Marijuana Use Among College Students by Smoking Status, 1999

Figure 2: Alcohol Use Among College Students by Smoking Status, 1999
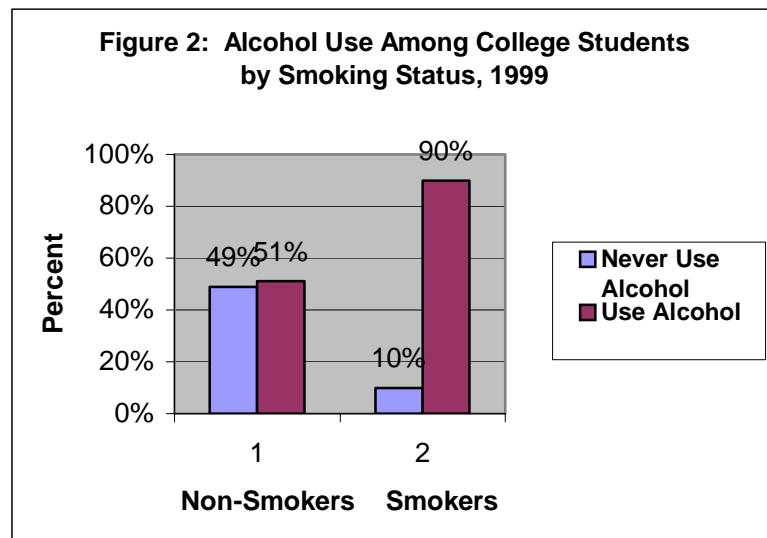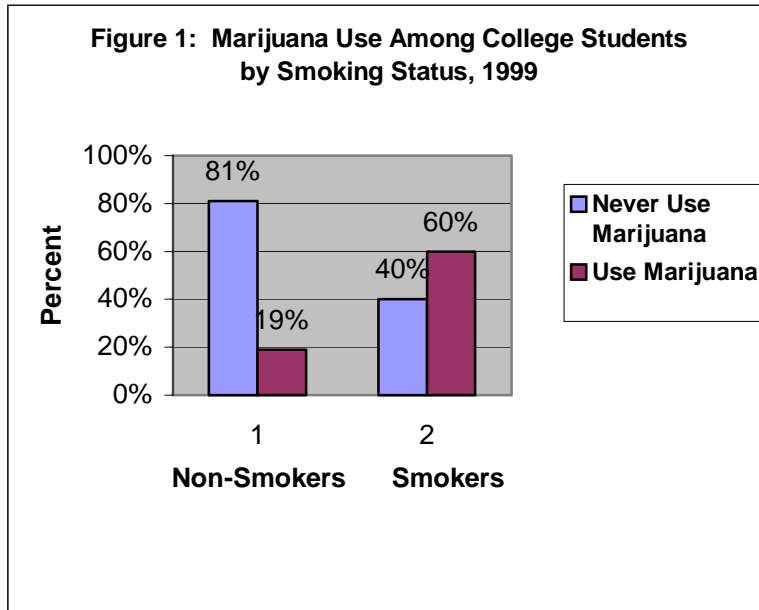
Additional Chi-Square tests did not show any significant relationships between smoking status and race, student type (commuter or resident), class rank, age at which first cigarette was smoked, or lifetime usage (more or less than 100 cigarettes).
Also, a computer-generated problem caused the survey questions to be misnumbered. As a result, most of the participants did not answer the survey question that measured exercise habits. Therefore, this researcher could not test for differences in the exercise habits of smokers and non-smokers. Additionally, there were several questions left blank by some participants, making those questions useless in this study.

DISCUSSION

The present study does not show a significant relationship between cigarette smoking and gender or race. These results do not agree with most of the past research reviewed or with my hypothesis. A small sample size is suspected to be the cause for the failure to show significant results for the above in this study. In this sample, 36% of the females were smokers and 21% of the males were smokers. Of the research reviewed, sample sizes were very large, usually over 1,000 participants. Moskal et al (1999) surveyed 1,150 students and found significant differences between males (22%) and females (28%) in smoking regularly. Another problem with this study was the smaller minority student sample size (16) as compared to the white students (51). Results showed 35% of white students reported current smoking (smoked in the last 30 days) and only 13% of the minority students reporting current smoking. Once more, trends are consistent with published literature, but small sample size limits finding significance.

A relationship worth mentioning, although not found to be statistically significant because of the small sample size, is the age at which the participants smoked their first cigarette. This research shows 86% of the females and 79% of the males smoked their first cigarette by the age of 17 and that approximately 50% of both groups smoked their first cigarette before the age of 15.

Research in the area of tobacco use among young people proves to be quite extensive as it should be. Smoking is the leading preventable cause of death, and yet is quite popular with young adults. In addition to posing many health threats, smoking has been shown to be associated with drinking and illicit drug use in the present student as well as several larger epidemiological studies. It is very important that middle and high schools be equipped with effective tobacco prevention programs since it has been shown that smoking usually begins before the college years and rarely after age 22 (Moskal et al, 1999).

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Appendix

PLEASE *DO NOT* WRITE YOUR NAME ON THIS QUESTIONNAIRE

Smoking Trends Questionnaire

Please circle the appropriate answer
1. What is your gender?
   a. Male   b. Female
2. What is your race?
   a. White   b. African American   c. Asian   d. Other
3. What is your age?
   a. 18   b. 19   c. 20   d. 21   e. 22   f. 23
4. Are you a:
   a. Freshman   b. Sophomore   c. Junior   d. Senior
5. Are you a resident or commuter student?
   a. Resident   b. Commuter
6. Are you married?
   a. Yes   b. No
7. Have you ever used tobacco cigarettes?
   a. Never used (skip to question #14)
   b. Used, but not in the past 12 months
   c. Used, but not in the past 30 days
   d. Used in the past 30 days
8. If you have used tobacco cigarettes, what was your age when you tried your first cigarette?
   a. <15   b. 15 – 17   c. 18 – 20   d. >20
9. If you smoke every day, on average, how many tobacco cigarettes do you smoke per day?
   a. <5   b. <10   c. <20   d. >20
10. If you smoke every week but not every day, on average, how many tobacco cigarettes do you smoke per week?
    a. <5   b. <10   c. <20   d. >20
11. If you are currently a smoker, have you ever tried to quit?
    a. Yes   b. No
12. Have you smoked more than 100 tobacco cigarettes in your lifetime?
    a. Yes   b. No
13. Do you participate in athletics or exercise at least 3 – 4 times per week?
    a. Yes   b. No
14. Do you use marijuana?
    a. Never   b. Occasionally   c. Frequently
15. How often do you drink beer or alcohol?
    a. Never   b. Occasionally   c. Frequently

Thank you for your participation

The Effect of Self-esteem on Eating Disorders

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What are the effects of low self-esteem on the development of an eating disorder? Participants would be presented with three different inventories across a three-month period, to compare the relationship between self esteem and weight loss or weight gain. The inventories will measure self worth, eight dimensions of attitudes related to eating disorders and how one perceives her body image. The results are expected to show that the participants with low self-esteem will score similarly on the three inventories. Moreover, a correlation between low self-esteem and the development of an eating disorder is expected.

The Effect of Self-esteem on Eating Disorders

Is low self- esteem a predictor of an eating disorder? Today, women learn that their appearance is more important than their accomplishments. There has been an increasing preoccupation with weight and appearance among females in the population in recent years. An almost unattainable body image is idealized by American society to such an extent that young women trying to model it may be subconsciously pressured into eating-disordered behaviors (Mintz, 1988). Many researchers have studied eating disorders and the multiple factors leading to the behavior. In this particular study, self-esteem will be the main focus in the association with eating disorders.

Frederick and Grow (1996) provided a tentative model that suggests mediation pathways between autonomy, global self-esteem, and eating disordered attitudes/behaviors in college women. They used the Eating Disorders Inventory (EDI; Garner, Olmsted & Polivy, 1983) when testing 71 undergraduate women. Measures of relative autonomy, global self-esteem and eating disordered attitudes/behaviors were all significantly inter-correlated. They concluded that when women experience a lack of autonomy and self- determination, they are likely to fail to develop global self-esteem. As a result women may increase their risk of developing an eating disorder as a means of regaining some sense of control and self worth (Frederick and Grow, 1996).

Grubb (1993) studied factors related to depression and eating disorders. Grubb used the Coopersmith Self-esteem Inventory (Coopersmith, 1981) to evaluate participants. The results were reported for the scores on the scales for self-esteem and for depression then correlated with the rated self- perceptions of body size and attractiveness. Self- esteem scores were significantly and positively correlated with self- rated attractiveness (Grubb, 1993). These data contradict findings reported by Grant and Fodor (1986) whose research indicated that self-esteem was the most important factor in the prediction of anorexic behavior and indicates the importance of psychological evaluations (Grant and Fodor, 1986).

Results showed test-retest reliability indicating that for current/actual body shape, the score on each measurement occasion was significantly and positively correlated with scores on other measurement occasions. Furthermore, investigating the relationship between eating behavior, body image dissatisfaction, and self-esteem. Body dissatisfaction was found to be significantly correlated with scores on the drive for thinness scale. There was also a trend for self esteem as measured by Harter's (1982) scale, to be related to body dissatisfaction, with lower scores on self worth being associated with higher dissatisfaction (Sands et al., 1997).

The present study proposes, that if a woman has low self-esteem, she is more susceptible to developing an eating disorder. My study extends other studies because it specifically targets 12[th] grade females, where other research usually focuses on college age females. I am also extending the framework of my proposal by readministering the Eating Disorder Inventory, Coopersmith self-esteem and the Body Image Scale.

METHOD

Participants

The participants will include 100 female participants who are enrolled in a 12[th] grade health course, who will receive extra credit for participation in the study.

Materials

Three inventories will be administered and scored for this study. The inventories include The Eating Disorder Inventory (EDI; Garner, Olmstead & Polivy, 1983), Coopersmith self-esteem Inventory (Coopersmith, 1981) and The Body Image Scale (Fallon & Rozin, 1985).

Procedure

Participants are to be tested individually in a private office with a trained professional. Each student needs to read and sign an informed consent form to participate. The participants are guaranteed anonymity so that they may feel more comfortable. Each participant will be measured; height and weight and then presented with a folder containing the inventories mentioned above. Participants will be advised to read the instructions carefully and to answer each question to the best of their ability, answering the questionnaires should take approximately 35-40 minutes . When the inventories are completed they will be collected and each student will be debriefed, at which time the study will be explained to the participant (Grubb, 1993). Participants are then asked to engage in a second session pertaining to the same experiment three months later, in which they will be involved in the same exact way as before. The two measurements will be correlated. Participants will receive the results and literature of the experiment. They will be given the name and number of a psychologist, to contact after the experiment if they have questions or concerns.

EXPECTED RESULTS

Based on past experiments, we could assume that there would be a correlation between self-esteem and eating disorders. Results from the longitudinal comparison should conclude that those participants who scored high in self-esteem during the first session should express high self-esteem scores in the latter session. If low self-esteem is the product of the second session, we will examine the measurements of the participant. If the weight of the participant has changed along with self-esteem, we can predict that the participant may be engaging in eating disorder behavior. The same scenario can be predicted if the results of the first session and the latter are associated with low self-esteem. These proposed findings differ from past research because of the extension of the experiment. Previous researchers studied self-esteem and eating disorders, but didn't re-administer the questionnaires for comparison data.

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Coping with Stress: Are There Differences Between Genders?

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Research displays conflicting evidence about the tendencies of females to ruminate or use more emotion-focused coping and males more distracting or task-oriented coping. This present research seeks to determine the existence of gender differences in coping with professional and personal stressful events. Eighteen male and 88 female undergraduates were surveyed, using demographic questions, questions about professional and personal stressful events, and open-ended questions concerning coping style. A chi square analysis found no significant gender differences in coping for either category of professional or personal stressful events. These results agree with recent studies and contradict earlier research. However, several potential confounds may have influenced the present findings.

Many people experience stress, especially college students. To master, reduce, or tolerate stressors and/or emotional distress, individuals cope differently (Rosario, Shinn, Morch, and Huckabee, 1988). How people cope with stress varies per individual situation. Do females tend to use more ruminative, emotion-focused coping styles and men more distracting, problem-focused styles? Popular thought agrees on the stereotype that women rely more on emotion-focused coping, but past research indicates conflicting evidence regarding coping styles and gender.Focusing on cognitive based theories of stress and coping, Folkman and Lazarus (1985) emphasize that a distressing situation is a variable process, not a stable unitary event. They assessed coping as well as emotion at three stages of a midterm examination: the anticipation stage (before the exam), the waiting stage (after the exam, but before grades were announced), and after receiving the grade. Significant changes in emotions and coping were reported for the entire group. In addition, participants experienced conflicting emotions and states of mind during each stage of the process. On average, participants used combinations of problem-focused coping and emotion-focused coping at every stage of the exam. Finally, Folkman and Lazarus discovered that there are individual differences in emotion, which reflect such differences in cognitive appraisal and coping at any given stage of a stressful situation.

Also within the cognitive perspective, Goodhart (1985) studied the psychological effects associated with tendencies to focus on positive and negative thinking about an outcome of a stressful event. College undergraduates completed an event-outcome appraisal questionnaire. Participants' well-being was taken into account both immediately after the survey and 8 weeks later. Results concluded that positive thinking increased the well-being that participants reported immediately after their thoughts were assessed, but was unrelated to the well being reported after 8 weeks. By contrast, negative thinking was correlated with lower reported well-being at both times. Psychological effects associated with positive and negative thinking were a result of self-relevant thoughts, not externally relevant thoughts. Also, negative thinking about prior stressful outcomes increased vulnerability to the effect of subsequent events on several aspects of well-being.

What is the impact of social forces on coping, taking thought processes into consideration? Moving away from the cognitive approach, researchers have explored gender differences from a social standpoint. For instance, Rosario, Shinn, Morch, and Huckabee (1988) assessed

socialization and role constraint theories, hoping to explain gender differences in coping and social support. Their socialization hypothesis predicted more problem-focused coping in males and more emotion-focused coping in females. The role constraint theory they developed specifies that gender differences tend not to occur in coping when men and women exhibit the same social roles. The primary objective of their study compared the two theories of gender differences in coping, using three samples. Included in the first two samples were men and women in similar occupations. In the third sample, college students occupied multiple roles. Their second objective was to compare both theories of gender differences in regards to perceived social support. Surveys were mailed to 328 members of a state professional organization for group therapists and other group workers. Those responding answered a six-page questionnaire of open-ended questions on job stressors, individual coping, co-worker support, and agency support. In addition, they also answered closed-ended questions pertaining to psychological distress. Their results indicated no gender differences in coping, so they dismissed the socialization hypothesis. They found that, when both genders occupied similar social roles, their coping strategies did not differ, supporting role constraint theory. Men and women did not reveal differences in the way they coped with similar role stressors. In reference to social support, results indicated that woman reported using more support than men in similar role environments.

In accordance with the previous study, Hamilton and Fagot (1988) tested socialization theory by comparing male and female coping styles. The researchers interviewed 51 female and 39 male first year undergraduates by telephone, three times per week for a total of eight weeks. The researchers used an inventory developed for 28 chronic stressors. They discovered no gender differences, so their evidence failed to support the socialization hypothesis. Expectations concerning gender differences in coping may be a product of sex-role stereotypes that are speculative. However, females reported more overall stress than males. In addition, Bernard (1971) and Gove and Tudor (1973) also cited similar findings. They found that stress encountered by women was more intense and persistent than the stress experienced by men.

On the other hand, Eisler and Skidmore (1987) and Goldberg (1987) found that males experience more stress than females. This was partly due to the prominence of gender role stereotypes within this culture including achievement, competency, and competition.

A limitation of many studies is that they do not permit assessment across time. To correct this, Ptacek, Smith, and Zanas (1992) conducted a longitudinal analysis of gender, appraisal, and coping. Over 21 consecutive days, 186 male and female undergraduates established daily reports of the day's most stressful event, which was recorded from the life area from which the stressor came. Then participants appraised the event on multiple dimensions, indicated the degree to which they utilized specific coping techniques, and then displayed the sequence in which the techniques were used. Interestingly, the results disagreed with the previous studies involving the socialization hypothesis. Gender differences that emerged were consistent with the prediction that men cope in more problem-focused ways, whereas women use emotion-focused coping. In addition, both sexes rated problem-focused coping as being more effective than seeking social support. On average, women reported experiencing more stress than men. Men reported a higher expectancy that the stressful event would occur, more perceived control over the outcome, and greater overall effectiveness in coping. With respect to appraisals, more men tended to label stressful events as challenges, meaning the event could have positive or desirable consequences. Therefore, challenging situations evoked more problem-focused coping. Despite the fact that all research findings of this study are consistent with the socialization hypothesis, the possibility

remains that men and women differ only in their self-reports, not in reality.

Porter and Stone (1995) conducted a longitudinal study, which again supported the socialization hypothesis. The researchers were curious to know if differences existed in the content and appraisal of daily stressors that men and women experience. Seventy-nine married couples were asked to complete the Daily Coping Inventory, describing the most unsettling problem of the day and answering questions about its severity, chronicity, control over its occurrence, and which of nine strategies was used to cope with it. Porter and Stone's results indicated that the major differences between men and women involved the perceived nature of the stressful problems rather than the methods of coping used. Women reported more problems centered around self, parenting, and interpersonal relationships, whereas men reported more work related and miscellaneous difficulties. In addition, women saw problems focused on the self as more chronic, and men utilized more direct action in coping with work problems.

One might infer from the above literature that there is conflicting evidence regarding gender differences in coping. Many studies are limited because they fail to measure the types of problems experienced or the participants' psychological reaction to these events. Another flaw in past research (except for Ptacek, Smith, & Zanas, 1992, and Porter & Stone, 1995) was the use of retrospective, summary measures of coping. Using prior measures of coping increases the likelihood of memory confounding, thus invalidating results. This study seeks to determine the presence of gender differences in coping with personal and professional stressful events. By establishing and identifying the relations between appraisal processes, coping styles, and adjustment outcomes, people of both genders could learn more effective coping strategies.

METHOD

Participants

Eighteen male and 88 female undergraduates from the University of North Carolina at Charlotte participated in this study. Surveys were distributed to two sections of an abnormal psychology course. All individuals were at least sophomores, so each had college experience.

Materials

A twenty-five question survey was administered to the participants. Question types included on the survey were responses based on a five point likert scale and open-ended responses. The questionnaire included two different sections: professional and personal stressors.

Design and Procedure

A correlational design was used to assess gender differences in coping within professional and personal stressful event categories. Before administration of the questionnaire, participants were given instructions on how to complete the survey and assured that all responses were confidential.

Both sections (professional and personal) of the questionnaire attempted to measure stress levels, frequency of thought, and coping methods. Stress level was measured using a five point likert scale. In this study "professional" refers to a full time undergraduate (taking at least 12 semester hours of academic credit). Within the professional stressful event category, individual stressful events included amount of stress encountered before an exam; before an individual presentation; on the job; when thinking about career plans following graduation; unpleasant exam grades; personal finances; and job performance. Also, frequency of thought was measured

on a five point likert scale according to how often the participant thinks about job related stressors, school related stressors, post graduation plans, and unpleasant exam grades. Next, open-ended responses were used to evaluate which coping style was enacted for professional stressful events on the basis of four types: distractive, ruminative, self-destructive, or self-improving.

The next section, personal stressors included: conflict with friends and/or family members, self-image, achievement, failure, positive life events, and negative life events. Also, as displayed above, frequency of thought and coping styles (distracting, rumination, self-destructive, or self-improving) were measured. After completion of the survey, respondents were debriefed and thanked for their participation.

RESULTS

Preceding the analysis, questionnaires were separated on the basis of gender. In addition, within both categories of professional and personal stressors, all individual stressors were averaged to form one score for the professional stress level and one for the personal.

A chi square analysis of the groups found no significant gender differences in coping methods in either category of professional or personal stressful events. A possible explanation is an insufficient number of male participants in the study. In the professional category, 2.8% of men and 24.5% of females used distracting techniques; 3.8% of males and 12.3% of females used a ruminative style; 9% of males and 2.9% of females used self-destructive methods; 9.4% males and 37.7% of females used self-improving strategies. Within personal stresssors, 6.6% of males and 22.6% of females reported distracting styles; 0% of males and 4.7% of females used ruminative methods; 0% of males and 2.8% of females used self-distracting tactics; 9.4% of males and 39.6% of females reported self-improving strategies. In addition, an analysis of variance was used to examine the relationship between level of stress and coping method of both categories, resulting in no significant findings.

DISCUSSION

This study failed to display any gender differences in coping with professional or personal stressful events. With previous studies resulting in contradictory findings, the current literature as well as this data report no differences in methods of coping. However, lack of gender differences could be due to possible confounds within the selection of participants and/or methodology.

The number of participants in the study was of little concern, but there was a large discrepancy between the number of male and female participants, which could have contributed to the findings. In addition, the sample was derived from two abnormal psychology classes, thus limiting generalizability of the population, and may mirror the coping styles of an unusual segment of the population. Also, a few participants chose not to answer the open-ended questions on coping, possibly confounding the results. In this study, only the mean of various stressors was measured and used in data analysis, not specific types of stressful events. Therefore, coping based on specific distressing occurrences is not distinguished from total stress level coping. Folkman and Lazarus (1985) noted that coping is a process which involves change, and cannot be limited to a single stressful encounter. Other previous literature has also specified that gender differences may occur only in the data, and not in the environment based on the

methodology of self-reporting. Furthermore, outcomes of gender differences may be a product of immeasureable sex-role stereotypes. Previous as well as present research may be overlooking categories of coping. Within this study, participants reported a variety of responses to coping. Future research may want to consider more complex coping styles, rather than general strategies. Despite variation in the methodology, the results of the present study (as well as previous studies) of gender differences and coping tend to show trivial differences at best. The study of gender differences in coping may contribute in important ways to our understanding of cognitive processes, those social and interpersonal factors that affect individual development and adjustment.

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