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Editor’s Corner

The publication of this third volume of Initial Forays into Psychological Science (IFPS) marks the end of one era and the beginning of a new one. This is the last issue of the journal to be faculty-edited. The fourth volume will be edited by students. The first three volumes have shown that a student journal is sustainable with extensive faculty control. The next phase of this publication will test the hypothesis that it is possible to sustain this publication from year to year as a student-controlled publication. These three years have demonstrated that it is possible to sustain a high level of scholarship in the Research Methods and other classes at JBU by rewarding excellence in scholarship with publication. It continues to provide students in the Advanced Research Seminar class with an opportunity to have real life experience in the peer review process and to get students excited about doing research.

The next volume will also be published in an entirely online format for the first time and students will be in control of all choices regarding its publication, from the type style to the specific articles that will be included. I expect that is will continue to be an excellent model of student research for those in the Research Methods class.

IFPS is also making an impact on the growing culture of scholarship at John Brown University. It has provided the model for a campus-wide online journal that will begin publication in the Spring of 2008. The new journal will also be student-edited and will invite papers from all disciplines across JBU. This will provide an excellent outlet for students in the Research Seminar class to publish their original research while IFPS will continue to provide a place for Research Methods students to publish their research online and an opportunity for Research Seminar students to simulate the peer review process. I look forward to seeing how it will develop and what other changes it will inspire in the coming years.

Richard Froman, Managing Editor of IFPS
Instructions for Contributors

*Initial Forays into Psychological Science* (IFPS) is a journal which solicits manuscripts from undergraduate students in psychology classes at John Brown University. Manuscripts may include research projects conducted for classes, theoretical and review papers written for classes and empirical or theoretical research conducted as part of a course of independent study while an undergraduate student at John Brown University.

1. The author must have been a student in a psychology class at John Brown University at the time the paper was written. The paper must have been read and commented on by a John Brown University Psychology Department faculty member. Submission of research to IFPS is not limited to psychology majors but it is limited to students enrolled in psychology classes at John Brown University.

2. Manuscripts can not be submitted for publication in IFPS while they are being considered for publication anywhere else.

3. Manuscripts must be formatted in accordance with the manuscript style of the latest edition of the American Psychological Association (APA) Publication Manual. Manuscripts must be submitted electronically as an attachment in either Microsoft Word format or Rich Text Format. Use a 12 point readable font (such as Times New Roman).

4. In the submission e-mail, provide your school e-mail address and a more permanent summer or post-graduation e-mail address, if one is available.

5. The review process will be completed during the course of the next Fall semester by the students in the Advanced Research Seminar. The members of the ARS course will act as reviewers for all of the submitted manuscripts and there will be a student editorial board appointed by faculty. The reviewers will work in groups so that students’ submissions will not be reviewed by anyone in their group. The review process is likely to require the author to make some revisions over the course of the Fall semester. Revisions need to be made and re-submitted in a timely way in order to ensure full consideration for publication.

6. The IFPS will be made freely available online for use by Research Methods students in the following semester to be used for assignments in the course. It will be published on the Psychology Department website at ftp://acadweb.jbu.edu/psychology/IFPS/IFPS.htm in a format that can be openly accessed by employers, graduate schools, family and friends, etc.

7. E-mail submissions to Dr. Rick Froman at: rfroman@jbu.edu. Include the following statement in your e-mail message: “I, [your name] give permission to have the attached manuscript considered for publication in IFPS. I give permission to the journal (IFPS) to publish my work and sell it to university students at cost. I understand that I will retain the copyright and the right to submit my manuscript to any other publication I desire.”
The Influence of Music on Study Habits and Mood and Arousal

Suzie Piper

Testing the influence of calming music upon choice to listen to that music while studying was obtained through a 14-question, online survey administered to 79, randomly selected John Brown University students. The 29 participants, overall, listened to more calming music while studying and as a means by which to either change their mood or match their mood while studying. A t-test assuming equal variances was conducted on the Likert scale questions, and the results showed no significant differences between groups (male and female). In regards to within-group findings, the mean averages showed that females tended to either rate their music as calming or aggressive, while males were more ambiguous in their ratings of music as either calming or aggressive.

Music can influence many areas of our lives. One of the most studied ideas of music is the ‘Mozart Effect’. The Mozart Effect is the claim that people perform better on tests of spatial abilities after listening to music composed by Mozart (Thompson, et. al., 2001). One unique study of the Mozart Effect was conducted by William Forde Thompson, E. Glenn Schellenberg, and Gabriella Husain (2001), who studied the Mozart Effect in relationship to mood and arousal in three groups. One group was exposed to a pleasant piece of piano music which was supposed to put participants of that group in a positive mood. A second group was exposed to a melancholy or sad piece of instrumental music assumed to put participants of that group in a negative mood, and one group was left in silence. Thompson et. al. found a significant difference from pretest to posttest in the group exposed to the pleasant, positively arousing music, while the other groups showed no significant difference from pretest to posttest. The conclusion of their results led them to assume that participants’ performances from pretest to posttest were significantly different because of the level of arousal and mood. In correlation with the study conducted by Thompson and et. al., Robert H. Woody and Kimberly J. Burns conducted re-search where, during the course of the study, participants were asked why they chose the music to which they listened. The questions were asked in survey form, and the majority of participants replied with answers that related to mood, saying that they chose their music as a means by which to either change their present mood or to match their present mood (2001).

Based on my study of previous research, I decided to base my study on the idea that students will be more likely to listen to music while studying if they find the music positively arousing, based upon how calming or aggressive they rate their music. My definition and way for measuring whether music is positively arousing is: the more calming a participant rates his or her music, the more likely that participant will be to listen to that music while studying. I expect that students who rate their music as more calming will be more likely to

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listen to music while studying, and I also expect that females will listen to more calming music while studying than males.

**METHOD**

*Participants*

The data used for this study are taken from a random sample of students from John Brown University, a small, nondenominational, private school in Siloam Springs, Arkansas. The students were chosen randomly through the University emailing system. There were 79 randomly chosen students, and 29 of those students chose to participate. There were 16 male participants and 13 female participants. Students were asked to participate only if they were 18 years or older.

*Materials*

A random email list was acquired and used. Participants were asked to fill out a 14 question survey which consisted of multiple choice questions, open-ended questions, true/false questions, and Likert scale questions (see Appendix). Ratings of calmness or aggressiveness were measured on Likert scales such as the following: “Please rate the following on the scale below: how calming do you rate the music to which you listen?” There were similar questions for ratings of aggressiveness in music listened to in general and for ratings of calmness and aggressiveness of music listened to while studying.

Some true/false questions measured how frequently participants listened to music often in general, and other true/false questions measured whether participants listened to music studying. Open-ended questions were measurements of what type of music students listened to in general, how often music was listened to in general, and why participants chose either to listen to or not to listen to music while studying.

There were only two multiple choice questions, one of which asked participants with what kind of homework or schoolwork do they normally listen to music. The choices consisted of the following: a.) reading assignments; b.) worksheet or similar assignments; c.) writing assignments; d.) other; e.) none. The other multiple choice question asked participants to what kind of music do they listen while studying for classes, and the choices are as follows: a.) rock or rap music; b.) country music; c.) instrumental or piano music; d.) other.

*Procedure*

An email containing an informed consent section, a brief statement about the reason for sending the email, what was asked and expected of each recipient, and a link to the survey was sent to the randomly selected students. The online survey contained the questions, another section of informed consent, brief, clear instructions, and a thank-you to anyone who participated.

**RESULTS**

The sample was divided into two groups: male and female. A t-test assuming equal variances was conducted on the Likert style questions. Between groups, no significant results were found. In ratings of calming music listened to in general, there was no significant difference between groups, \( t(27) = 2.05, p = 0.24 \). Ratings of aggressive music listened to in general was also insignificant with, \( t(27) = 2.05, p = 0.16 \). There was no significant
difference between groups in how often participants listened to music while studying, \(t(27) = 2.05, p > .05\). When asked to rate how calming the music listened to while studying was, there was no significant difference between groups, \(t(25) = 2.06, p > .05\). In rating how aggressive their music was while studying, there was no significant difference between groups with, \(t(25) = 2.06, p > .05\).

In regards to within-group results for males, male participants tended to be more ambiguous with their answers on how calming (M = 4.38) and aggressive (M = 4.19) was the music to which they listened in general. When asked to rate how calming (M = 5.57) and aggressive (M = 3.14) was the music to which they listened while studying, males became less ambiguous in their ratings and began to rate the music to which they listened while studying as either calming or aggressive.

In regards to within-group results for females, female participants tended to rate the music to which they listened in general as either calming (M = 5) or aggressive (M = 3.15). When asked to rate how calming (M = 5.38) and aggressive (M = 2.46) was the music to which they listened while studying, females remained consistent in rating their music as either calming or aggressive.

When participants were asked to what kind of music do they normally listen in general and while studying, in an averaging of scores, the majority stated Contemporary Christian music or Christian worship music. The majority of males said that they listened to music while studying when doing worksheet or similar assignments or they did not listen to music at all. The majority of female participants said that they listened to music while studying either with worksheet or similar assignments or writing assignments. When answering the question of why they chose to listen to music while studying, the majority of both genders replied with answers pertaining to mood and how music helps to either change their mood or match their mood.

**DISCUSSION**

The in regards to differences between groups, there was no significant difference found in any of the statistical analyses. Overall, participants did tend to listen to more calming music while studying, but the difference was not significant. In addition, females did listen to more calming music while studying, but males also tended to listen to more calming music, and the difference between groups was not significant. However, some of these results could have been due to several things. First, the sample may not have been large enough, and it was not equal. Second, the survey questions may not have been relevant or valid enough for what was being tested. Third, not all participants answered all of the questions. There were two male participants who chose not to answer the questions for rating how calming and aggressive they found the music to which they listened while studying. Fourth, because I did not have control over how participants chose the music to which they listened while studying, there were most likely varied opinions or ideas about what type of music is calming or aggressive in regards to style of music and personal opinion.

When studying, it seems that individuals (in this study) of both sexes tend to listen to music which they found more calming. Most participants related their choice of music while studying to how it would affect their mood, either to change it or match it. These results were similar to the results found by Woody and Burns and Thompson et. al. Mood does seem to play a factor in how individuals choose their music (2001). However, since my study included a survey, it may not be applicable to all areas of the previous research which used
actual experiments. In addition, my definition for positive arousal may not be entirely applicable to previous research, but it is similar to the Thompson and et. al. study which used music supposed to create either good mood or negative mood as a means by which to determine levels of arousal (2001).

Further research should attempt to use a larger, more equal sample, and, if a survey is still used, the survey used in this study should be formatted for content and validity. Using actual experimentation would probably be best for maintaining some level of control over what style of music is heard while studying and for maintaining some level of control over positively arousing and negatively arousing music heard while studying. Any further research should focus on mood and how it affects what music is listened to while studying as well as its effect upon what is being studied.

REFERENCES
APPENDIX

This survey is part of a student research project being conducted this semester to study music influence. If you choose to participate in this study, your answers will be used, but all personal information will be kept strictly confidential. You may omit any item that you do not wish to answer, and you may stop participating at any point while filling out the questionnaire. Try to complete the survey in one sitting if at all possible. If you have any questions, you may contact me at: pipers@jbu.edu. Please return the completed survey by **April 13, 2005**. Thank you for your participation.

Circle one:

M / F

1. T / F I listen to music often

2. How of often do you listen to music?

3. I usually listen to:
   a. rock or rap music
   b. country music
   c. instrumental or piano music
   d. other

4. On a scale of one to five, how calming would you rate the music you listen to most?
   1 2 3 4 5

5. On a scale of one to five, how aggressive would you rate the music you listen to most?
   1 2 3 4 5

6. T / F When studying for classes, I listen to music

7. How often do you listen to music while studying?

________________________________________
8. With what class material do you usually listen to music?

a. reading assignments
b. worksheet or similar assignments
c. writing assignments
d. other
e. none

9. When studying for classes, I listen to:

a. rock or rap music
b. country music
c. instrumental or piano music
d. other

10. On a scale of one to five, how calming would you rate the music you listen to while studying?

1 2 3 4 5

11. On a scale of one to five, how aggressive would you rate the music you listen to while studying?

1 2 3 4 5

12. If you listen to music while studying, why do you like to listen to music while studying?

13. If you do not listen to music while studying, why do you not like to listen to music while studying?
Faith Maturity and the Spiritual Disciplines

Thomas V. Craft

This study is testing for a correlation between the spiritual disciplines and faith maturity. I expect that we will see a positive correlation between the spiritual disciplines, such as prayer, study, meditation, etc., and faith maturity. My partners in research were 27 randomly selected students of John Brown University who took the Faith Development Scale and a spiritual practices survey. It showed that the over all correlation between scores on the FDS and the incidence of the spiritual disciplines was insignificant. Although there was no correlation found between spiritual maturity and the spiritual disciplines, there were enough extraneous variables to account for the lack of significance.

At John Brown University, students are constantly being told that if we practice the Spiritual disciplines then we will continue in the maturation of our faith. It is in the books we are asked to read, it is in our Bibles, it is in the lectures and chapel services. We are constantly told this, but who has scientifically studied it? It is understood that religious practices don’t in and of themselves breed faith maturity. Only God can produce that within us. But, this is not an attempt to prove causation, but merely to show a correlation. Faith maturity by definition is the level of maturity that we possess in the faith realm of our lives. Spiritual Practices, on the other hand are those practices that we participate in, such as prayer, Scripture reading, etc, that are said to develop our Christian faith.

There actually has not been very much research on this topic. There have been two studies, that I have found that are relevant but are not studying this exact correlation. Michalec (2005) conducted a study to try and gain the ability to predict religious practices by determining the connection between attachment, religious faith development, and religious practices. Michalec concluded that having a “religious framework” moves an individual to conduct spiritual practices. Furthermore, Sanders (1998) conducted a study in which he tested how exploring one’s faith led to faith development. This study is particularly applicable to the current study because exploring one’s faith must in turn deal with at least some of the disciplines of that faith. His results showed that individuals who did explore their faith were more likely to be more mature than those who did not. From these results, I expect that we will see a positive correlation between the spiritual disciplines, such as prayer, study, meditation, etc., and faith maturity.
METHOD

Participants

My partners in research were a random selection of John Brown University students to me by my supervisor, Dr. Rick Froman. The only qualifying characteristic was that they were students at John Brown University, a four year Christian university. I received a list of 104 possible participants 27 of which participated.

Materials

The first survey, The Faith Development Scale (FDS) was originally designed by Gary Leak to measure the differences in faith development between entering freshmen and graduating senior college students but I thought it served my purpose well. It consists of eight dichotomous choice items and asks the participant to choose one or the other. The second part of the survey I designed and it merely asked for the regular incidence of Spiritual disciplines the participant took part in over a given period of time. The spiritual disciplines are the acts of participating in any of the following: meditation, prayer, fasting, Bible study, simplistic living, times of extended silence for reflection, selflessness, serving others, confession, going to church, seeking Christian guidance, and thankfulness toward God and others. The disciplines are taken from Richard J. Foster’s book “Celebration of Discipline”. A copy of both surveys can be seen at the following link: http://acadweb.jbu.edu/psy2393/Surveys/Old%20surveys/Craft.htm.

Procedure

I put the survey into web page format that participants filled out online. I then sent out an e-mail requesting that they participate in the survey and included the link in the e-mail. They went to the web page, filled out the survey, then clicked the submit button and in so doing they acknowledged consent. The results were then gathered and statistically analyzed for significant results.

RESULTS

The data was analyzed using a Pearson R correlation. It showed that the over all correlation, $r(25) = .096, p = .63$, between scores on the FDS and the incidence of the spiritual disciplines was insignificant (see Fig. 1). The results were then broken down to see if particular questions were correlated. It was found that there was a significant correlation between spiritual maturity as defined by having one’s own beliefs apart from the individual’s church teachings and thankfulness toward God, $r(25) = .46, p = .02$, Church attendance, $r(25) = .57, p < .05$, frequency of Bible study, $r(25) = .42, p = .03$, and frequency of daily prayer, $r(25) = .52, p < .05$. It was also found that that there was a significant correlation between spiritual maturity as defined by developing personal faith apart from what I was taught growing up and seeking guidance from others, $r(25) = .39, p = .04$, serving others, $r(25) = .41, p = .03$, Bible study, $r(25) = .39, p = .04$, and prayer, $r(25) = .42, p = .03$. 
DISCUSSION

In spite of the fact that I hypothesized that there would be a correlation between faith maturity and spiritual disciplines, I found none. Although I was drawing out two of Michalec’s (2005) variables, the correlation was not supported by itself. Neither did I support Sander’s (1998) research because the spiritual disciplines as an example of exploring one’s faith did not lead to faith maturity.

I did find some interesting correlations once I analyzed the correlation between the individual questions in each survey. When I did this I found that there was a significant correlation between spiritual maturity as defined by having one’s own beliefs apart from the individual’s church teachings and thankfulness to God, church attendance, frequency of Bible study, and daily prayer. I thought this was quite interesting because it seems the more you practiced the basic disciplines the more likely you are to form your own beliefs.

I also found a significant correlation between spiritual maturity as defined by developing personal faith apart from that of parents and seeking guidance from others, serving others, Bible study, and prayer. I thought that this was incredibly interesting for somewhat of the same reason, as one gets more involved in these disciplines you are more likely to develop your own beliefs apart from parents. The most conclusive things that my study did show then was that the more an individual prays and studies Scripture, the more likely they are to develop their own beliefs apart from both parents and church.

There were a few problems that I perceived in the study. First of all, I did not come up with a working definition of faith maturity before I began. Because of that, the FDS that I used was not particularly applicable to what I was studying. The FDS is more for studying faith development in general, and I was studying specifically Christian faith
development. This created problems in that the FDS valued breaking away and individualizing faith apart from tradition which in a Christian sense does not necessarily mean that one is maturing in their faith. For future research, I would use the passages in Scripture that specifically talk about spiritual maturity to first of all define it and second of all to come up with a survey that would test for it.

I also think that it would be important to see if there is a specific difference between the age and sex of participants and the spiritual practices that specifically helped them develop maturity. In the future this should be taken into account and age and sex should be a question in the survey for that purpose. In order to do this, a bigger sample size would definitely be needed in order to come up with significant correlations.

Although there was no correlation found between spiritual maturity and the spiritual disciplines, there were enough extraneous variables to account for that. This study was not conclusive and needs to be followed by more research emphasizing age/sex differences, specific Christian faith, and a spiritual maturity survey that reflects the definition Christians are given in the Bible.

REFERENCES
Financial Independence and Self-Confidence among College Students

Matthew Aspegren

This study investigates the relationship between the financial dependence of college students and their respective self-esteem. Takagishi and Curtis (1999) found that there was a positive correlation between people with a series of characteristics and their psychological functioning and well-beings. One of the characteristics in this study was financial independence. In this study the financial dependence of college students is correlated with self-esteem. Forty-nine students from John Brown University were asked to take an online survey concerning their financial dependence levels and self-esteem. There was no significant correlation found between the two, and, therefore, no support to the hypothesis that there would be a negative relationship between financial dependence and self-esteem among college students.

The idea of the American college student cannot be stereotyped. Some students work full time to support themselves through school, while others do not see employment, or a bill, until after graduation. The relative level of familial dependence defines the learning curve of life for many American college students. A slower learning curve usually means less responsibility and fewer significant life experiences, while the quicker one brings reality sooner than possibly expected.

Research by Takagishi and Curtis (1999) found a correlation between the well-being and psychological functioning of young adults and a multitude of characteristics. Within this particular study there were six factors considered and found to have a positive correlation with well-being and psychological functioning. One of the characteristics of the college students being studied was financial independence from their families.

The study described above showed a correlation between financial independence and well-being and psychological functioning, but not without a considerable amount of other factors. This study attempts to find positive correlation between financial independence and self-confidence where other variables are limited. I hypothesize that this study will find a positive correlation between the self-esteem of college students and their relative levels of financial independence.

My name is Matt Aspegren and I am a student at John Brown University in the Department of Psychology in Siloam Springs, AR. I can be reached by email at aspegrenm@jbu.edu. I would like to thank the Department of Psychology and Rick Froman at John Brown University for the support for this research.
METHOD

Participants
The data used for this study are taken from a random sample of over 1,000 students attending John Brown University in the spring of 2006. Both males and females of all classifications were surveyed. The survey was taken by those who were randomly selected to receive, and chose to participate in, the survey. Those who participated were split almost evenly male and female, with ages ranging from 18-23. Financial demographics were not questioned, only to what extent students were financially supported. No extra credit, monetary, or other reward was given to those who completed the survey. A power analysis showed that for this study to show significant results (significance level .05) with a desired power level of .8 and a correlation coefficient under that alternative hypothesis of .4 there must be at least 48 participants. Random E-mails were sent out to 100 John Brown University students and 49 students responded.

Materials
Participants received access to a self-developed online survey (see Appendix). A list of random e-mail addresses of John Brown University students was used to send 200 of its students a link to the survey and its instructions.

This survey asked two series of questions to participants on self-esteem and financial dependence levels respectively. The first part of the survey, focusing on self-esteem, asked questions about what participants think about themselves, how they would react in certain situations, and how they interact with other people in relation to their opinions and their perspectives of others’. The questions on financial independence asked the participants how much of their accumulative college expenses are provided for by their families and how much is paid for by some other personal contact.

Procedure
Surveys were offered online. Surveys instructed participants to answer all the questions as honestly as they could. To avoid response sets, questions were not consistently worded positively or negatively and there were multiple possible arrangements of questions that participants could receive.

Initially the randomly selected participants received a link to the survey as well as preliminary information about the survey. Participants were not told the hypothesis of the research because this could affect their answers. On the online survey, the participants pressing the submit button agreed with the confidentiality of the survey. The surveys were submitted anonymously and the participants were informed that they could stop at any time or skip any questions they did not feel comfortable answering.

RESULTS
A series of correlations were done to see if self-esteem levels and financial dependence corresponded in any way. The first correlation done was that of the self-esteem of the entire sample and their family financial support. There was no significant correlation found, \( r=.035, p>.05 \). There was also no significant correlation found for the self-esteem of the entire sample and other sources of financial dependence (\( r=-.036 \) or
Financial Independence and Self-confidence

self-esteem and total financial dependence, \( r = 0.002, \ p > 0.05 \). There was no significant correlation found between age and self-esteem, class and self-esteem, or sex and self-esteem. The correlation between family given financial support and self-esteem among males was found to be .213. The correlation between family given support and self-esteem among females was -.116. These were not found to be significant. A correlation between familial financial support and self-esteem was done for each class and no significant affect was found: Freshman \( r = 0.123 \), Sophomore \( r = 0.106 \), Junior \( r = 0.130 \), Senior \( r = 0.152 \). A negative correlation of -.881 was found between the average scores in self-esteem and the average scores of familial financial dependence by class.

DISCUSSION

The -.881 correlation found between the averages of self-esteem and the averages of financial support seem to support this study’s hypothesis, but when the average self-esteem numbers are looked at, it is found that these results do not mean much. The four self-esteem averages are all within one standard deviation of each other and do not stray from the mean by more than 1.13 points on a scale with a standard deviation of 2.52. The small differences in self-esteem averages happen to switch sides of the mean at the same times that, and in the opposite direction than, average familial support does relative to class. This and the insignificant results of each class’s self-esteem/financial dependence correlation support the nullification of the original hypothesis. The study resulted in no significant support of the original hypothesis.

However, with a few assumptions made, the insignificance of this result may lead to something significant. If we assume that generally those with higher self-esteem are more likely to be successful, and that success is at least partly a function of financial progress, then this study may support the idea that financial support during college is not a major contributing factor in financial successes later in life. This refutes the idea often toted by politicians that the poor stay poor, while the wealthy only get wealthier, and consequently evens the playing field among those in school.

Furthermore, a study by Rosenberg and Pearlin (cited in Wiltfang, 1990) found a negative correlation between neighborhoods with high unemployment rates and adolescent self-esteem. If we assume that those not supported by their families are more likely to come from neighborhoods with high unemployment rates (and likely lower income levels), and there is not any significant difference between financial support and self-esteem of the students of John Brown University, we can assume that an environment of education raises the self-esteem level of people formerly living in those neighborhoods. The support of the null hypothesis in this study further supports the helpfulness of education for America’s youth; especially those coming from low income areas. There is no proof that the students not supported by family in this study are from areas of little income, but logic would follow that they generally come from areas of littler income than those who receive more financial support.

Future research should focus on the self-eesteems of those in low income neighborhoods, and if those who go to four year institutions have a significant increase in self-esteem and if those who stay in those neighborhoods do not. Future research should also address the validity of the idea that self-esteem precedes success, and if that success is financial. Longitudinal study of adolescents through college age and into financial dependence is suggested for future study as well. The success of people is
dependent on a number of characteristics, but the longitudinal study of success and self-esteem should be considered.

This study has not supported the hypothesis it set out to support, but its results should be helpful to future studies in the financial capabilities of the American college student. Often considered the future of this country, if college students are not studied to see what makes them successful, how else can we (as a society) attempt to understand, predict and support the success of this country’s future?

REFERENCES

Financial Independence and Self-confidence

APPENDIX

1. When you make a mistake do you tend to…
   a. Feel ashamed and embarrassed.
   b. Who me? I never make mistakes. But if I did make one, I would immediately correct it and hope no one was watching.
   c. I have no fear owning up to it in public, and I am open to receiving help from others in fixing it.

2. On average, when you look at yourself in the mirror what do you believe you see?
   a. Someone who is attractive and confident.
   b. Someone who is average and often unsure about what to do in life.
   c. Someone who is ugly and insecure.

3. When you are dealing with a problem in your life what do you tend to do?
   a. Blame everyone or anything that I think caused the situation. It’s rarely my fault.
   b. I complain and vent to anyone willing to listen but rarely address my personal responsibility for the issue.
   c. Take responsibility for my thoughts, words, and actions because if I take ownership I am not a victim to the situation.

4. If my wants and needs are different from those of others I am likely to…
   a. Give up and give in. I'd accommodate.
   b. Say, "My way or the highway!" I argue until I get my way
   c. Create a win/win

5. When you think about the greater purpose of your life what do you tend to think?
   a. I feel like I am drifting. I am ashamed to admit it but I don't know what I should be doing or even where to start.
   b. I have a general picture of what I want to do and what I am capable of creating for my life.
   c. I am on course with my purpose, and know I am capable of creating whatever my heart desires for my life.

6. When I make a commitment to myself I often tend to…
   a. Break it before the end of the hour, I am terrible at following up on my self-goals
   b. I do it with hesitation and fear because I so desperately hate disappointment
   c. Stick to it with conviction and await the rewards that I believe will come from it.

7. When you talk to yourself (you know, that little voice in your head) what does it tend to sound like?
a. Very critical and negative. I often put myself down and beat myself up emotionally

b. Fairly confident and supportive, but I still have those days when my self-talk holds back my true greatness

c. Extremely confident and helpful. I have learned to become my own best friend and weed out my limiting thoughts from the empowering ones.

8. How do you often react to what other people say about you?

a. I take things personally, and if I think someone is saying something negative about me I take it too much to heart

b. I get defensive and often respond with an equal, if not greater, negative reaction to them.

c. I value what others have to say about me -- but honestly -- I know who I am, and other peoples' opinions have no bearing on my self-worth

9. How easy is it for you to make eye contact?

a. Extremely easy and effortless

b. Awkward and uncomfortable

c. Extremely difficult and painful.

10. What percentage of your college tuition and room and board is paid for by your family, or another personal connection (non-scholarship, non-loan(circle a range))?

0-10  10-20  20-30  30-40  40-50  50-60  60-70  70-80  80-90  90-100

11. What percentage of other expenses and spending money is provided for by your family or another personal connection (circle a range)?

0-10  10-20  20-30  30-40  40-50  50-60  60-70  70-80  80-90  90-100
The Correlation between Exercising and Self-Esteem

Jenny Carolina Castro

The purpose of this research paper is to find out if there is a connection and relationship between self-esteem and exercising because previous research has shown that there is. Therefore, the hypothesis of this study is that there will be a correlation between exercise and good self-esteem. The sample was composed of student and faculty from John Brown University, and a survey was sent to them via email. The results remained anonymous. The results showed that there is a high positive correlation between self-esteem and exercising. The hypothesis proved to be true, and it also proves previous research.

As the years have passed, there has been much more interest in exercising and athletics. As we can see around us, there have been more establishments of gymnasiums and fitness centers. The reasons this is a good business is because people are more and more interested in exercising. Therefore, researchers have also been very interested in researching why people exercise. Also, many researchers have tried to find if there is a relationship between exercising and self-esteem. They want to know if exercising brings good self esteem for the ones who exercise.

There has been very much research in the area of self-esteem. As we all know self-esteem is a very important area in the lives of all people, and it is much related to their psychological well being. Researchers say that self-esteem is very important for a successful life, and that it is a central aspect of psychological being (McAuley, 2005). One area in which many researchers have devoted their time is in the area of exercising. For quite some time, people have wondered if exercising has any effect at all in self-esteem. For example, researchers have investigated what self-esteem does to positive behavior, and research has shown that it does have a positive influence on self-esteem. Researchers have done various studies in this topic, and the results they have found affirm that exercise does increase self-esteem (Bun Kim, 2004).

Research also has shown that exercise has a positive outlook in individual well-being, especially in that it increases body esteem and self-esteem (Strelan, 2003). However, some researchers have concluded that some people, especially women, do not experience well-being when they exercise. The reason is because of the types of reasons and motives that they have for exercising. They usually do it because they want to look more attractive and for weight control. However, exercising for these reasons has been linked to body dissatisfaction and disturbed eating (Strelan, 2003).

In order to verify a theory, it is very important to do several research studies in the same or similar topics. This is why the main point of the present study is to determine if in fact exercise does affect self-esteem. The point of this study is to answer
questions that people have about this topic. More specifically, to verify if exercising does influence self-esteem.

The hypothesis of this study is that there is a correlation exercising and good self-esteem. The independent variable in this case will be exercising, and the dependent variable will be the level of self-esteem of the people. The assumption in this research is that the studies will show and verify that exercise increases self-esteem, confidence and psychological well-being.

**METHOD**

**Participants**

My participants were students and faculty from John Brown University in the Fall 2005 semester. The sample was randomly chosen by the computer, and it was given to me by my research methods class professor. The survey was sent to about 100 participants.

**Materials**

A 10-question survey was designed by the researcher to assess the relationship and effect of exercise and self-esteem. This 10-question includes questions to determine the quantity and the reasons of people’s exercising patterns. Also, it contains many questions about the people’s opinion of their own self-esteem. Some questions were open-ended with the purpose of providing a ratio data. Others were not open-ended, and most of them were interval. The survey is sent via-email and posted in a website and it can be viewed at: [http://acadweb.jbu.edu/psy2393/Surveys/Old%20surveys/castro.htm](http://acadweb.jbu.edu/psy2393/Surveys/Old%20surveys/castro.htm).

**Procedure**

The survey was sent via e-mail. The results were kept anonymous since the survey was posted in a website. The participants were asked to quickly fill out the survey found in the website, and then submit it.

**RESULTS**

In the study sample (N=46), there was an overall positive correlation of 0.43752. A Pearson R correlation showed that the results are significant, therefore is a relationship between exercises and self-esteem, r(44)=.44, p=.002.

Also, the results showed that there is a slightly negative correlation between how people view their self-esteem and exercising for pleasure. The results show that there is negative correlation, r (44)=.02, p=.89. Also, there is a similar result between how people view their self-esteem and exercising for weight loss. The results show that there is a correlation, r (44)=.02, p=.89. However, there is a slight positive correlation between how people view their self-esteem and exercising for body toning, r (44)=.02, p=.89. However, the p-value shows that there is not a significant statistical result in this. Also, there is a positive correlation between how much people exercise and how transparent in their relationships they are. However, it is a slight correlation, and the p-value shows that the results are not significant, r (44)=.07, p=.64 and the p-value shows that the results are not significant.
Exercising and Self-esteem

DISCUSSION

Researchers have been very interested in whether there is a relationship between self-esteem and exercising. As we all know, self-esteem is a very important area of all people’s lives because it is related to a person’s overall well-being. Research has indicated that there is a positive influence of exercising in self-esteem.

In this research, the results showed that there is a positive correlation between exercising and self-esteem. Therefore, there is a very close connection and relationship between the two. Therefore, the results are compatible with previous research. Previous research points out that there is a correlation between exercising and self-esteem. Therefore, this research once again confirms previous research.

The hypothesis proved to be true. This shows that it is very accurate that there is a strong connection between the two. However, there can always be some alternative explanations for the results. For example, it could be that the participants had good self-esteem because of other reasons. It could be that their character is already a very confident and satisfied personality. Also, it could be that they find their security in their relationship with Jesus Christ. It can also be that they find their good self-image in their parents’ acceptance or in very much success in their life.

Also, a person could have low self-esteem because of any kind of abuse at their home or work, even if they exercise. Or it could be that they have melancholic personalities. However, the results do show that there is a high correlation between people who exercise and people who have a good self-esteem. Therefore, people who usually have a good self-esteem also exercise, or exercise helps them to have a positive outlook on themselves. The results do show, though, that there are connections between the two.

The next step in researching these questions about the correlation between exercising and self-esteem is to research if exercising programs would impact the society in a way that people will be more confident, and therefore more successful and mentally and emotionally healthful. Researching if exercising programs would be beneficial in these ways can be very useful to the society as a whole.

REFERENCES

I hypothesized that there would be a difference between perceived relationship health and level of commitment. One hundred and four John Brown University students were randomly selected from the JBU population, and were asked to participate in this study by filling out a survey. The return rate was 37 participants. There was a significant difference between the perceived healthiness in the most and least committed relationships, \( t(35) = -2.41, p = 0.02 \). Therefore, based on previous research, since students are more likely to report that their most committed relationships are healthier than their least committed relationships, it is possible that even in unhealthy, highly committed relationships, that people perceive those relationships as healthy.

There are multiple examples of people living in relationships to which they will stay loyal regardless of the situation. One example is of a young girl who stays with her boyfriend even if he degrades her. This unhealthy relationship is only one example of what people will sometimes endure—for the sake of what? Clearly, the relationship does more harm than help, so why would someone stay in this type of harmful relationship? There are various explanations of this, but one possibility might be the measure of commitment some people feel they must keep in their relationships.

An example of unhealthy relationship denial is exemplified in a study of stress levels in home-care workers. The workers indicated the presence of denial when asked about their work-related relationships. While they initially claimed not to have much stress, they revealed significant stress in an interview (Ellen, Gillery, & Sturges, 1989). In fact, the home-care workers’ relationships with their clients were the source of most of their satisfaction, as well as most of their stress. Although their relationships with their clients caused unhealthy stress levels, the home-care workers denied that these relationships caused them as much stress as it did. This finding offers reason to believe that even in unhealthy relationships, people may view that relationship as healthy.

A 2001 study examined college students’ romantic relationships and observed the role of commitment in the extent of the time the couple stayed together. Based on the evaluation of his results, Oner argues that a person’s commitment to a relationship might explain the fact that he or she did not want to end a romantic relationship, even if it was a negative one (Oner, 2001). Therefore, these findings provide supporting evidence that there are people who do not want to end relationships, and so they will stay in those relationships, even if they might be unhealthy ones.

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Even in work situations, when there is a perceived healthiness, then there tends to be a higher commitment. In a study about organizational health and commitment, the perceived organizational health correlated with the organizational commitment (Patel, 1998). In other words, when a person viewed their organization as healthy, then they were also likely to be more committed to that organization.

What characteristic do these relationships have in common? Perhaps the most significant factor in these examples is that the participants view their relationship, or job, as a healthy one, and they want to stay committed to it. Even though people in the social-work realm are likely to experience much emotional drain, their dedication to their clients is crucial if they stay in their occupation for long. Therefore, even if it is by choice, or by obligation, commitment may be correlated with the perception of the healthiness in a relationship. Based on the evidence of this previous research, I expect to find in this study that there is a difference between perceived relationship health and level of commitment. That is, as commitment to a relationship increases, an individual’s perception of the healthiness of that relationship will also increase.

METHOD

Participants
One hundred and four John Brown University students were randomly sampled from all of the undergraduate students who attend John Brown University. Participants, younger than 18, were asked in the informed consent not to complete the survey. I expected the return rate to be about half of those sent out: 52 students. Although there were 38 returned surveys, 2 of the survey results were deleted. The first one was deleted because the female who filled it out did not complete it the first time. The second one was deleted because one of the females who answered the questions pertaining to her least committed relationship was not in that type of relationship. Therefore, for the purposes of this study, only 36 of the 38 surveys were used. The students consisted of 10 males and 26 females, with ages ranging from 18-31, and an average age of 20 years old. The mode of the ages was 21.

Materials
An e-mail requested the students to take an online survey, which consisted of 22 questions on one web page. The content of the survey was from a combination of multiple internet websites that had various people’s opinions on what healthy and unhealthy relationships look like. On most of the websites, the writers of the websites had lists of unhealthy relationships, so that people in potentially destructive relationships could recognize those unhealthy patterns. Not all of the items from these websites were used to determine an unhealthy relationship in this study. However, the statements about unhealthy relationships that frequently occurred on multiple pages were used as a basis for this study’s definition of unhealthy relationships. Questions were then developed on the basis of those statements. For example, the website statement might be something like: In unhealthy relationships, you feel trapped. As a result, the question would become: I almost feel trapped in these relationships. The survey is included in the appendix.

The online survey was anonymous, which means that students who decided to take the survey did not have any recorded information about themselves in the results.
section, except for the questions they chose to answer in the survey. The first part of the web page included the informed consent form, then two generic questions, relating to how old and what sex the participant was. The second set of questions asked the participants to answer questions on the healthiness/unhealthiness of their most committed relationships, and the last set of questions asked the participants to answer questions on the healthiness/unhealthiness of their least commitment relationships. Both of these sections of questions had the same questions, with two basic questions which were used in the analysis of the results. The first question was about the healthiness of the participants’ most and least committed relationships. The statement, “Despite the troubles I go through in these relationships, they are overall healthy,” was measured on a Likert scale (1= more true than false, 7=more false than true). A similar question was one pertaining to the unhealthiness of the participants’ relationships. The measure of this question was on a Liker scale as well, with 1= more true than false, and 7= more false than true, and the statement was “I view these relationships as overall unhealthy.” The survey can be viewed at: [http://acadweb.jbu.edu/psy2393/Surveys/Old%20surveys/goddard.htm](http://acadweb.jbu.edu/psy2393/Surveys/Old%20surveys/goddard.htm).

Procedure
The 104 randomly sampled John Brown University students were sent an e-mail requesting them to take an online survey, with the website to the survey attached to the e-mail. After clicking on the link, the volunteer participants could read the informed consent and choose to continue or to leave the webpage. If they chose to continue, they could answer the following 32 questions then click the “Submit” button after they completed the survey to contribute to the study. The answers from this web page recorded automatically into a data file.

RESULTS
The difference between the perceived healthiness in the most and least committed relationships was statistically significant, \( t(35) = -2.41, p= 0.02 \) (see Fig. 1). The mean for the most committed relationship was 1.75, and the mean for the least committed relationship was 2.58. However, the difference between the perceived healthiness in the most and least committed relationships was not statistically significant, \( t(35) = 0.77, p= 0.44 \) (see Fig. 2). In this case, the mean for the most committed relationship was 5.97, and the mean for the least committed relationship was 5.63. There was no significant correlation between the perception of the healthiness of the most and least committed relationships, \( r(34) = -0.02, p>0.05 \). Furthermore, there was no significant correlation between the most and least committed relationships perceived unhealthiness, \( r(34) = 0.21, p>0.05 \). In the most committed relationships, there was a significant correlation between the students’ perception of healthiness of the relationship and which person received the most blame, \( r(34) = -0.54, p<.01 \) (see Fig. 3). Approximately 64% of the students answered that their most committed relationship was their immediate family, approximately 22% of the students answered that their most committed relationship was their romantic relationships, and about 8% of the participants answered that their most committed relationship was their friends. Furthermore, on the most committed relationship, 78% of the students said that they were committed “lifelong,” “forever,”
“until death,” “until I die,” “rest of my life,” etc, and about 6% of students said that they were committed 50 years or more.

**Figure 1.** Difference between perceived health in most and least committed relationships

**Figure 2.** Difference between perceived unhealthiness in most and least committed relationships
DISCUSSION

The hypothesis was supported that as the students’ perceived healthiness in a relationship increased, the level of commitment to that relationship increased. In agreement with the statement, “Despite the troubles I go through in these relationships, they are overall healthy,” the mean for the committed relationships was closer to “more true than false” than was the mean for the least committed relationships. There are a few explanations for these results. One explanation is that adults are more likely to be committed to a relationship if it is a healthier one. In accordance with the previous research, perceiving one’s most committed relationships as healthier than one’s least committed relationships could be part of a coping method in which people view their most committed relationships as the healthiest, in order to reduce the stress they may feel in these relationships.

The verse “Do nothing out of selfish ambition or vain conceit, but in humility consider others better than yourselves” (Philippians 2:3, NIV) is partially the basis of contemporary Christians believing that they should prioritize others above themselves. Since there is a high likelihood that most students at John Brown University are Christians, it is also likely that the students who filled out this survey had a belief that a higher emphasis on the other person in relationships is representative of a healthier relationship. One of the results pertaining to this idea was a significant positive correlation between the participants’ perception of relationship healthiness and which person received the most blame. According to the results, in the most committed relationships, the more the participant received the blame, the more they rated that relationship as healthy. In other words, the less they rated that relationship as healthy, the less the participant reported receiving the blame. The students could have answered these questions in accordance with their belief that a higher emphasis on the other person signifies a healthier relationship. They could have answered these questions truthfully.
with what they had incorporated into their lives, yet they also could have answered these questions with how they thought it would be best to answer. Therefore, in a way, they might have elevated the other person above themselves by lowering themselves in this relationship, and receiving more of the blame. Also, the students may have been more willing to receive the blame, and, thus, reported that they did receive more of the blame. Since this survey was only one-sided, in surveying only one of the two people in the relationship, there is no evidence that the other person is not also willing to take more of the blame.

There was no significant correlation between the most and least committed relationships and the participants’ perception of the healthiness and unhealthiness of these relationships. When students thought their most committed relationships were more healthy than unhealthy, they usually thought that their least committed relationships were more healthy than unhealthy. Overall, this sample of students reported their most and least committed relationships as healthy. There are three main possible explanations for the result that most students answered that all of their relationships were relatively healthy. One is that the students were in more healthy than non-healthy relationships; the second is that the students were reporting different answers than the ones they actually perceived, for the purposes of the survey; and the third is that some of the students were in denial of the unhealthiness of the relationship and, therefore, reported their relationships as more healthy than not healthy.

Although questions specifically pertaining to the healthiness of relationships were directly consistent with the perceived healthiness in those relationships, there was a contrast between the perceived healthiness and the perceived unhealthiness in the most and least committed relationships. Even though the perception of healthiness in the most and least committed relationships was significant, the perception of unhealthiness in most and least committed relationships was not significant. One reason for this contrast could be that because the word “unhealthy” has a negative connotation. The statement which asks about the unhealthiness of the relationship is, therefore, a stronger statement than the one which asks about the healthiness of the relationship. However, the phrasing of the question, which pertains to the measure of healthiness, offers a less threatening proposition: “Despite the troubles I go through in these relationships, they are overall healthy.” In contrast, the phrasing of the unhealthiness question is more of an absolutistic statement, “I view these relationships as overall unhealthy,” which could lead the participants who answered that their most and least committed relationships were overall healthy to state that these relationships were less unhealthy than they would have if the question was stated differently. Furthermore, the word “unhealthy” has more negative connotations than the word “healthy” does, and its use in the survey could cause participants to answer more negatively to the unhealthy question and more positively to the healthy question.

One limitation of this study is that the survey did not incorporate any official questionnaire or any nationally recognized scale of healthiness and unhealthiness in relationships. The questions might have directed the participants towards answering the questions according to what the hypothesis was. Also, the sample size was relatively small, with only 36 participants. Lastly, the sample might not be representative of the population, since the sample consisted of 36 undergraduate students at a private, inter-denominational university in Northwest Arkansas.
Replication of this study in a different environmental setting may provide a more accurate representation of the population. In comparison to a large public university, John Brown University is a relatively small, private, Christian school, and the 36 participants in this survey were all undergraduates. Interviewing and surveying different age groups is a possibility for future research. It would be interesting to discover if this same statistic is consistent when studying adults who have graduated from college, or with children who still live at home. Would children who still live with their immediate family perceive their family as healthier? Furthermore, future research could study the difference in the perceived value of the other person’s opinions and views in comparison to the participants’ opinions and views, in both the most and least committed relationships. Other studies about correlates of commitment in relationships would also add to the psychological research archive. Furthermore, future research could specifically study those in unhealthy relationships, to see if their level of commitment is correlated with their perception of the relationship.

Since many of the people who participated in this study reported all of their relationships as overall healthy, there might not be a relationship between those in unhealthy relationships and their perception of health in the relationship. Even though the perception of healthiness in the most committed relationships was significantly different than the perception of healthiness in the least committed relationships, it could mean that the participants in this sample were in more healthy relationships than the people in the general population. However, it could also mean that some of the participants who answered that these relationships were healthy were in denial of the unhealthiness in these relationships. Furthermore, it could mean that they were more likely to answer that their relationships were healthy, even if they did not think the relationships were as healthy as they reported them. To discover more definite answers to these questions, researchers need to do more research in the area of perceptions in relationships.

REFERENCES