

Initial Forays into Psychological Science

John Brown University

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John Brown University

Volume 1, 2005

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Editor's Corner

The publication of the inaugural volume of this journal marks the beginning of new educational opportunities for students taking Psychology classes at John Brown University. *Initial Forays into Psychological Science* (IFPS) is designed with a number of purposes in mind. First, it is designed to encourage the highest level of scholarship in the Research Methods and other undergraduate classes at JBU by rewarding excellence in scholarship with publication. Second, it is designed to provide students in the Advanced Research Seminar class with an opportunity to have real life experience in the peer review process that characterizes the publication process of an academic journal. Third, it is designed to encourage a culture of scholarship in the Psychology Department at JBU and get students excited about doing research. Fourth, it is designed to provide guidance to new students in Research Methods, allowing them to build on the example of the previous year's class.

Even at this point, before publication of the first issue, it is clear that at least the first three purposes have already been achieved. The work done by students in last year's Research Methods classes in anticipation of the possibility of publication was excellent. I am sure this will only increase in future years as the reality of publication is realized. The peer review work of the students in the Advanced Research Seminar work exceeded all expectations. They brought a level of professionalism and integrity to their work that only strengthened my belief in this project. I also believe that a culture of scholarship is growing in the department and research is starting to be seen as something everyone can do and something that can be interesting and challenging. I hope that the fourth purpose will be met this semester as students in Research Methods use it in their assignments for the first time. I know that what they learn from using the journal in class this year will carry over to improvements they will make when they are in charge of producing the journal next year.

Richard Froman, Managing Editor of IFPS



The members of the Peer review board for the inaugural issue of IFPS. Seated (l to r): Christy Eye, Erika Elijah, Robin Jones, Nicole Giroux and Katie Kruit. Standing (l to r): Kristen Delaney, Sarah Baack, Laura Wollman, Dawn Spragg, Heidi Propst, Michelle Godinez, Un-So Park and Victoria McCracken. Not pictured: Sara Daugherty.

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 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.
4. 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).
5. 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.
6. The review process will be completed during the course of the next academic semester by the students in the Advanced Research Seminar course. Dr. Froman will act as editor and the members of the ARS course will act as reviewers for all of the submitted manuscripts. 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.
7. The IFPS will be sold at cost to Research Methods students in the following semester to be used as a required text in the course. It will also be published on the Psychology Department website in a format that can be openly accessed by employers, graduate schools, family and friends, etc.
8. 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 Prevalence of Alcohol Related Arrests during Months of the Year in Siloam Springs, Arkansas

Laura Wollman

The present study investigated the relationship between alcohol related arrests and different months of the year. Past studies showed that heavy drinking occurred during the winter months and that increased drinking lead to increased arrest rates. This study hypothesized that they would be more arrests during the winter months. A database at the Siloam Springs Police Department gave the number of people arrested each month for either Driving While Intoxicated or Public Intoxication from January 1994 to December 2003. There were 2202 samples. One-way ANOVA found no main effect for arrest rates and different months of the year. Future research in this area should include a larger sample size and, possibly, a larger geographic area.

Does Seasonal Affective Disorder, the freedom of summer vacation, or perhaps alcohol consumption at holiday parties affect the number of alcohol related arrests? There may be a definite correlation between different times of the year and the cases of these arrests.

Several articles state that there seems to be a correlation between alcohol consumption and different times of year. Carpenter (2003) cites a previously docu-

mented “January effect” in which people of all racial groups report greater drinking behavior in January than other months. His study found that self-reports of drinking were highest in January for whites and blacks, but highest in June for Hispanics. Also, Greenfield and Kerr (2003) mentioned that it is difficult to track overall alcohol consumption patterns of U.S. citizens because heavy beer consumption in the summers and liquor consumption in the winters may distort findings.

An experimental study done by Bormann & Stone (2001) on the results of eliminating alcohol sales at football games at University of Colorado showed a decrease in the number of arrests after the beer ban. Another study stated that instances of drinking and driving and public intoxication are two of the major problems associated with alcohol consumption (Room 1998).

Since there have been no studies that have dealt directly with the prevalence of alcohol related arrests and time of year, one can only make assessments and connections based on other research. Since there have been documented studies of increased alcohol intake during winter months (Carpenter, 2003 & Greenfield & Kerr 2003) and alcohol consumption correlates directly with arrest rates (Bormann & Stone 2001 & Room 1998), one can surmise that the winter months, when the most drinking occurs, would be the time when the most alcohol related arrests would occur.

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METHOD

Participants

Participants included adults arrested for alcohol-related crimes from January 1994 to December 2003 in Siloam Springs, Arkansas. There were a total of 2202 samples. Sex and race were not differentiated, as the nature of this study does not require it. Participants were chosen because they were arrested for either public intoxication or driving while intoxicated during the previously mentioned dates.

Materials

Information was gathered using the IBM AS400 database at the Siloam Springs Police Department. This data base contains records of every person arrested (including their demographic information) and for what reason, during the past ten years.

Procedure

Printouts from the computer simply gave the number of people arrested each month from January 1994 to December 2003 for either public intoxication or driving while intoxicated. The number of people arrested was correlated with the month of the year on an excel spreadsheet in an attempt to find a significant correlation.

RESULTS

A One-Way ANOVA was performed to determine significant effects between alcohol related arrests and individual months of the year. Data analysis revealed no significant relationship between seasons and arrest rates ($F(11,108) = 1.25, p = 0.26$). Separate analyses were run using one-way ANOVAs for Public Intoxication and Driving While Intoxicated. No significant effect was found for DWIs ($F < 1, p = 0.64$) and a marginal effect was found for Public Intoxication ($F(11,108) = 1.69, p = 0.08$).

DISCUSSION

No documented studies involving the subject matter at hand was attainable, so this study was essentially breaking new ground. This study did not contradict research regarding the relationship between alcohol consumption and time of year, however, the incidents of arrests do not correlate with the previously established data on alcohol. There were no significant findings in this study. Therefore, the hypothesis that the winter months would be when the most alcohol related arrests would occur was not supported by this study. One explanation for this could be the limited amount of data available. The Siloam Springs police department developed their database in 1993, therefore, only 10 years of information was available. At least twenty years should be examined if one were to try and find a significant effect. Another, more obvious, reason for the marginal significance of public intoxication arrests may be because people are simply less likely to be out in colder weather even though they may, in fact, be drinking more.

In the future, a study that includes research for twenty years or more may be able to provide more significant results. Also, data collected for a larger geographic area, such as an entire region, may also provide more significant results.

In conclusion, it is important to note that these results do not mean that one should negate the idea of being a cautious driver during the winter months, as it still seems to be a time of heavy drinking. Drivers should always be cautious and defensive when on the road.

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Alcohol Review, 17, 389-399.

Note: I would like to thank Gwen Suber and the Siloam Springs Police Department for their willingness to help me and their generosity with their equipment. I would also like to thank Dr. Rick Froman for his generosity with his time and concern for all his students' success, not just mine. I would also like to thank my husband Drew for the idea for a study like this in the first place.

Don't forget to look into opportunities to be involved with the Psych Club at JBU. They have special events and sometimes sponsor informational chats (about grad school and other things) and it's a great place to meet other people who have similar interests (who might even come in handy when you are studying for that neuroscience test). Contact Sarah Baack, Maria Ballestas, Jessi Heatherly, Robin Jones, Christine Rowley or Robert Conde for more info on Psych Club.

The Relationship Between Self-esteem and Emotional Stability

Nicole M. Giroux

The present study explored the correlation between self-esteem and emotional stability in individuals. Twenty undergraduate students (10 men, 10 women) completed a two-page, 16-question survey, which consisted of a quick description of instructions, 10 questions that were designed to measure a person's self-esteem and six questions that were designed to measure a person's emotional stability. Unlike Hay and Ashman's (2003), the results revealed that there was not a significant correlation or relationship found between self-esteem and emotional stability. Although the correlation was not significantly different from zero, the correlation was negative. The insignificant results may be due to an inadequate sample.

What possible connections could self-esteem and emotional stability have? Self-esteem is someone's personal view of their own self worth and how they measure up to others. Emotional stability is someone's level of how well they deal with conflict, issues and problems they might face that would stir up feelings. Both of these personality traits assess one's own mental state and view of different situations.

"Self-esteem is a self-evaluation reflecting the extent to which individuals believe

themselves to be capable, significant, successful and worthy." (Newstrom, Gardner, and Pierce, 2004). Newstrom, Gardner and Pierce studied the effects of people on others self-esteem in the work environment and found that employees with high self-esteem will better help the company in today's workplace. Also, Tolpin, Gunthert, Cohen and O'Neill (2004) found less day-to-day carryover of negative mood and self-esteem. From this study, the authors could conclude that the less stress that one encounters, the higher their self-esteem may be. General self-concept and emotional stability have been found to increase together as a result of relationships between peers more than between children and their parents (Hay and Ashman, 2003). Hay and Ashman studied the development of adolescents' emotional stability and general self-concept. Consequently, emotional stability and self-esteem or self-concept have been found to have some correlation and do have a big influence on the way people live and function.

Consistent with previous research (Hay and Ashman, 2003) I expect to find a correlation between self-esteem and emotional stability. That is because self-esteem is the way individuals view their self worth and if their view of their own self-worth is destroyed then they will most likely be more sensitive to issues and problems they must face and, therefore, not be able to handle them in the most stable way. It is expected that a person who has emotional conflicts or a

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high level of emotional instability are going to have a much lower self-esteem.

METHOD

Participants

Data was collected from 20 undergraduate students (10 men, 10 women) at John Brown University, a small Christian liberal arts school in Northwest Arkansas. The sample taken in this study was primarily composed of White, middle-to upper-class students. Participants were approached in different places around the campus using no specific selection strategy. Participants' ages ranged from 18 to 22 years of age. All Participants approached filled out the survey completely. Once, the participant agreed to fill out the survey, I asked them to sign and date an informed consent form prior to completing the survey. The informed consent included the purpose of the study, that they were free to drop out of the study at any time without any consequences and that their response would remain confidential at all times. I also provided my phone number and email address as well as my professors' phone number and email address. None of the 20 participants received any kind of reward or payment for completing the survey.

Materials

A two-page, 16-question survey was handed to each of the 20 participants along with an informed consent paper for them to sign prior to completion of the survey. (See Appendix A) The first page of the survey consisted of a quick description of instructions, 10 questions that were designed to measure a person's self-esteem and one of the six questions designed to measure a person's emotional stability. The second page consisted of the other five questions

that were designed to measure a person's emotional stability. The first 10 questions on self-esteem were by M. Rosenberg (1989) and the next 6 questions were by H.J. Eysenck (1970).

Procedure

I recruited 20 Participants in various places across campus and asked them to simply fill out a personality inventory survey. The participants were then given the survey to complete in as much time as they needed to fully complete the survey to their best ability. The participants were in sight the whole time. However, the experimenter backed away to give the participants their privacy. After each participant was done filling out the survey they handed the completed survey along with the signed informed consent form to the experimenter and were free to leave.

RESULTS

A Pearson r correlational analysis was performed on the relationship between emotional stability and self-esteem. Data analysis revealed that there was not a significant correlation or relationship found between self-esteem and emotional stability, $r(18) = 0.298$, $p = 0.2017$ (see Figure 1). However, it is important to note that although the correlation was not significantly different from zero, the correlation was negative.

DISCUSSION

The present study examined the relationship between self-esteem and emotional stability and that there is no significant relationship between self-esteem and emotional stability. This

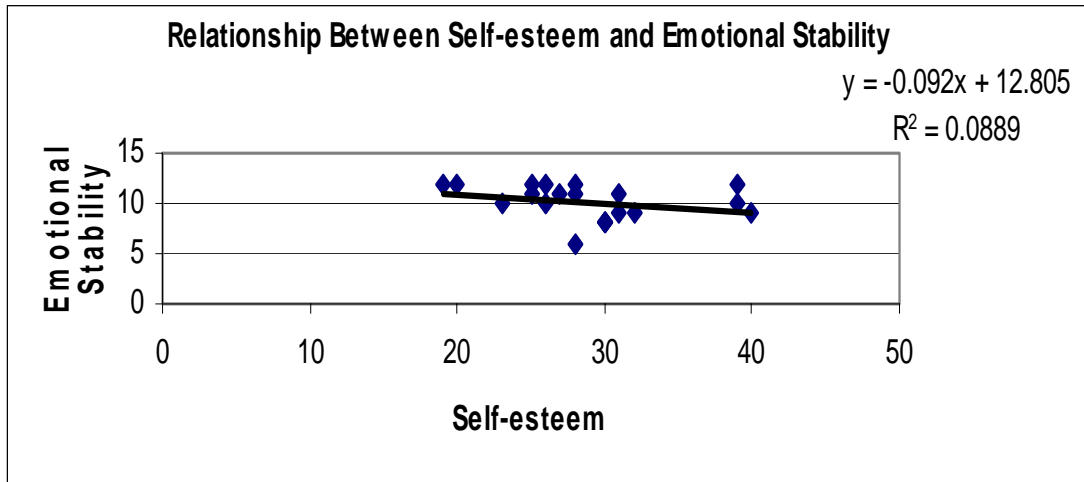


Figure 1. Scatterplot displaying the correlational relationship between emotional stability and self-esteem.

study failed to support the hypothesis that if a person has emotional conflicts or a high level of emotional instability then they are going to have a much lower self-esteem or self-concept than people who are very emotionally stable and have very few emotional conflicts.

However, it is important to note that although the correlation was not significantly different from zero, the correlation was negative. This means that if the results were to be significant, that the higher the score on self-esteem, the lower the score on emotional stability would have been.

Unlike Hay and Ashman's (2003) research, the present study did not find any connection between emotional stability and self-esteem. Also, unlike a research study done by Jelisaveta Todorović(2002), this study did not show that people with emotional instability have a lower self-esteem. However, it is important to point out for future research on this topic some factors that may have affected the results of this study.

This study did not yield a significant result from an analysis of the data collected.

However, the sample size was relatively small and it is possible with a larger sample size that the results could have been significant and that there would have been a relationship between emotional stability and self-esteem. Also, if there was a significant difference, it would have been completely the opposite of the hypothesis and from what was expected because the correlation was negative. It is possible that there was not enough variation in either variable given the use of a normal college population. It is recommended for future research that a larger sample size is taken and from many different college campuses.

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Appendix

Personality Inventory Survey

The purpose of this survey is to collect and analyze data for a Research Methods project at John Brown University. Please do not include your name on this survey or any other marks that may be identified as yours. The data and other results of this survey will remain confidential at all times. Please answer the questions on this survey as honestly as possible.

Instructions for questions 1-10: For the following questions please use the scale below to indicate how strongly you agree or disagree with the statement.

- 1 = strongly disagree**
2 = disagree
3 = agree
4 = strongly agree

- ___ 1. I feel that I am a person of worth, at least on an equal basis with others.
- ___ 2. I feel that I have a number of good qualities.
- ___ 3. All in all, I am inclined to feel that I am a failure.
- ___ 4. I am able to do things as well as most people.
- ___ 5. I feel I do not have much to be proud of.
- ___ 6. I take a positive attitude toward myself.
- ___ 7. On the whole, I am satisfied with myself.
- ___ 8. I wish I could have more respect for myself.
- ___ 9. I certainly feel useless at times.
- ___ 10. At times I think I am no good at all.

Instructions for questions 11-16: For the following questions decide whether the items represent your usual way of acting or feeling and circle either "Yes" or "No" for each.

11. Do you sometimes feel happy, sometimes depressed, without any apparent reason?
YES NO

12. Do you have frequent ups and downs in mood, either with or without apparent cause?

YES NO

13. Are you inclined to be moody?

YES NO

14. Does your mind often wander while you are trying to concentrate?

YES NO

15. Are you frequently “lost in thought” even when supposed to be taking part in a conversation?

YES NO

16. Are you sometimes bubbling over with energy and sometimes very sluggish?

YES NO

Psi Chi (not Psy Chi despite how many times you might see it spelled like that) is the National Honor Society for Psychology Students. It is not the same as the Psychology Club which is open to everyone and is also a great opportunity. You can be a JBU chapter member here at JBU. If you are academically eligible, Dr. Cater will notify you and give you the opportunity to join. For a small dues payment, you will be in for life. Ask any of the psych profs if you have any questions.

Effects of Parental Styles on Peer Socialization in College Students

Kristen R. Delaney

The purpose of this study was to investigate the relationship between parental style and sociability in college students. Three forms of parental control were examined: Authoritative parents encouraged open discussion with their children. Authoritarian parents rarely allow adolescents to express their thoughts and feelings concerning their behavior. Finally, Permissive parents allowed their children to make their own decisions; Permissive parents encourage independence. Participants included 42 students chosen by random selection on the campus of John Brown University. The participants were given a 47-question survey, which was administered via Internet. Results concluded that there is a significant relationship between parental style and sociability in college students. However, other factors such as peers, teachers, mentors, and the media also play a vital role in developing social skills.

Recent studies reveal that parenting is best understood within the context of the family where socialization occurs through the interaction between parents and adolescents (Fagan 2000). Children (no matter what their background) at some point in their lives, desire an authority

figure or boundary system. Though, most children will not readily admit to this (Kelly & Goodwin, 1983). Children who excel in the social atmosphere tend to be warm, responsive listeners. They are also more likely to possess a healthy sense of boundaries, neither imposing on others, nor allowing others to take advantage of them. One study recently completed by the Head Start Program, asserts that Puerto Rican parents who are exceptionally responsive and consistent in their system of values as well as committed towards their children, tend to raise children who excel in social competence (Fagan 2000). Furthermore, students who spend less time developing peer relationships are more likely to display disciplinary problems (Brown & Belice, 1999). In order to more fully understand the impact that parents have on shaping their children, three predominant styles of parenting must be examined. These parental styles include the Authoritarian, Authoritative and Permissive models.

The Authoritarian parent seeks to gain control over their children (often, into the stage of adulthood). Authoritarian parents judge their children harshly based on religious or societal values. Furthermore, they attempt to suppress their children's sense of autonomy by discouraging open family communication (Carlson & Grossbart, 1988). Such parents believe that, "Obedience and respect for authority are the most important virtues children should learn" (Myers, 2000). In contrast, Authoritative parents encourage their children's ability to use self-expression, creativity, and autonomy in their

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relationships (Brown & Belice 1999). However, this is done while still conveying that expectations must be maintained or punishment will soon follow. Most importantly, Authoritative parents realize that their relationship with their children will continually change as growth and maturation begin to take place. Finally, the Permissive parent attempts to be non-restraining, emphasizing absolute freedom (Myers 2000). Generally, Permissive parents are warm and positive. However, they are distant from their children's holistic development. Permissive parents encourage their children to develop their own system of rules and boundaries (Myers 2000).

The present experiment attempts to understand to what extent a parent's ability to communicate warmth, power, and obedience, in the home setting (exhibited through parenting styles) is linked to the development of their child/children's capacity to develop healthy, balanced social skills by the time they reach young adulthood. Parents play a vital role in shaping their children's social development. "Clearly there is ample evidence that the path to positive (or negative) peer interactions often begins at home" (Shaffer, 2000). Due to supportive evidence, children who have been raised by authoritative parents will prove to be more socially balanced individuals than children of permissive and authoritarian parents.

METHOD

Participants

Those who participated in this study were 42 randomly selected students from John Brown University, a small private four-year liberal arts college in the South. Approximate attendance (includ-

ing those involved in the graduate program) consists of 1,500 students. The university is primarily composed of Caucasian and Latino students. The ages of those participating in this study range from 18-25 years old. Participants received no form of incentive by participating in this study.

Materials

The present study implemented a 47-item questionnaire solely developed by the experimenter (see Appendix). The questionnaire was designed to gauge individual participants' responses towards questions pertaining to parental style and their current level of sociability in the college atmosphere. There were three separate sections to this questionnaire. The first section focused on the student's relationship with their mother, the second section focused on a student's relationship with their father, and the final section focused on how the student perceived their own level of social interaction. A few examples of questions used on the survey include: "My mother is very sheltering," "My father is a very social person," and "I feel confident in my ability to communicate effectively in a professional setting." Responses to each question were rated on a Likert scale ranging from one, (I do not agree), to five, (I completely agree).

Procedure

Participants were informed that their participation was optional, their responses would remain anonymous, and they could withdraw from the study at any time, for any reason, without penalty. Randomly selected students received an e-mail with an attached link to the location of the survey. Once the survey had been completed, it was submitted electronically. If students had further questions or comments they were encouraged to reach

the experimenter either through e-mail or by phone.

RESULTS

A Pearson r correlation was used to analyze data concerning parental style and sociability (see Figure 1). The results revealed that there was in fact a significant difference between parental style and the students level of social competence, $r(41)=.3229, p<.05$. However, the level of significance was somewhat smaller than anticipated. A few other significant findings include the correlation between the amount of time a father spends with his or her child, and a child’s ability to satisfy their father, $r(41) = 0.5862, p <.05$. There was also a significant relationship between a father’s ability to encourage his or her child and the child’s level of confidence in a professional setting $r(41) = 0.5983, p <.05$.

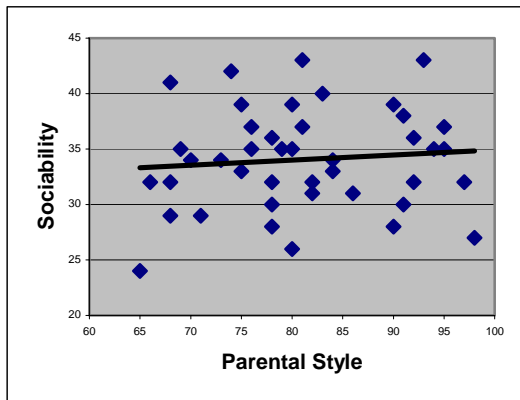


Figure 1. The relationship between parenting style and sociability.

DISCUSSION

The results revealed that there is a correlation between parental style and sociability. More specifically, parents who have adopted the authoritative parental style tend to raise children who are socially competent. The current study

differs from previous research in the fact that previous research involved participants who were in elementary school through high school, instead of in college. College students were chosen to be participants in this study for three reasons. First, college students provided for a convenient sample. Secondly, the college setting allows for a large amount of social interaction. Finally, college provides students with a sense of freedom, allowing students to develop their own social habits apart from their parents.

Previous research reveals that parents who are involved in their children’s lives, yet allow their child a certain level of independence tend to raise children who are comfortable and confident in their social abilities (Fagan 2000). The results may have been significant partly due to the fact that young children spend a great deal of time with their parents, especially observing the ways in which their parents interact with others. Therefore, it can be concluded that children learn from their parent’s social behavior.

However, due to the fact that the results were not extremely significant, other factors may influence sociability. For example, research reveals that students tend to display disciplinary problems when they spend less time with their peers (Brown 1999). Factors that may affect social skills include but are not limited to the following: peers, teachers, mentors and the media. In interpreting the results of this study, one should keep in mind that the results from this survey were taken out of context and may not be representative of real life situations. It is also important to note that these results may be in part biased, due to the fact that student’s answered questions pertaining to themselves. Finally, the parent-child relationship cannot be completely understood simply by the parent’s

behaviors, because the meaning of each parent's behavior may vary within different contexts.

Future research should focus on gathering a larger sample size. This includes utilizing participants who are from different age brackets, as well as cultural and geographical backgrounds. Doing so may insure that further research is representative of the general population. The present study could also be extended by combining research in the area of parental influence and birth order.

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Appendix

A copy of the survey used in this study

There are three sections of questions in this survey. Please answer all of the questions in chronological order.

Section A:

1. I feel comfortable discussing my romantic relationships with my mother.
2. I would describe my mother as warm and affectionate.
3. My mother has always used appropriate punishment with me.
4. My mother is sympathetic and understanding when I am discouraged.
5. My mother constantly compares me with others.
6. My mother has a very dominating personality.
7. My mother is a great listener.
8. My mother is too busy to know what's going on in my life.
9. My mother has taught me how to be patient in any situation.
10. My mother is very sheltering
11. I feel pressure from my mother to make good grades.
12. I feel comfortable bringing my friends home because my mother makes them feel welcome.
13. My mother is a very socially confident person.
14. My mother has a close network of friends.

Parental Styles and Socialization

15. My mother encourages me to use my own judgment and make my own decisions, while still giving me instruction.

Section B:

1. I feel comfortable discussing my worries, problems, and concerns with my father.
2. My father is extremely argumentative.
3. My father has a strong temper.
4. I feel valued and important to my father.
5. My father encourages me to make my own decisions, yet he is still very involved in my life.
6. My father has a good sense of humor, but has never used it to ridicule me.
7. My father has always made my friends feel welcome in our home.
8. My father lets me get away with almost anything.
9. My father first discusses my inappropriate behavior before punishing me.
10. My father has played a large role in helping me develop a healthy self-concept.
11. My father is a very social person.
1. My father has a handful of close friends he confides in.
2. My father is too busy to know what's going on in my life.
12. My father has taught me how to preserve in any situation.
13. My father is overly protective of me.
14. Nothing I do is ever good enough for my father.
15. My mother and father take equal responsibility in raising me.

Section C:

1. I feel confident in my ability to communicate effectively in a professional setting.
2. I can advocate for myself in difficult circumstances.
3. I would describe my best friends as confident, assertive, and mature.
4. I establish my own goals.
5. I accomplish the goals I establish.
6. I tend to sit with the same group of people in the cafeteria.
7. When entering the cafeteria, I feel anxious and begin to panic when I can't find familiar faces with whom to sit.
8. I am a good listener.
9. I can converse easily with people from many different age brackets.
10. I have several friends from different nationalities and backgrounds that my own.
11. I avoid conflict.
12. I tend to dominate most conversations.
13. I feel confident and comfortable speaking in class.
14. I have a healthy sense of self worth.
15. When I am frustrated with someone, I tend to ignore this person rather than discuss with him or her why I am frustrated.

The Relationship between Extroversion and Self-Monitoring

Allison Beth Almstrom

Previous research indicates that high levels of external influence are evident in both extroversion and high self-monitoring. This study investigated the relationship between extroversion and self-monitoring. Participants included 52 student volunteers (17 males, 35 females) from John Brown University, a small nondenominational institution in Northwest Arkansas. Participants completed an online 25-item Self-Monitoring Scale developed by Snyder (1974) as well as a 36-item questionnaire designed to gauge participants' tendency toward introversion or extroversion. Results revealed a significant positive correlation between extroversion and self-monitoring. No significant gender difference was found between scores in either extroversion or self-monitoring. Consistent with predictions, results suggest that those high in extroversion tend to be high in self-monitoring. In regard to these findings, implications for the workplace are discussed.

Is it common for individuals to alter who they are in order to please the crowd? Most people would like to believe that their true self remains stable despite

interactions with varying audiences. Western culture has strongly enforced the idealistic calling to be true to yourself. However, some individuals seem to face an internal struggle between standing up for oneself and modifying their true beliefs in order to appear in agreement with different people. Others appear to remain quite consistent in their attitudes, viewing outside influences as rather irrelevant to their own personal beliefs. One variable that seems to be related to this personality consistency is the extent to which an individual is introverted or extroverted.

Most people have dealt with the inner conflict between wanting to create a desired image for an external audience while still trying to maintain a genuine internal self as well. This is known as the act of self-presentation (Myers, 2002). Some individuals, however, tend to consistently present a socially acceptable external image to the neglect of their true personal beliefs. This conscious self-presentation is known as self-monitoring. Myers (2002) describes self-monitoring as the act of, "being attuned to the way one presents oneself in social situations and adjusting one's performance to create the desired impression" (p. 75). For such individuals, this is a way of life that is comparable to "social chameleons" (Gangestad & Snyder, 2000). Those high in self-monitoring tend to alter their actions in response to external factors. They are less likely to live out their own beliefs. Low-self monitors, in contrast, do not dwell on the way others perceive

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them, but remain internally guided (Myers, 2002). Such people feel free to express their true opinions and act in accordance with genuine beliefs.

Because introversion and extroversion also concern the extent to which an individual is internally or externally guided, this seems to be related to one's level of self-monitoring. Tobacyk, Driggers, and Hourcade (1991) studied the relationship between self-monitoring and the Myers-Briggs psychological type. Their results indicate that extroversion is significantly associated with high self-monitoring. In contrast, introversion is significantly associated with low self-monitoring. Other previous research has resulted in similar findings. Furnham (1989) investigated the different personality correlates of self-monitoring. A regression analysis indicated that extroversion, along with neuroticism, was the strongest predictor of self-monitoring, accounting for approximately 25% of the variance in the results.

Previous research indicates that strong degrees of internal guidance are found in both introversion and low self-monitoring. Additionally, former studies have found that high levels of external influence are evident in both extroversion and high self-monitoring. Therefore, the review of previous research leads to the expectation of a significant positive correlation between levels of extroversion and self-monitoring.

METHOD

Participants

Participants included 101 undergraduate college students from John Brown University, a small nondenominational institution in Northwest Arkansas. Students ranged in age from 18 to 24 years old ($M = 20$ years.) Participants voluntarily filled out online surveys, receiving no additional rewards or incentives for

doing so. Students were selected through random sampling by obtaining a randomly selected list of 101 students from the student population and e-mailing them a request to complete the online survey. The return rate for the completed online surveys was 51%. For the remainder of the study, statistical analysis and discussion of the results was based on the 52 participants who completed the online survey (17 males and 35 females).

Materials

Participants completed the Self-Monitoring Scale (Snyder, 1974). This was a 25-item questionnaire designed to gauge participants' tendency toward self-monitoring (see Appendix A). Examples of items are: "I find it hard to imitate the behaviors of other people" and "I sometimes appear to others to be experiencing deeper emotions than I actually am." Participants marked their response to each item as either *true* or *false*. The experimenter also developed a 36-item questionnaire designed to gauge participants' tendency toward introversion or extroversion (see Appendix B). This survey was adapted from a portion of the Myers-Briggs Type Indicator (MBTI) inventory. Examples of items are: "I prefer a small group of people I already know" and "I am energized by action, people, and things." Participants marked their response to each item as either *true* or *false*. Answers indicating low self-monitoring and introversion were assigned a score of 0 and answers indicating high self-monitoring and extroversion were assigned a score of 1 on each test. Scores from 13 to 25 on the first test indicate a high degree of self-monitoring, and scores between 19 and 36 on the second test indicate a high degree of extroversion.

Procedure

The present design was an ex post facto study that incorporated an analytic survey to explore the relationship between total scores in introversion or extroversion and total scores in self-monitoring. Participants were randomly selected and then asked via e-mail to complete an online survey. Implied informed consent was stated at the top of each survey. Upon willingly volunteering, participants completed the online survey and their anonymous responses were automatically placed into an online survey database, where they were statistically analyzed.

RESULTS

A Pearson r correlation was conducted to compare the difference between scores in extroversion and scores in self-monitoring for each participant. As hypothesized, a significant positive correlation was found between scores in extroversion and self-monitoring, $r(50) = .31, p = .02$ (see Figure 1).

Regression analysis indicated that extroversion accounted for approximately 10% of the variance in self-monitoring (R^2

$= .0976$). Results are depicted in Figure 1. A two-sample t -test for equal variances was conducted to determine if there was a difference between males and females in extroversion and self-monitoring scores. There was no significant difference between males ($M = 19.47$) and females ($M = 20$) in extroversion scores, $t(50) = -.27, p = .79$. Similarly, there was no significant difference between males ($M = 14.41$) and females ($M = 13.49$) in self-monitoring scores, $t(50) = .84, p = .41$.

DISCUSSION

As predicted, participants in the present study demonstrated a significant positive relationship between extroversion and self-monitoring. Participants that were high in extroversion were also high in self-monitoring. Results also indicated that there was no significant difference in scores between males and females in either extroversion or self-monitoring.

These results support the previous research by Tobacyk, Driggers, and Hourcade (1991) which found that extroversion is significantly associated

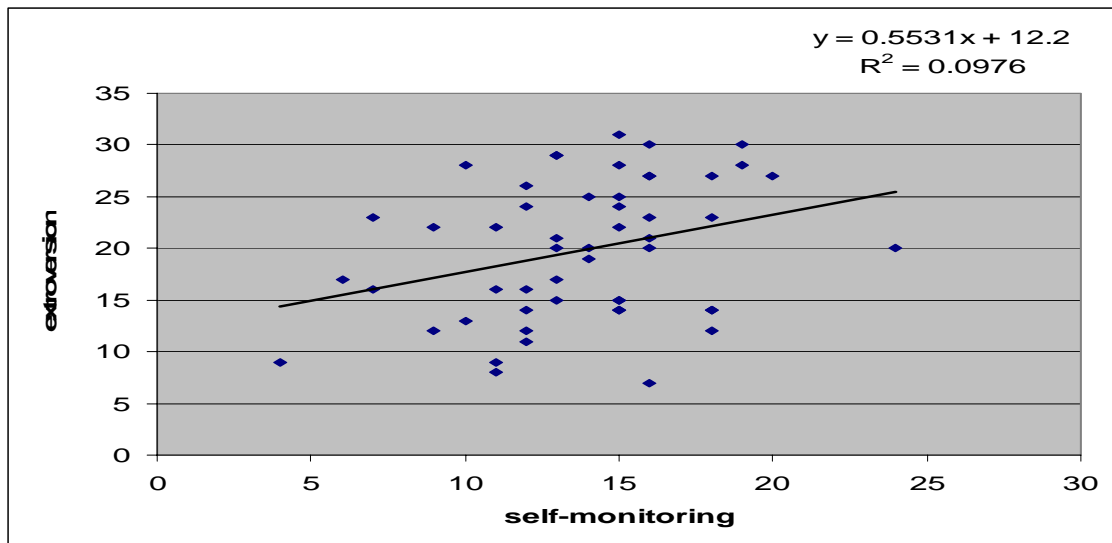


Figure 1: Correlation between extroversion and self-monitoring

with high self-monitoring. That study found that certain psychological types, due to their perceptual and cognitive processing preferences, may facilitate the expression of high or low self-monitoring. Results also support Furnham's (1989) research regarding the personality correlates of self-monitoring. Furnham's findings indicate that extroversion and neuroticism account for approximately 25% of the variance in self-monitoring, whereas the present study found that extroversion accounted for 10% of the variance in self-monitoring. This slightly lower percentage could be explained by the characteristics in the current sample that was used. For instance, participants who are freshmen or those who are from minority cultures could express higher self-monitoring due to their desire to fit into a new social group. Additionally, these findings support previous research by Gangestad and Snyder (2000) that acknowledges strong ties between extroversion and self-monitoring.

One limitation to this study is the lack of generalizability to other populations. External validity is limited due to the narrow selection of primarily Christian college students. This limited sample could result in a skewed database of results. Additionally, although the current sample is representative among the population of John Brown University students, the high ratio of females to males would not be representative of other populations. The lack of differences in scoring between males and females found in the present study could be due to the limited number of male participants. A study with equivalent ratios between males and females may yield more significant results.

Future studies might use a correlated within groups design to account for individual participants' gender. Most

importantly, a larger sample size could be used to increase the significance of the results. In addition, if an equal number of male and female students participated in the study, this would increase the likelihood that a significant difference in extroversion and self-monitoring between the two genders would be found. A study with a 1:1 ratio of males to females would have greater external validity since this is more representative of other populations. Future studies could also use a correlated within groups design by surveying an equal number of introverted and extroverted participants. Although a significant correlation between these two groups was found, a stronger correlation may result if an equal number of introverted and extroverted individuals were represented.

Results from this study confirm previous theories regarding extroversion and self-monitoring. It supports the idea that these two traits tend to be correlated within individuals. These findings also have practical implications in the work setting. Tobacyk et al. (1991) recognizes that high self-monitors, similar to extroverts, prefer environmentally directed attention with rapid processing of social cues and a flexible degree of self-presentation to accommodate the social situation. In contrast, low self-monitors, consistent with introverts, are most comfortable in environments requiring self-direction with a high acceptance of one's own personal beliefs and values, maintaining stability and consistency. Therefore, employers may be able to use one's measure of extroversion to determine if a prospective employee would be suited for a company's work environment. Extroverted individuals would thrive in a setting characterized by a high need for self-monitoring, whereas introverts would prefer work environments suitable to low self-monitoring.

Applying the findings from the current study can greatly increase the effectiveness and satisfaction of employees in the workplace.

In conclusion, individuals who are high in extroversion tend to be high in self-monitoring as well. Results from this study will be very useful in the work force. However, additional research may be necessary to determine the effects of gender on each trait. Because of the currently growing need for highly specified, particularly suitable employees in the job market, understanding the most compatible employee traits for each work environment is an excellent way to ensure a successful employee-job match.

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Appendix A Self-Monitoring Scale (Snyder, 1974)

- (T) (F) 1. I find it hard to imitate the behavior of other people.
- (T) (F) 2. My behavior is usually an expression of my true inner feelings, attitudes, and beliefs.
- (T) (F) 3. At parties and social gatherings, I do not attempt to do or say things that others will like.
- (T) (F) 4. I can only argue for ideas that I already believe.
- (T) (F) 5. I can make impromptu speeches even on topics about which I have almost no information.
- (T) (F) 6. I guess I put on a show to impress or entertain people.
- (T) (F) 7. When I am uncertain how to act in a social situation, I look to the behavior of others for cues.
- (T) (F) 8. I would probably make a good actor.
- (T) (F) 9. I rarely seek the advice of my friends to choose movies, books, or music.
- (T) (F) 10. I sometimes appear to others to be experiencing deeper emotions than I actually am.
- (T) (F) 11. I laugh more when I watch a comedy with others than when alone.
- (T) (F) 12. In groups of people, I am rarely the center of attention.
- (T) (F) 13. In different situations and with different people, I often act like very different persons.
- (T) (F) 14. I am not particularly skilled at making other people like me.
- (T) (F) 15. Even if I am not enjoying myself, I often pretend to be having a good time.
- (T) (F) 16. I'm not always the person I appear to be.

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- (T) (F) 17. I would not change my opinions (or the way I do things) in order to please someone else or win their favor.
- (T) (F) 18. I have considered being an entertainer.
- (T) (F) 19. In order to get along and be liked, I tend to be what people expect me to be rather than anything else.
- (T) (F) 20. I have never been good at games like charades or improvisational acting.
- (T) (F) 21. I have trouble changing my behavior to suit different people and different situations.
- (T) (F) 22. At a party, I let others keep the jokes and stories going.
- (T) (F) 23. I feel a bit awkward in company and do not show up quite as well as I should.
- (T) (F) 24. I can look anyone in the eye and tell a lie with a straight face (if for a right end).
- (T) (F) 25. I may deceive people by being friendly when I really dislike them.

Appendix B Introversion and Extroversion Scale

- (T) (F) 1.) I get energy from interacting with people.
- (T) (F) 2.) If I go to a large social function I will not want to stay long.
- (T) (F) 3.) I often think out loud.
- (T) (F) 4.) I have quiet energy from within.
- (T) (F) 5.) I like to talk less and think quietly inside my head.
- (T) (F) 6.) I figure things out by talking about them.
- (T) (F) 7.) I prefer to solve problems alone, perhaps asking others' opinions once I have the options figured out.
- (T) (F) 8.) While I enjoy other people, being with them does drain my energy.
- (T) (F) 9.) I like to be around people a lot.
- (T) (F) 10.) I may like to be alone part of the time, but knowing when I'll be with people is very important.
- (T) (F) 11.) I like to be the center of attention.
- (T) (F) 12.) I prefer a small group of people I already know.
- (T) (F) 13.) I proceed cautiously in meeting people.
- (T) (F) 14.) If I have a problem I am quick to turn to others to share it.
- (T) (F) 15.) I like to spend time alone, and I feel comfortable being alone.
- (T) (F) 16.) I develop ideas through discussion.
- (T) (F) 17.) I like to have a lot of friends.
- (T) (F) 18.) I would rather do a big project alone or with one other person, than to work closely with seven or eight people.
- (T) (F) 19.) I like to avoid crowds and seek quiet.
- (T) (F) 20.) I like working in teams.
- (T) (F) 21.) I like to talk a lot.
- (T) (F) 22.) Others see me as shy, quiet, and inhibited.
- (T) (F) 23.) I am expressive, outgoing, enthusiastic, and uninhibited.
- (T) (F) 24.) I tolerate noise and crowds.
- (T) (F) 25.) I am energized by ideas, feelings, and impressions.
- (T) (F) 26.) I am private, self-contained, and reserved.

- (T) (F) 27.) I am energized by action, people, and things.
- (T) (F) 28.) I like meeting new people, and I meet people readily.
- (T) (F) 29.) I share personal information easily.
- (T) (F) 30.) I prefer to focus on one thing at a time.
- (T) (F) 31.) I am different in public and in private.
- (T) (F) 32.) I am easy to get to know.
- (T) (F) 33.) I prefer to do lots of things at once.
- (T) (F) 34.) I have a rich inner life.
- (T) (F) 35.) I have a single layered personality; I tend to be the same in public and in private.
- (T) (F) 36.) I am reluctant to share personal information.

The Arkansas Symposium for Psychology Students (ASPS) meets each year in April at various locations in Arkansas. This year (2005) in April it is in the well-known resort destination of Russellville, AR. This is not a long trip (and it goes much faster in the presence of the scintillating company of your fellow presenters) and it is well worth it to have a chance to participate in a professional research conference. See Dr. Froman if you are interested in presenting your research this year. If not, keep it in mind for next year when you can present your project in Advanced Research seminar.

The Effects of Combat on the Presence of PTSD Symptoms in Military Personnel

Victoria Anne McCracken

The recent call to active duty of thousands of American soldiers to fight the "war on terrorism" reawakens a long-dormant interest in understanding the societal costs of war. Because previous findings have shown that exposure to combat situations significantly contribute to the likelihood of post-traumatic stress disorder, it was hypothesized that those having served in combat should demonstrate more symptoms of PTSD than those who have not. With questionnaire data from a convenience sample of active duty or retired military personnel, the DSM-IV Post-Traumatic Stress Disorder symptoms were used to determine the level of symptoms present in each participant, which were then compared by those who have served in combat and those who have not. A 2-sample t test reveals no significant results. These results are then discussed within the context of what extent of influence combat may have on the general overall mental well being of those surveyed.

The recent deployment of US special operations forces and the call to active duty of thousands of American soldiers to fight the "war on terrorism" reawakens a long-dormant interest in understanding the societal costs of war. By documenting the enduring negative effects of combat exposure on the nation's mental, social, and occupational health, past research has demonstrated the lasting and pernicious effects of exposing United States citizens to war. The constant threat to life and

gruesome sights and sounds of war take their toll on the soldier psychologically as well as physically. Beyond short-term combat fatigue, many soldiers suffer serious and long-lasting psychological damage as a result of combat experience – frequently enough to knock them out of fighting as surely as if they were physically wounded. These effects have been called, in various wars, "shell shock," "combat neuroses," or "post-traumatic stress disorder" (PTSD), all controversial designations (Goldstein, 2001).

PTSD may lead to emotional numbing, recurrent nightmares, substance abuse and, most frighteningly, delusional outbursts of violence. However, PTSD typically manifests itself in more subtle symptoms. The most immediate psychological symptoms in combat veterans are conditioned reflexes from combat, notably the tendency to "hit the dirt" on hearing a loud noise like a car backfiring. These habits are superficial though, and wear off quickly. The nightmares are long-lasting: a combat veteran sits up in bed, in a deep sleep, shouting "Kill him! Kill him!" or "Get down!" (Goldstein, 2001).

Manifestations of combat trauma have been "remarkably constant" through history. The intensified destruction of twentieth-century wars may make combat trauma more pervasive than ever, especially since World War II. Scholars argue that combat trauma is more likely to cause PTSD than are "civilian" traumas including rape, but not because of participation in killing. Rather, PTSD results from the soldier's isolation from home and community, the multiple and prolonged

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traumas, and the uncertainty about the immediate future. Today, a significant number of military personnel suffer from a wide range of debilitating psychological symptoms that vary in duration. For some the symptoms are transient, while for others profound and prolonged psychological symptoms remain in the form of PTSD.

In a recent study by a Yale researcher, results showed that men who witnessed combat were at risk for a variety of current adverse outcomes. It was found that combat exposure contributed significantly to the likelihood of current post-traumatic stress disorder. On a societal level, it was found that 28% of PTSD could have been averted had the men not been exposed to combat (Prigerson, 2002). Another study on Post-Traumatic Stress Disorder study showed that combat exposure predicted PTSD course more strongly than any other risk factor (Koenen, 2003), and yet another demonstrated that increased exposure to combat stress was associated with increased PTSD symptomatology (Pereira, 2002). Because the findings have shown that exposure to combat situations significantly contribute to the likelihood of post-traumatic stress disorder, a comparison between those who have served in combat and those who have not should show a significant difference in symptom prevalence. A two sample t-test should reveal those having served in combat demonstrate more symptoms of PTSD than those who have not. Consistent with this previous research, which demonstrates that combat exposure has adverse effects, and that combat also increases the chances of PTSD, I expect that the participants who have served actively in combat situations will demonstrate more symptoms of PTSD than those who have not served in combat.

METHOD

Participants

The participants in this study were eleven active duty or retired military personnel. There was no specification on

age or gender; however, only those above 18 were allowed to participate. The participants were Army and Marine personnel located in Arkansas, Virginia, and North Carolina. The participants were a convenience sample, as they were selected due to their accessibility via email.

Materials

The participants were asked to fill out a questionnaire designed to determine the level of post-traumatic stress disorder symptoms they display. The questions were designed from the symptoms found in the DSM-IV, and were formatted in similar format to those found on a survey designed to determine the *Long Term Effects of War Experience*. (Hunt, 2004) There were three questions to gather biographical information, including age, marital status, and branch of service. The other 17 questions were formatted based on PTSD symptoms found in the DSM-IV. The final three questions were then used to determine which participants had served in combat, as well as the level of combat they experienced. These questions were used to separate the two groups. The 17 PTSD symptoms questions were scored and the final amount of symptoms for each person was compared to their response to whether or not they had served in combat.

Procedure

The participants were a convenience sample, and were accessed via email through contacts within the Army and the Marine Corps. The survey was posted on a school web link so that the link could be emailed and the survey accessed directly. The results were then submitted automatically at the completion of the survey. Through three different contacts, an email link was sent and it was requested that they then send the link on to as many military personnel as they had access to. This survey was formatted to preserve confidentiality by having the participants avoid providing contact information, and by having the results submitted electronically, which eliminated any con-

nection through email. It was made clear on the survey that participation was voluntary they could stop taking the survey at any time. Respondents under age 18 were asked to not respond to the survey.

RESULTS

By doing a 2-sample t-test for independent groups, it was determined that there were no significant results. Of the 17 DSM-IV PTSD symptoms listed, there was not a significant difference between those having served in combat as compared to those who have not. Although there was some variation in the scores, the hypothesis was not confirmed. However, several results, although not significant, did yield results that are connected with the hypothesis. Those having served in combat did report more flashbacks and hallucinations than those who did not, $t(11)=1.39$. Also, more combat veterans than non combat reported upsetting memories frequently pushing themselves into their mind, $t(11)=.49$.

Topic	Non-Combat		t-stat	df	p-value
	mean	mean			
Upsetting memories	3.20	2.75	0.49	11	0.63
unpleasant dreams	2.40	1.88	0.62	11	0.55
Flashbacks	2.60	1.50	1.39	11	0.19
Upset by reminders	1.80	2.50	0.69	11	0.50
Avoid thoughts	1.60	2.50	0.97	11	0.35
Avoid situation	1.80	2.57	1.03	10	0.33
Forget service	1.60	1.75	0.34	11	0.74
Lost interest	2.40	2.38	0.03	11	0.98
Emotionally cut off	1.80	2.88	1.23	11	0.24
Not express emotions	1.80	3.13	1.17	11	0.27
Fear of no future	1.80	2.88	1.19	11	0.26
Difficulty sleeping	1.80	2.13	0.39	11	0.70
Short temper	2.60	2.75	0.14	11	0.89
Trouble concentrating	1.40	1.88	0.97	11	0.35
Overly alert	3.00	2.25	1.19	11	0.26
Startle response	2.25	2.00	0.34	11	0.74
Reminder anxiety	2.00	1.63	0.63	11	0.54

Table 1. Non-significant differences between combat and noncombat troops.

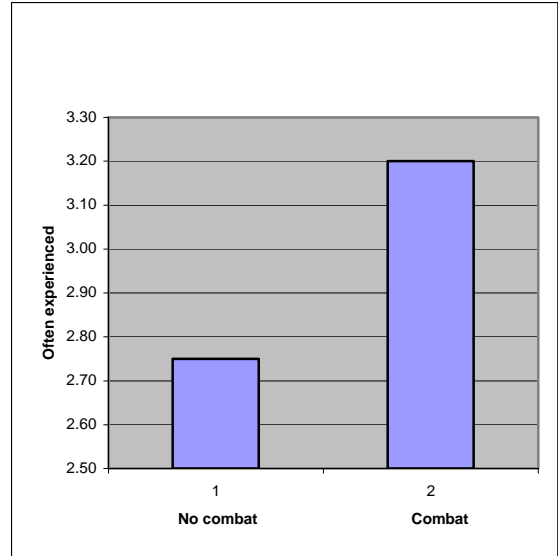


Figure 1. Survey question number 1, Upset by memories.

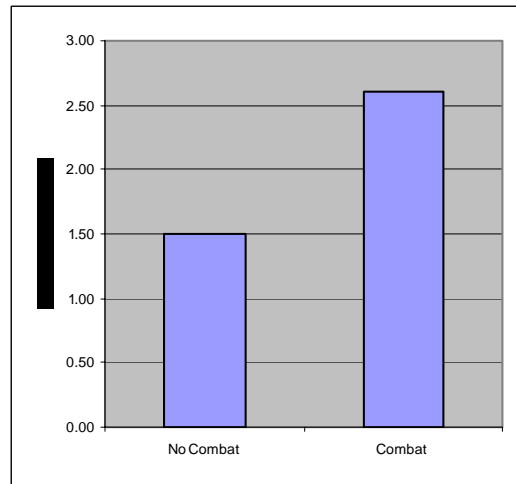


Figure 2. Survey question number 3, Flashbacks and hallucinations

DISCUSSION

In the present study, we examined the difference in prevalence of Post-Traumatic Stress Disorder symptoms in military personnel that have been in combat as compared to those that have not. Because previous findings have shown that exposure to combat situations significantly contribute to the likelihood of Post-Traumatic Stress Disorder, a comparison between those who have served in combat

and those who have not should show a significant difference in symptom prevalence. It was hypothesized that the results would reveal those having served in combat demonstrate more symptoms of PTSD than those who have not. The results from this study show that there were no significant differences between those having served in combat and those who have not. However, there were differences found between the two groups in several of the symptoms. Although the findings failed to show any significant results, these findings are consistent with those from previous studies which have demonstrated that increased exposure to combat stress was associated with increased PTSD symptomatology (Pereira, 2002). There was an increase in certain PTSD symptoms seen in those that were in combat. These results would be neither consistent nor inconsistent with previous research that showed that combat exposure predicted PTSD course more strongly than any other risk factor, as other risk factors were not taken into consideration for this study (Koenen, 2003). Although no statistically significant differences were observed regarding the differences between the symptoms found in the two groups, there were findings that did show some support to the hypothesis. A possible explanation for the insignificant results is due to the sample size. To have a significant finding, the number of participants would need to be increased. This was especially demonstrated, for although there was a large effect size, there were too few cases for the finding to be significant. A power test revealed that if the study had consisted of 60 or more cases with same differences, then the results would have been significant.

Findings from this study should be viewed with the knowledge that the results were gained from a convenience

sample, as they were selected due to their accessibility via email. There were either active duty or retired military personnel, which would mean variations regarding both time served, and the time that has passed since their active duty service. In the present study, we also did not differentiate specific demographic, background, or very specific psychosocial factors. Race was also not specified.

Further research is needed to improve the variance within the sample, with more focus on specific factors that may influence participant response. More research should be done regarding the general military attitude surrounding mental health. Past contact with military personnel has led to a feel of an overtone of some perceiving mental stresses as a sign of weakness, which may inhibit military participants from reporting truthfully. Further research should seek to assure participants anonymity, along with proof that the researcher is not gathering information for any government agency, or branch of service. There should be studies done that are more specific to determining the extent of military service, with more information gained on the actual combat, as more differentiation could be made to further determine what might cause PTSD symptoms. Information could also be gathered about the possibility of other traumatic situations besides combat that could affect participant response. Another aspect that could be studied in relation to combat and PTSD involves the difference between those who serve in combat situations that are recognized as war by the American culture, (War in Iraq) and those that are not (Operation Joint Forge: Peacekeeping in Bosnia).

Although the findings were not significant, results did show a relation to some increased PTSD symptoms with exposure

Combat and PTSD

to combat stress. However, a larger sample is needed for significant results. Further research is needed on this topic so that we can have a better understanding of the stresses that combat places on our soldiers. With an increased understanding of the effects combat has on military personnel, we will be more prepared to assist those combat survivors as they attempt to overcome the life changing situations they have encountered.

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Note: This research was supported through academic support by Dr. Rick Froman, to whom I am very grateful. I would also like to thank my fiancé for his support, encouragement, and inspiration.

APPENDIX

Online Survey

Victoria McCracken, a student in a University Research Methods class, is conducting this survey. To contact: Email at McCrackenV@jbu.edu. The faculty advisor is Rick Froman. To contact, email Rfroman@jbu.edu.

The purpose of this research is to collect data regarding military involvement and its impact on the lifestyles of those living it.

The survey should take 10 minutes to complete.

To fill out, read the question and select the appropriate response.

Because of the nature of the questions, it is possible that any service member that has witnessed a traumatic event may experience some degree of distress when answering. If you think this might be a problem for you, please think carefully before proceeding.

To preserve confidentiality you will not be asked to provide your name or address. The results will be submitted electronically; therefore your email address will not be connected in any way to the responses you give.

Participation in this survey is voluntary and you may choose to not respond. You may also stop taking the survey at any time.

If you are under 18, please do not respond to this survey.

Biographical information

Age (Day:Month:Year) :

Marital status

Married Single Divorced Widowed

Which branch of the armed forces did you/are you serving in? (please specify):

This part of the questionnaire relates to your experience in military life. Please select the answer that most closely defines your personal experience involving the effects of military service on you and your lifestyle.

Please rate the following questions by choosing one of the alternatives from the drop-down window. (The alternatives included “no or never”, “very little or very rarely”, “a little or sometimes”, “somewhat or commonly”, “quite a bit or often”, “very much or very often” and “extremely or always”.

- Have upsetting memories of military involvement frequently pushed themselves into your mind at times?
- Have you had recurring unpleasant dreams involving your military service?
- Have you ever suddenly acted or felt as if you were re-living part of your experience? This includes flashbacks, illusions, hallucinations or other "re-livings" of military service, even if they occur when you are intoxicated or just waking up?
- Have things that reminded you of your service sometimes upset you a great deal?
- Have you ever tried to avoid thinking about your service or feelings you associate it with?
- Have you sometimes avoided activities or situations that remind you of your service? Have you found you sometimes couldn't remember important things about past service? Have you lost a lot of interest in things that were very important to you before joining the military?
- Have you felt more cut off emotionally from other people at some period than you did before joining the military?

Combat and PTSD

- Have there been times when you felt that you did not express your emotions as much or as freely as you did before joining the military?
- Have there been periods since the joining the military when you felt that you won't have much of a future - that you may not have a rewarding career, a happy family, or a long, good life?
- Have you had more difficulty falling asleep or staying asleep at times than you did before your service began?
- Have you got irritated or lost your temper more at times than you did before joining the military?
- Have there been periods since joining the military when you had more trouble concentrating than you had before it?
- Have there been times when you were more overly alert, watchful, or super-aware of menacing noises or other stimuli than you were before your service began?
- Have there been times since your service began when unexpected noise, movement, or touch startled you more than they did before?
- Have things that reminded you of your service made you sweat, tense up, breathe hard, tremble, or over respond in some other physical way?
- During your time in the military, have you been involved in combat, or combat situations? (If your answer is "no", please skip the next two questions.)

Yes No

- If you answered "yes" to the previous question, did you experience, witness, or find yourself confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others?

Yes No

- Did this combat experience involve feeling of intense fear, helplessness, or horror?

Yes No

The Interrelations Between Religiosity, Stress, and Self-Esteem

Marie Michelle M. Reyes and Pablo A. Fernandez

This study examined the interrelations between stress, self-esteem, and variables related to religiosity. An online convenience sample consisting of individuals from seventeen countries from the five continents was obtained. Questionnaires were disseminated through the Internet. The diversity of cultural backgrounds and religious approaches was essential to examine the correlations among the variables. Of the eight hypotheses, only one was supported. That is, the study found a moderate and significant correlation between intrinsic religiosity and a loving God-image, with intrinsic religiosity accounting for 14% of the variance in a loving God-image. Nevertheless, correlations between variables (e.g., strength of religious faith and intrinsic religiosity) and group differences (e.g. ethnicity, socio-economic situation, religion) unmentioned in the hypotheses were also noticed and analyzed.

Much research has been carried out concerning the interrelations between stress levels, coping with stress, strength of religious faith, extrinsic religiosity, intrinsic religiosity, God-image, and self-esteem. An overview of previous studies will be helpful

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in understanding just exactly how the above variables may interact.

Strength of Religious Faith and Coping with Stress

Studies have found positive correlations between strength of religious faith and coping with stress. Krause and Van Tran (1989) conducted a study on the effect of religious involvement on older African Americans. The authors found that while “life stress tended to erode feelings of self-worth and mastery; these negative effects were offset or counterbalanced by increased religious involvement” (p. S11). In addition, Plante, Yancey, Sherman, and Guertin (2000) examined the correlation between strength of religious faith and mental and physical health in undergraduate students. Among their first sample, which consisted mostly of Baptists, findings revealed that “strength of religious faith was significantly associated with coping with stress, optimism, experiencing meaning in life, viewing life as a positive challenge, and low anxiety” (p. 405).

Certainly, much research has shown a relationship between strength of religious faith and overall mental and physical stress-related factors (Donahue & Benson, 1995; Larson et al., 1992). Tebi, Mallon, Richards, and Bigler (1987) found that among adolescent cancer patients, 17 out of 28 stated that practicing their religion helped them cope with their illness. Swensen, Fuller, and Clements (1993) found that among

terminally ill cancer patients, strength of religious faith was associated with higher quality of life. Also, Frankel and Hewitt (1994), found a positive relationship between faith group involvement and various aspects of health status among Canadian university students who were involved with Christian clubs or faith groups.

There are, however, a few studies that find no association between strength of religious faith and coping with stress. Plante, Yancey, Sherman, and Guertin (2000) found that among their sample of students from a West Coast private Catholic university, wherein 51% were Catholic, no correlation between strength of religious faith and coping with daily stress was found. Perhaps this resulted because half of the population was Catholic, while among the other half, 22% were other, 10% were Protestant, and 22% had no religious affiliation. Furthermore, Plante, Saucedo, and Rice (2001) found that strength of religious faith was not associated with coping with daily stress over a week in a sample of 132 students and faculty from a liberal arts Catholic university. Perhaps the above studies reveal no correlation between daily stress and strength of religious faith because they are specific to daily stress. Daily stress may not be sufficient enough to influence participants to turn to religion for coping. For example, previous research (Jenkins as cited in Plante et al., 2001) has shown that among HIV patients, those who are more ill are more likely to turn to religion for coping. Indeed, many of the findings which revealed correlations between strength of religious faith and coping with stress involved severe stress.

Strength of Religious Faith and Self-esteem

Research has also revealed a positive correlation between strength of religious faith and self-esteem. Maton and Kenneth

(1989) found that spiritual support positively related to self-esteem among those with high life-stress and also positively related to personal-emotional adjustment to stressful situations. Krause and Van Tran (1989) found that “Religious involvement appears to be an important factor in bolstering and maintaining positive feelings” and that “religiosity can exert a beneficial effect on self-feelings even in the absence of life-crises” (p. S11). Plante, Yancey, Sherman, and Guertin (2000) found that among their third sample, which consisted of undergraduate students from a Southern Baptist university, 77% of whom were Protestant, “strength of religious faith was significantly associated with viewing life as a positive challenge and self-acceptance” (p. 405).

Stress/Anxiety/Coping with Stress and Intrinsic Religiosity

Negative correlations have also been found between stress, anxiety, or coping with stress, and intrinsic religiosity. Sturgeon and Hamley (1979) sampled 148 students from a conservative, Protestant church related college. Their findings revealed that those more intrinsically religious were less anxious. Furthermore, Bergin, Masters, and Richards (1987) found “moderate evidence that religious intrinsicness is positively associated with personal adjustment” (p. 200). Personal adjustment is the way in which the person adapts to new situations. Hence, one of the factors in personal adjustment is stress. Furthermore, Bergin et al. states that “Results have shown that various indexes of emotional distress covariate with extrinsic scores (Baker & Gorsuch, 1982; Bergin, 1983; Sturgeon & Hamley, 1979). All this information suggests that I [intrinsicness] is associated with

less anxiety whereas E [extrinsicness] is associated with more anxiety” (p. 201).

Self-esteem and God-Image

Much research has also been carried out concerning how a view of one’s self correlates to God-image. A study by Chartier and Goehner (1976), which analyzed correlations between parent-adolescent communication, self-esteem, and God-image, found a significant correlation between self-esteem and God-image. Greenway, Milne and Clarke (2003) observed how personality characteristics relate to one’s God-image and perception of self. In females, they found that Self-Liking significantly correlated to the image of God as caring. A study by Buri and Mueller (1993) investigated the relationships between college students’ concept of God, the view of their parents, and their self-esteem. It found that “self-esteem far outweighed all other variables in accounting for the variance in God concepts.” Research by Benson and Spilka (1967) found that self-esteem positively correlates to loving-accepting God-images and negatively to rejecting images. Benson and Spilka (1972) theorized from the standpoint of the cognitive consistency theory that self-esteem may affect one’s God-image. The consistency theory “suggests that information which implies the reverse of one’s usual level of self-regard tends to create dissonance” (Benson & Spilka, 1967). Hence, in order to avoid cognitive dissonance, one with high-self esteem may support images of God that are loving-accepting. However, since their study was correlational, the study acknowledges that the reverse is also possible. In relation, a study by Lawrence (1997) revealed that one’s view of God in relation to the factors of Benevolence and Acceptance correlated highly and significantly to self-esteem. Benevolence asks the question, “Is God the sort of person who would want to love me?”

and Acceptance asks the question, “Am I good enough for God to love?”

Religious Orientation and God-image

Research has also observed how religious orientation, that is, extrinsic and intrinsic religiosity, correlates to self-esteem and God-image (Spilka & Mullin 1977, Lawrence 1997, Wickstrom & Fleck 1983, Watson, Hood, and Morris 1985, Hunt & King 1971). When a person is extrinsically oriented to his/her faith, he/she is very concerned with performing the set of rituals that are socially accepted and expected from a person that professes that faith. In this case, social approval may work as a stressor that may influence the person’s self-esteem. An extrinsically oriented person may also attend church on Sunday, or perform any other religion’s ritual, because it is the “right thing to do.” On the other hand, among those who are intrinsically oriented to their faith, there is less external pressure to perform rituals or expected behaviors because the essence of the relationship with the divine source is personal. These persons are committed to their religion and daily try to incorporate their religious beliefs into their life. Spilka and Mullin (1977) found that intrinsic faith correlated with positive regard towards one’s self, others, and God, while extrinsic faith correlated with less favorable orientations. Likewise, Wickstrom and Fleck (1983) found negative self-esteem primarily in those who practiced extrinsic religious styles and not in those who practiced intrinsic religious styles. Another finding was that intrinsic religions were more likely to perceive God as loving and kind whereas extrinsic religions perceived God as

more punitive and vindictive (Hunt & King, 1971).

In light of the above research, the study focuses on the following eight hypotheses:

1) Stress level/anxiety is negatively correlated to strength of religious faith.

2) Coping with stress is positively correlated to strength of religious faith.

3) Stress level/anxiety is negatively correlated to intrinsic religiosity.

4) Coping with stress is positively correlated to intrinsic religiosity.

5) Self-esteem is positively correlated to intrinsic religiosity.

6) Self-esteem is positively correlated to a loving God-image.

7) Intrinsic religiosity is positively correlated to a loving God-image.

8) Strength of religious faith is positively correlated to self-esteem.

METHOD

Participants

The sample was composed of 173 participants whose ages ranged from 18 to 63. Over half of the sample consisted of those between the ages of 18 and 31 and the majority of the other half consisted of a range between 32 and 60. According to citizenship, the participants included 43 Americans, 36 Filipinos, 22 Singaporeans, 15 Uruguayans, 6 South Koreans, 7 British, 4 Italians, 3 Australians, 3 Salvadorians, 3 Canadians, 3 Northern Irish, 2 French, 2 Swiss, 2 Costa Ricans, 2 Guatemalans, 1 Chinese, 1 Indonesian, 1 German, 1 New Zealander, 1 South African, 1 Spaniard, 1 Japanese, and 1 Mexican. (Due to problems in Excel, the religion of the Korean participants was unidentifiable.) The racially diverse sample offered an interesting variety of religious approaches. The sample contained 103 Protestants, 26 Catholics, 4 Buddhists, 2 Atheists, 2 Agnostics, 1 Diast, 1 Taoist, 1 Islamist, and 17 individuals that had no specific religion.

Materials

A questionnaire that combined six different measures was used (see Appendix). *The Stress Appraisal Measure* (Peacock & Wong, 1990) was used to assess stress coping, and the measure entitled *Stressed Out?* (Adler, 1999) was used to assess stress levels. Also, the benevolent components from the *God Image Inventory* (Lawrence, 1997) measured a loving God-image, the *Santa Clara Strength of Religious Faith Questionnaire* (Plante & Boccaccini, 1997) measured strength of religious faith, and *Feagin's Extrinsic-Intrinsic Conceptual Factors* (Feagin, 1964) measured extrinsic-intrinsic religiosity. Finally, the *Rosenberg Self-Esteem Scale* (Rosenberg, 1989) assessed self-esteem. A 4-point Likert scale was used on all the measures except the *Stress Appraisal Measure* and the *Stressed Out?* measure, which both used a 5-point Likert scale. In addition, the English version of the questionnaire was translated into Spanish, French, Italian, and Korean in order to accommodate the native languages of the various participants. In order to disseminate the questionnaire, e-mail as well as various discussion boards on the Internet were used.

Procedure

An online convenience sample was obtained. The majority of participants were accessed directly through e-mail and a few through Discussion boards on the Internet. All Korean participants were accessed through the latter. Participants received an explanation of the study along with an attached Internet link containing the version of the questionnaire in their particular language. The e-mail explained the purpose of the study, terms of informed consent, as well as the request that those

below 18 do not fill out the questionnaire. Finally, the message stated that the questionnaire should be completed by April the 16th of 2004 and that if participants were interested in the results and conclusions of the study, they should contact the researchers. Thereafter, the results were processed in order to investigate the hypothesized correlations.

RESULTS

Only one of the eight hypotheses obtained a significant result. That is, a moderate and significant correlation existed between intrinsic religiosity and a loving God-image, $r(172) = .37, p < .05$, with intrinsic religiosity accounting for 14% of the variance in a loving God-image. Nevertheless, other significant results were found, indirectly pertaining to the hypotheses. A strong and significant correlation was found between strength of religious faith and intrinsic religiosity, $r(172) = .55, p < .05$, with strength of religious faith accounting for 30% of the variance in intrinsic religiosity. An even stronger correlation was found between strength of religious faith and a loving God-image, $r(172) = .70, p < .05$, with strength of religious faith accounting for 48% of the variance in intrinsic religiosity. A moderate and significant, negative correlation was found between stress level and self-esteem, $r(172) = -.39, p < .05$, with stress level accounting for 15% of the variance in self-esteem. No significant correlations were found between intrinsic religiosity and stress levels and between intrinsic religiosity and coping with stress.

Analyses were carried out regarding how the main variables correlated within the different religious groups. Four significant correlations resulted. Among Catholics, a strong correlation was found between strength of religious faith and a loving God-image, $r(25) = .4, p = .038$, with strength of

religious faith accounting for 16% of the variance in a loving God-Image. Among Protestants, a strong correlation was found between strength of religious faith and intrinsic religiosity, $r(102) = .4, p < .05$, with strength of religious faith accounting for 16% of the variance in intrinsic religiosity. Also, among Protestants, an even stronger correlation was found between strength of religious faith and a loving God-image, $r(102) = .48, p < .05$, with strength of religious faith accounting for 24% of the variance in a loving God-image.

Comparisons were also analyzed with regards to whether various religious groups differed significantly on the main variables. Five significant differences were found with the use of t-tests. Protestants were significantly more intrinsically religious than Catholics, $t(129) = -3.87, p < .05$ containing a large effect size of .84. Protestants also scored higher on strength of religious faith than Catholics, $t(129) = -2.21, p = .03$, containing a moderate effect size of .48. Catholics, on the other hand, scored significantly higher than Protestants on self-esteem $t(129) = 2.69, p < .05$ containing a moderate effect size of .58. Also, Catholics scored significantly higher than Atheists on self-esteem, $t(129) = 2.69, p < .05$, containing a moderate effect size of .58. However, Atheists scored significantly higher than Protestants on self-esteem, $t(114) = 3.77, p < .05$ containing a very strong effect size of 1.15.

One-way ANOVAS were also performed to compare how citizens from the Philippines, Singapore, and Uruguay, scored on the different variables. Significant differences were found between the groups with regard to strength of religious faith, ($F(63.3,$

20.5) =106.3, $p < .05$), self-esteem, ($F(1.5, 17.3) = 3.13$, $p = .05$), and a loving God-image, ($F(11.2, 13.7) = 28.8$, $p < .05$). Strength of religious faith was highest among the Filipinos, followed by the Singaporeans and then by the Uruguayans. Coping with stress was highest among Filipinos, followed by the Uruguayans, then the Singaporeans. Self-esteem was highest among the Uruguayans, followed by the Filipinos, and then the Singaporeans. A loving God-image was highest among the Filipinos, followed by the Singaporeans, then the Uruguayans.

One-way ANOVAs were also performed to find whether differences existed among the different regions in the world with regards to Asians, Europeans, North Americans, and Hispanics. Stress levels were highest among the Asians, followed by the Europeans, followed by the North Americans, and then by the Hispanics. A loving God-image was highest among North Americans, followed by Asians, closely followed by Europeans, and thereafter by Hispanics. Also, intrinsic religiosity was the highest among North Americans, followed by the Europeans, closely followed by the Asians, and then by the Hispanics.

DISCUSSION

While the study only supported one of the eight hypotheses, numerous other results were found. The supported hypothesis, that is, that a loving God-image correlates with intrinsic religiosity, is in line with a previous study which found that participation in religious activities and in cultivating one's relationship with God, along with surrendering to God, or in other words, intrinsicness, are positively correlated to a God perceived as good instead of untrue, worthless, or distant, or in other words, loving (Maynard, Gorsuch, & Bjorck, 2001).

Reasons why the other hypotheses were not supported are important to analyze. No

significant correlations were found between intrinsic religiosity and stress levels and between intrinsic religiosity and coping with stress possibly because the definitions of intrinsic religiosity vary among religions. For example, among Catholics, intrinsic religiosity may signify practicing a set of rituals and works. However, such a definition may be viewed as extrinsic by Protestants who emphasize developing one's relationship with God as opposed to religious rituals. Hutchinson, Patock-Peckham, Cheong, and Nagoshi (1998) found a correlation between intrinsic religiosity and obsessive-compulsive cognitions/behaviors among Catholics but not among Protestants, implying that the definitions of intrinsic religiosity vary for the two religious groups. Also, the present study used Feagin's Extrinsic-Intrinsic Conceptual Factors (Feagin, 1964) which was tested primarily on Protestants in its making. Hence, perhaps this measure defined intrinsic religiosity according to the Protestants' perspective. This may also explain why a correlation between a loving God-image and intrinsic religiosity was found in the overall sample; over half the sample consisted of Protestants. Maynard, Gorsuch, and Bjorck (2001) suggest that an individual's God concept and a person's perception of other's beliefs, as well as other personal variables, are related to the way they perform their religious coping with regard to stress. Three religious coping styles were proposed by Pargament et al. (1988): the Self-directing style in which an individual tackles the problem him or herself and does not go to God directly to solve the problem, the Deferring style in which individuals give up solving the problem to God, and the Collaborative style in

which both the individual and God actively participate in the problem-solving process. Findings revealed that individuals feel most comfortable giving over their problems to a God who they believe cares for them and has the power to know, act on behalf of, and guide in times of distress. However, when individuals view God as false or distant, individuals prefer to solve problems on their own. Indeed, individuals' God concept may affect whether their strength of religious faith will affect how they cope with stress. Maynard et al.'s study also suggests that those who are either strong in their faith or intrinsically religious do not necessarily turn to religion for coping with stress, possibly explaining why in the present study, no correlation was found between strength of religious faith and coping with stress as well as between intrinsic religiosity and coping with stress. Another factor is that the religious orientations of the researchers of this study influenced how they defined intrinsic religiosity. Indeed, future research should note how a particular concept is defined before drawing conclusions about it.

Perhaps no correlation was found between strength of religious faith and coping with stress; intrinsic religiosity and coping with stress; self-esteem and intrinsic religiosity; self-esteem and strength of religious faith; and self-esteem and a loving God-image due to unrecognized variables. For example, if individuals do not look to religion as a main source of self-identity or comfort, it seems less likely that their religious faiths would affect their self-esteems. Other confounds to consider in regard to self-esteem are childhood experiences, relationships with parents and peers, and economic status.

Aside from analyzing why many of the hypothesized correlations were not supported, it is important to analyze the significant unpredicted correlations. For example, results revealed a negative

correlation between self-esteem and stress levels. This finding may imply that those with high self-esteem are more resilient, and, thus, experience lower levels of stress. At the same time, perhaps less stress levels better enable one to attain higher self-esteem. Future research may assess the causal direction of this relationship.

Findings also revealed significant correlations between strength of religious faith and intrinsic religiosity as well as strength of religious faith and a loving God-image. The former correlation is predictable in that the two variables may work together. That is, those who are intrinsically religious are internally driven to practice their religion and this internal drive may be fueled by their strength of religious faith. Regarding the correlation between strength of religious faith and a loving God-image, this was found especially among Protestants and Catholics probably because, in essence, both religious groups share elements that are the basis of their creeds (e.g., a loving and supportive God image).

Indeed, one must take note of the resulting differences in the main variables among the religions. For example, Protestants scored higher on intrinsic religiosity and strength of religious faith than Catholics. As explained earlier above, one must take into account the way in which Feagin's (1964) instrument defined intrinsic religiosity as well as the varied views that different religions have towards intrinsic religiosity, when observing that Protestants scored higher than Catholics in this study. Also, since strength of religious faith and intrinsic religiosity are related, as previously explained, it is no surprise that Protestants scored high on not just one but both variables.

Nevertheless, results did not reveal a significant difference among Catholics and Protestants with regard to the correlation between strength of religious faith and intrinsic religiosity, perhaps because the sample size for Protestants was significantly larger than the sample size for Catholics. On the other hand, the result may suggest that a strong correlation exists between strength of religious faith and intrinsic religiosity.

One interesting finding is that Catholics scored higher on self-esteem than Atheists and that Atheists scored much higher than Protestants on self-esteem. Since Catholics are more works-oriented, the above finding may have resulted because the Catholics' works, which are rewarded by the Divine as well as perhaps by social approval, increase self-esteem. It could be interpreted that through the performance of rituals, Catholics are able to express themselves and therefore relieve the internal pressures that generate low self-esteem.

Cultural variables may also have influenced the results. That is, about half of the Catholics consisted of Filipinos and almost all the Atheists consisted of Hispanics from Uruguay. The fact that the sample of Uruguayans consisted mostly of Atheists is first related to the sample size, and secondly, to the relatively undefined behavior of the Uruguayan people towards religion. Regarding the latter, in Uruguay, 66% affirm to be Roman Catholic yet less than half of the adults attend church on a regular basis, and 30% claim to be non-religious or other (CIA World Factbook 1998). Indeed, the Filipino and Hispanic cultures have been highly correlated due to the Spanish influence on both countries (Mamaed, 1994). Perhaps these cultures help cultivate self-esteem in their inhabitants due to their generally loving, warm cultures which promote being personal, looking out for one another, and being expressive (e.g. being affectionate, expressing emotions,

having parties) (Mamaed, 1994). The Protestant sample was more racially heterogeneous than the Catholic and Atheist samples, making it harder to draw conclusions as to why they scored lower on self-esteem. Nevertheless, approximately one-third of the Protestant sample consisted of Americans, who generally have a more fast-paced life than Filipinos or Hispanics. Such stressors may have an indirect, negative influence on self-esteem. Another finding that may show the influence of culture on self-esteem is that, in a separate analysis, self-esteem was highest among the Uruguayans, followed by the Filipinos, and then the Singaporeans. Note that those that scored the highest two on self-esteem were influenced by the Spanish culture.

Analyses were also conducted regarding how Asians, Europeans, North Americans, and Hispanics compared with regard to stress levels, a loving God-image, and intrinsic religiosity. Stress levels were highest among Asians, followed by Europeans, followed by North Americans, and then by Hispanics. The largest Asian samples in this study were from the Philippines and Singapore. Stress in the Philippines may result from harsher economic circumstances, high unemployment, and more rigorous environments. Gerson (1998) noted the economic circumstances and stated that poverty is the most pervasive in the Philippines in comparison to the other ASEAN (Association of South East Asian Nations) countries. "Some of the blame for the Philippines' slow progress in reducing the incidence of poverty can be attributed to past economic policies that retarded growth by discriminating against agriculture and discouraging investment in human capital." The

rigorous environment is partly seen in that those who are impoverished oftentimes live in crowded homes. A study by Lang (2000) noted that across different ethnic groups, crowded homes are stressful. If one does not live in a crowded home, perhaps the environment is crowded. For example, in the capital of the Philippines, Manila, the streets are crowded with traffic. Also, weather inclemency in the Philippines (e.g., monsoons, high temperatures, and humidity) may increase stress and encourage less sanitary conditions. Regarding the latter, hard rains result in floods which give rise to sooty rivers.

Stress in Singapore may result from driven working environments and the competitive school system. Regarding the former, Harrison (1995) conducted a study which confirmed Hofstede's concept that "job satisfaction will be lower, job tension higher and interpersonal relations poorer for managers in the high power distance, collectivist cultures of East Asian nations than for managers in the low power distance, individualist cultures of Anglo-American nations." Power distance refers to the degree to which societies deal with human inequality. Harrison's study particularly compared Singapore and Australia and found that Singapore managers reported a lower level of satisfaction with their jobs than Australian middle managers. Also, the levels of tension and stress due to work was higher in Singapore than in Australia. Regarding Singapore's competitive school systems, Saywell (2001) observed that the competitive school system "and anxieties among children about less-than-perfect grades is driving more of the country's youth into the armchairs of psychiatrists." He also mentioned a survey conducted on 1,742 children aged 10 to 12 conducted by the *Singapore Press Holdings* in the year 2000, wherein students said that "they were more afraid of exams than of their parents

dying." While the majority of Singaporeans in our sample had already completed college, the work ethic ingrained in them since young may have influenced how they presently handle work and deal with stress. It is not only Singaporean students but also children across Asia who encounter these issues.

Hispanics in this sample, on the other hand, had the lowest stress levels. This, too, may be due to their environment. For example, as stated by Epstein (2001), health care in Uruguay is provided by the government and Uruguay has the highest literacy rate in Latin America (i.e., 97.3% in 2000). Uruguay also has the strongest welfare state and is the prime supporter of democracy in Latin America. Furthermore, Uruguay maintains "strong state control and job security laws" and the welfare programs have created "a well-educated, egalitarian society." Also, Balaba (2001) noted that "less than 2% of Uruguayans live below the \$1 a day income poverty line." Also, unlike Singapore and the Philippines, Uruguay's weather conditions are less inclement. That is, Uruguay has four seasons with no extreme temperatures, winds, or rains.

With regard to a loving God-image, this was found to be highest among North Americans (the majority of who were from the United States), followed by Asians, closely followed by Europeans, and thereafter, by Hispanics (the majority of who were Atheists). It is no surprise that Americans scored the highest since previous research has shown that Americans tend to focus on the supportive and loving aspect of God, as opposed to the authoritative nature of God (Hertel, & Donahue, 1995; Nelsen, Cheek, & Au, 1985). Also, perhaps the Protestant church in America focuses on

the loving aspect of God more so than Protestant churches in other countries. Future research may assess this.

Cultural factors may have had an influence on the God-images in the different countries. For example, perhaps the way in which parents are viewed in the respective countries affects one's God-image. Research has shown an association between parenting styles or a parent's image of God and God-image (Hertel & Donahue, 1995; Buri & Mueller, 1993; Birky & Ball, 1988). Asians, for example, have high regard for their elders and while they believe in their parent's love for them, they are also very aware that disrespect toward them is taboo. Hence, they have a view of both the love and authority of their parents. In relation, a study by Hwa-Froelich and Westby (2003) compared Southeast Asian parents' views on education and parenting to the staff of those in the Head Start program (Head Start is a US government-run service which provides for the needs of children in low-income families.) The study found that Asian parents' educational goals for their children involved obeying authorities, gaining respect from others, and working hard. Unlike the Head Start staff, the Asian parents did not think that the development of independence and self-esteem were important goals since such goals could lead the children to become rebellious toward authorities. At the same time, it is important to note that differences exist even among Southeast Asians. For example, a study by Agbayani-Siewert (2004) found that Filipino-American students were more similar to white students than to Chinese-American students.

Aside from a loving God-image, intrinsic religiosity was highest among North Americans, followed by the Europeans, closely followed by the Asians, and then by the Hispanics. As stated above, it is important to note that the majority of

Hispanics were Atheists. Perhaps North Americans scored highest on this variable because intrinsic religiosity relates to Protestantism (especially with regard to having a personal relationship with the Divine), and the majority of North Americans in this sample were Protestants. Future research may analyze the degree to which Protestantism encourages a loving God-image.

The study also found that strength of religious faith as well as coping with stress was highest among Filipinos. Certainly, the Philippines is known for being a very religious country whereby even its politicians are spiritually oriented and strive to find favor with the Catholic Church (Mitchell, 2001). However, it is interesting that Filipinos scored highest on coping with stress. While the study found no overall correlation between coping with stress and strength of religious faith, future research can consider whether the Filipinos coped better with stress due to the latter variable. Indeed, previous research has shown that those experiencing severe stress are more likely to turn to religion for coping; this is Plante, Yancey, Sherman, and Guertin's (2000) explanation as to why no correlation between strength of religious faith and coping with daily stress was found in their sample.

The present study certainly observes the interactions that take place among religiosity, stress, and self-esteem, revealing that causal relations are difficult to identify and that third factors to any research are ever-present. Nevertheless, this should give future researchers an impetus for conducting more specific studies in relation to the above three variables.

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Appendix Online Scale

On the following scale,

Very rarely 00000 Very often

How often have you been upset because of something that happened unexpectedly?

How often have you felt that you were unable to control the important things in your life?

How often have you felt nervous and “stressed”?

How often have you felt confident about your ability to handle your personal problems?

How often have you felt that things were going your way?

How often have you been able to control irritations in your life?

How often have you found that you could not cope with all the things that you had to do?

How often have you felt that you were on top of things?

How often have you been angered because of things that were outside your control?

How often have you felt difficulties were piling up so high that you could not overcome them?

On the following scale,

Strongly disagree 00000 Strongly agree

My religious faith is extremely important to me.

I pray daily.

I look to my faith as a source of inspiration.

I look to my faith as providing meaning and purpose in my life.

I consider myself active in my faith or church.
My faith is an important part of who I am as a person.
My relationship with God is extremely important to me.
I enjoy being around others who share my faith.
I look to my faith as a source of comfort.
My faith impacts many of my decisions
I try hard to carry my religion over into all my other dealings in life.
Religion helps to keep my life balanced and steady in exactly the same way as my citizenship, friendships, and other memberships do).
My religious beliefs are what really lie behind my whole approach to life.
One reason for my being a church member is that such membership helps to establish a person in the community.
The prayers I say when I am alone carry as much meaning and personal emotion as those said by me during services.
It is important to me to spend periods of time in private religious thought and meditation.
The purpose of prayer is to secure a happy and peaceful life.
The church is most important as a place to formulate good social relationships.
What religion offers most is comfort when sorrow and misfortune strike.

If not prevented by unavoidable circumstance, I attend church:

at least once a week
two or three times a month
once every month or two
rarely

On the following scale:

Strongly disagree ooooo Strongly agree

The primary purpose of prayer is to gain relief and protection.

I read literature about my faith (or church):

Frequently
Occasionally
Rarely
Never

On the following scale:

Strongly disagree ooooo Strongly agree

On the whole, I am satisfied with myself.
At times I think I am no good at all.
I feel that I have a number of good qualities.
I am able to do things as well as most other people.
I feel I do not have much to be proud of.

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I certainly feel useless at times.
I feel that I'm a person of worth, at least on an equal plane with others.
I wish I could have more respect for myself.
All in all, I am inclined to feel that I am a failure
I take a positive attitude toward myself.
I imagine God to be rather formal, almost standoffish.
I think of God as more compassionate than demanding.
I think God even loves atheists.
I can't imagine anyone God couldn't love.
God can easily be provoked by disobedience.
God is looking for a chance to get even with me.
God's mercy is for everyone.
I think God only loves certain people.
Even if my beliefs about God were wrong, God would still love me.
God's compassion knows no religious boundaries.
Running the world is more important to God than caring about people.
I think God must enjoy getting even with us when we deserve it.

Please read the following scenario:

You have been saving money in your bank account. Your daughter gets seriously ill and her life is at risk. The only way that she can be cured is by receiving very expensive treatment that can be paid with the money in your bank account. Unexpectedly, your money is lost to bankruptcy and there is no way you can get your money back.

In light of the scenario, please respond to the questions below according to how you view this situation right NOW. There are no right or wrong answers.

On the following scale:

Not at all ooooo Extremely

Is this a totally hopeless situation?
Does this situation create tension in me?
Is the outcome of this situation uncontrollable by anyone?
Is there someone or some agency I can't turn to for help if I need it?
Does this situation make me feel anxious?
Does this situation have important consequences for me?
Is this going to have a positive impact on me?
How eager am I to tackle this problem?
How much will I be affected by the outcome of this situation?
To what extent can I become a strongest person because of this problem?
Will the outcome of this situation be negative?
Do I have the ability to do well in this situation?
Does this situation have serious implications for me?
Do I have what it takes to do well in this situation?
Is there help available to me for doing well in this situation?

Does this situation tax or exceed my coping resources?
Are there sufficient resources available to help me in dealing with this situation?
Is it beyond anyone's power to do anything about this situation?
To what extent am I excited thinking about the outcome of this situation?
How threatening is this situation?
Is the problem unresolvable by anyone?
Will I be able to overcome the problem?
Is there anyone who can help me to manage this problem?
To what extent do I perceive this situation as stressful?
Do I have the skills necessary to achieve a successful outcome to this situation?
To what extent does this event require coping efforts on my part?
Does this situation have long-term consequences for me?
Is this going to have a negative impact on me?

What is your religion?

Islam
Buddhism
Taoism
Hinduism
Protestant (please specify denomination):
Catholic (please specify denomination):
Atheist
No specific religion
Other (please specify):

In which country do you currently live?:
Of which country are you a citizen?:
What is your ethnicity?:

What is your highest level of education completed?
elementary school
High school
College

How old are you?

Don't forget to submit your research paper (and other outstanding work you have done in other psychology classes) for the 2006 issue of IFPS. It is a great learning experience and there is nothing like seeing your words in print.