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 Psi Chi Journal of Undergraduate Research

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Robert J. Sternberg is currently the Dean of the School of Arts and Sciences, Professor of Psychology, Adjunct Professor of Education, and Director of the PACE (Psychology of Abilities, Competencies and Expertise) Center at Tufts University. He is also Honorary Professor at the University of Heidelberg. His work at the PACE Center is dedicated to the advancement of theory, research, practice and policy advancing the notion of intelligence as modifiable and capable of development throughout the life span.

A member of the American Academy of Arts and Sciences, Dr. Sternberg’s research covers a wide range of areas, including intelligence, creativity, wisdom, leadership, love and close relationships, and hate. He is the author of over 1200 books and articles, and has won roughly two dozen awards for his scholarship. His research has taken him to five different continents, where he has studied the relationship between culture and competence.

Sternberg received his PhD from Stanford University and his BA summa cum laude and Phi Beta Kappa, with honors with exceptional distinction in psychology, from Yale University. He also has received 10 honorary doctorates. Sternberg is a past-president of the American Psychological Association (APA) and the Eastern Psychological Association (EPA), and has served on the Boards of Directors of the APA, APA Insurance Trust, and American Psychological Foundation. He is currently on the Boards of the American Association of Colleges and Universities and the Eastern Psychological Association.

How did you become interested in psychology?
As a child, I did poorly on IQ tests. I always wanted to understand why. So I decided in elementary school I wanted to study intelligence, and that is much of what I have done in my career. I actually started my formal investigation at age 13, in 7th grade. I needed to do a science project, so I chose to do a study of mental testing. I created my own test as part of the project. I found the Stanford-Binet Intelligence Test in the book, Measuring Intelligence, by Terman and Merrill, and thought it might be good practice to give the test to some classmates. The first one I gave the test to was a girl in whom I was romantically interested. I was hoping that giving her the test might help break the ice. I was wrong. Then I gave it to a classmate I had known in the Cub Scouts. He was another bad choice. He told his mother, who told the junior-high-school guid-
Who was your mentor? If you had more than one, please comment on each mentor.

I have had five terrific mentors in my life. The first was Mrs. Virginia Alexa when I was 10—in fourth grade. Before her, my teachers had thought I was stupid because I did poorly on IQ tests. My teachers had expected me to perform stupidly; I had done so; they were happy that I performed at the expected level, and I was happy that they were happy. Mrs. Alexa, in contrast, believed in me and helped me, for the first time, believe in myself. I went from being a mediocre student to being an excellent one.

The second was Endel Tulving when I was an undergraduate at Yale. I am still friends with him today, 35 years later! He taught me not to accept ideas just because others believe them. Once, we submitted a paper to *Psychological Bulletin*. It was rejected. Later, I needed to cite the paper, and I asked him how to cite it. He said I should cite it as “rejected by *Psychological Bulletin*.” I thought at the time he must be losing it—and I was going to advertise my failure? But I later realized the important message underlying his suggestion. If you have unpopular ideas, others will tend, at least at first, to dislike the ideas and possibly you. You have to stick up for your ideas and be proud of them. Creativity involves defying many obstacles.

The third mentor was Gordon Bower when I was a graduate student in psychology at Stanford. He was a wonderful graduate advisor. I was interested in intelligence, which had, pretty much, nothing to do with his interests. Nevertheless, he supported me spiritually and financially and encouraged me to follow my own interests. I learned from him that a good mentor should learn as much from his or her students as the students learn from the mentor. Always allow students to pursue their own dreams, not yours. I think Gordon has had many successful students because he helped them develop and nurture their own dreams.

The fourth mentor was Wendell Garner, when I was a junior faculty member at Yale. Negotiating Yale as an assistant professor was a great challenge, and he was enormously helpful. When I was being considered for tenure, I heard that it was not going so well because my field was intelligence, and intelligence is generally considered a not very prestigious area of psychology. I went to see Garner, and told him I thought I had made a mistake in defining my work as being in intelligence.

I could have done the same work and called it something else, like “reasoning” or “problem solving.” He told me that, when I had come to Yale, my goal was to make a difference to the field of intelligence. Now I was afraid that goal might cost me my job. I was right; it might. But, he said, that is what I should study, because that is why I entered psychology in the first place. He was right. In life, one has to take risks one really believes in, and this was a risk I had to take. It ended well when I got tenure.

The fifth mentor has been Jamshed Bharucha, Provost at Tufts, during my two years as Dean of the School of Arts and Sciences at Tufts. First, he was willing to take a chance on hiring me. Second, since I have started at Tufts, he has been an incredible mentor. Much of being an academic administrator is counter-intuitive, and administration is very hard to negotiate without good mentoring. For example, he taught me that the hardest thing in administration is not having good ideas, but getting buy-in for those ideas from all relevant stakeholders. If one leaves out even one group of stakeholders, that group may end up opposing the idea just because the members were never consulted. He also taught me that, sometimes, when people get what they want, they are disappointed rather than happy about it. The thrill may have been in the challenge, not in actually having the challenge succeed.

How much of your academic lineage or "family tree" do you know?

I know my whole lineage back all the way to Wilhelm Wundt! This is a very useful thing to know, because it helps you see your place in the evolving history of the discipline.

Do you have any advice for maximizing one's graduate school experience?

Yes. First, follow your own passions. There is always going to be a lot of pressure to do this, that, or the other thing because it is the "in" thing, or because your advisor does it, or because it is where the funding is at the moment. In the end, you will do your best work if you pursue your own dreams, not other people’s dreams, or other people’s dreams for you.
Second, find a great mentor. If you don’t have a good mentor, change. Graduate school is much more about mentorship than about taking courses. Having great mentorship can make all the difference, as it did to me. Whatever I have achieved has been in large part because of the mentors I describe above, and others like them.

What is your source or inspiration for research ideas? All my ideas come from failures in my own life. I try to understand why I failed at something, and that is the basis of the theory and later empirical work. I started studying intelligence because I did poorly on IQ tests; creativity when I, at one point, felt I had run out of ideas; wisdom when I gave a student really foolish advice; love when a relationship I was in was going badly; hate when I wanted to understand why half my family was killed by the Nazis during World War II; and leadership because when I was 11 I lost the election for the elementary-school student-council vice-presidency to Ted and I could not quite figure out why.

Do you have any tips for developing a successful research program? The main tip I have is to seek ideas in problems that interest you. The great thing about psychology is that, everyday, things happen in people’s lives that are puzzling. Research in psychology helps us understand why they happen. The lesser tip is to make sure that, when you have ideas, you understand that good ideas don’t sell themselves. You have to sell them—to mentors, other psychologists, laypeople, whomever. You need to be prepared to show why what you do is important. Do not assume others will see it unless you show them!

What is psychology’s biggest problem today? Psychology’s biggest problem today is disunity. Scientists are under-appreciative of practitioners, and vice versa. Often, even within science or practice, people of different viewpoints are intolerant of each other’s views. We hurt ourselves when we squabble and bicker. For example, practitioners give us a chance to show how our science can be used and for our science to do good. Moreover, most students who study psychology are interested in practice. Were there no practice, scientists would have few students. At the same time, without science, practice would be vacuous. Psychological practice would have no more to offer than do all the amateur psychologists of the world who believe they are experts in human behavior. Thus, science thus gives practice its content, and practice gives science much of its personal and societal impact and many of its students.

Where is psychology as a field headed? I am concerned about where psychology as a field is headed. Biological approaches have much to offer, but so do other approaches. I am concerned that we are becoming reductionist, and thereby losing some of our soul. When I was young, what attracted me to the field was that great psychologists asked big questions. They were people who made a difference not just to the field, but to the world. For example, over the years, great psychologists from Alfred Binet to Gordon Allport to Amos Tversky asked big questions. I'm concerned that the methods are getting more precise, but in the process, the questions are getting smaller.

What will be the most important areas of psychological research in the future? Areas are not important in themselves, I believe. It is great psychologists who make the areas important. If you have good ideas, you can make an area important to the field. It is better to follow your passions than to follow trends in areas.

What is the biggest area(s) of application for the psychology? There are many big areas of application. I do not think there is one biggest one. Certainly, how to use psychology to help achieve world peace is fundamental. Another fundamental one is how to use psychology to help people realize the importance of preserving the environment—before it is too late. For me, a big area of application is how we can use psychology to make a difference to how testing of intelligence, achievement, and related areas is done. Testing has been controlled commercially rather than scientifically, and I think we have paid a price for the commercial rather than scientific control of the field. When there is commercial control, the main goal is to maximize the bottom line rather than to do what is best for those who take the tests, or for the society that has come to be stratified in large part by people’s test scores. All societies stratify themselves in one way or another. There is no best way to do it. If we are going to use tests, at least we should use tests that measure broader skills—creativity, practical and emotional intelligence, wisdom—and not just the narrow memory and analytical skills current tests assess.
In its entire history, the human race has dealt with war and its aftereffects; the ever-present threat or fear of war has hung over our history, the twentieth-century perhaps more so than other eras, like a shadow (Duiker & Spielvogel, 2004). Media coverage of war has become more and more graphic as time has progressed; whereas photographs from the Second World War remained sequestered for years afterwards, photographs and video feed from the Vietnam conflict arrived in the U.S. with a 24-hour delay (Duiker & Spielvogel, 2004). The Gulf War of the early 90s was televised almost simultaneously, with the more recent conflict in Iraq being aired in a similar fashion. The coverage of combat situations is perhaps even harder to avoid now that there are more 24-hour news networks all airing footage simultaneously in addition to the presence of the internet and its varied news outlets. As the technology of war has advanced, so has the technology to observe war.

With these advancements in mind, it becomes important to understand how people will react to this barrage of imagery; the caveat here being that psychological research on war, and its effects, only seems to occur during and in years following the actual armed conflicts. In the years following World War II the focus of psychological research centered on the effects of war on soldiers (e.g., Ferguson, 1942; Stagner & Osgood, 1946; and Buss & Durkee, 1957). Perhaps due to the conflicting national opinions of the conflict, the Vietnam War brought an increased interest in research on attitudes and perception of civilians (e.g., Granberg & May, 1972; Rosenbaum & Rosenbaum, 1973; Glasmer, 1974; Ross, Lepper, & Hubbard, 1975; and Loh, 1975). Almost certainly due to its brevity, the first Gulf War sparked little research (e.g., Lester, 1994; and Doty, Winter, Peterson, & Kemmelmeier, 1997). Now, in the midst of a period of conflict with even more conflicts potentially arising, new studies on the psychology of war are imminent.

**Mental Processes in the Study of War**

The process of studying the psychology of war is complex. A variety of mental processes, past experiences, and countless other factors may influence how a given individual perceives an act of war, or the idea of war as a whole. In 1994, Lester conducted a study of students’ attitudes towards war and the factors that affected them. Lester studied traits such as masculinity/femininity, esteem, verbal hostility, locus of control, and orderliness/cleanliness. After comparing all

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**The Relationship Between Personality Traits and Students’ Perceptions of War Imagery**

This study investigated patriotism, nationalism, smugness (an extreme form of nationalism), authoritarianism, and negativism and suspicion (subgroups of aggression), and how these traits are related to perceptions of war imagery. Participants were 78 undergraduates (23 male, 55 female) that are native born U.S. citizens. Participants completed surveys for the above personality constructs, then viewed a series of 20 images depicting war and reported their level of support for war. It was hypothesized that high nationalism, smugness, authoritarianism, and suspicion will result in more positive perceptions, while high negativism will result in more negative perceptions. Patriotism will also influence perception in some way. Significant correlations were found between support for war and patriotism, nationalism, smugness, and authoritarianism.
of these different personality traits to a measure of attitudes towards post-Vietnam era wars, Lester found his only significant correlation to be between gender and pro-war attitudes: men tended to be more pro-war than women. In his concluding remarks Lester (1994) wrote, “the major finding [of the study] was that attitudes towards war are too complex and cannot be categorized into a few simple dimensions or components (p. 542).” In addition to attitudes, there are a number of other ways in which the various personality components associated with war influence an individual. In the present study patriotism, nationalism, group-based dominance orientation, smugness, authoritarianism, and two subscales of aggression: negativism and suspicion, will be assessed and compared to students’ perceptions of war imagery to see if these personality constructs play any role in how an individual perceives an image, and consequently the degree of support that person shows for war. The following sections detail these different aspects of personality and associated research.

**Patriotism.** Patriotism is a word very closely associated with war. Pena and Sidanius (2002) define patriotism as “love of and pride in a nation and its symbols (p. 783).” They focused their study on the presence of patriotism, nationalism, and group-based dominance orientation in different American racial groups. It was found that in the case of white Americans, African-Americans, Latinos, and Asian-Americans high levels of patriotism were always associated with a preference for white Americans; meaning that even members of minority groups with high levels of patriotism identified more with white Americans than with their own ethnic group. Pena and Sidanius (2002) believed this result to be related to the generalization that white Americans have more “proprietary rights” than other ethnic groups, and patriotism tends to be higher in the cases of those who have more rights. Still, it is seen how a person’s perceptions of their rights affects that person’s degree of patriotism; however, it is possible that there could be that the opposite of this relationship could also be true, and that high levels of patriotism could affect a person’s perceptions of their rights.

Pena and Sidanius’ findings are somewhat in conflict with the findings of O’Brien and Haider-Markel (1998). O’Brien and Haider-Markel (1998) found that members of militia groups in the U.S. tended to have very high levels of patriotism, despite commonly harboring views that the government was violating their individual rights on a regular basis. While this may at first seem confusing, it is important to keep in mind that patriotism is a love and respect for a nation and its symbols, but does not necessarily include a love for that nation’s leadership or political systems. Therefore, it is possible for militiamen seeking to reshape the political structure of America to still have a great love for the United States, and still be moved by the sight of American symbols such as the flag (O’Brien & Haider-Markel, 1998).

In 1992, Sullivan et al. brought the definition of patriotism into question, claiming that patriotism is not a static concept, but one that changes from time to time. Kosterman and Feshbach (1989) agreed, sighting stronger patriotic feelings in Americans when questioned about the attack on Pearl Harbor, but lower feelings when the same people were questioned about Japanese-American internment camps. Sullivan and his team concluded that although patriotism can influence many aspects of a person’s life, including how that person may vote, there is not, as yet, a complete definition of patriotism.

**Nationalism.** Nationalism may at first seem to be too similar to patriotism to merit its own functional definition; however, the personality construct of nationalism is subtly different from patriotism. Patriotism is a love for a country and its symbols. Nationalism, on the other hand, is a “sense of national superiority and dominance over other nations and peoples” (Pena & Sidanius, 2002, p. 783). In a 1994 study, Feshbach found that nationalism was positively correlated with support for military action and also, although somewhat less so, positively correlated with individual aggression. Using “militant music,” Feshbach also found that stimuli related to war could cause momentary increases in nationalism. Though in the same study, patriotism remained unaffected by the militaristic stimuli (Feshbach, 1994).

Like patriotism, nationalism is a very complicated aspect of personality and a number of factors contribute to it. Loh (1975) studied nationalism in Quebec, where the ethnic identities of the Flemish and the Walloons are in constant conflict. Loh (1975) divided nationalism into three subtypes: political nationalism, cultural nationalism, and bilingual nationalism. Loh’s subtypes of nationalism are, in essence, different groups a person can identify with. Loh (1975) believed that depending on the ethnic identity of the participant, and the number of languages participants spoke, there would be a difference in the type of nationalism the participant displayed. Loh (1975) found support for his hypothesis, illustrating the complex nature of nationalism as a personality construct, with no attention paid to how such a complex construct may affect attitudes.

In their study, Pena and Sidanius (2002) closely associated nationalism with group-based dominance orientation. The concepts are essentially the same; both indicate a feeling within a person that they, and...
by magnification their group of identification, are superior to other groups. The difference being that nationalism specifically refers to a national in-group. Even in the case of Loh’s subdivisions of nationalism, cultural nationalism and political nationalism still refer to people within Quebec (i.e., cultural nationalism refers to someone viewing themselves as a Quebecois Walloon, not just as a Walloon). Pena and Sidanius (2002) use a measure of group-based dominance as a measure of nationalism, however it is included here as its own construct: a feeling of in-group superiority not necessarily tied to a national identity.

Smugness. Another trait very close to, but not interchangeable with, nationalism is what Kosterman and Feshbach (1989) call smugness. Smugness represents an intense form of nationalism, where a participant’s nation is not superior to some other countries in some situations, but is instead superior in every way in all situations to all other countries. Smugness is, in simple terms, a feeling of hyper-nationalism. It was found that Democrats had much higher levels of patriotism and smugness than Republicans, while nationalism tended to be level across the two groups (Kosterman & Feshbach, 1989). Logically, political alignment will play a role in whether a person is in favor of certain military action. However, which political party people align themselves with is not so much an aspect of personality as it is a product of environmental factors (e.g., the party of your parents, spouse, your socioeconomic status, etc.; Sullivan, Fried, & Dietz, 1929).

Authoritarianism. Another personality trait that may be related to party alignment is authoritarianism (Sullivan et al., 1992). Authoritarianism, unlike patriotism and nationalism, does not represent one personality construct, but rather a collection of closely related personality constructs; the traits of conservatism, militarism, nationalism, and religiosity are all components of authoritarianism (Eckhardt, 1991). The Nazi war criminals prosecuted at the Nuremberg trial are considered the epitome of authoritarians (Eckhardt, 1991). Although feelings of superiority are characteristic of authoritarians, it is a mistake to say that authoritarianism is correlated to racism; racism is, in fact, a different construct, completely separate from authoritarianism (Eckhardt 1991). The superiority felt by authoritarians is more general and does not, by definition, include animosity towards another group (Eckhardt, 1991). Authoritarianism has, however, been shown to be related to a number of personality factors.

Doty, Winter, Peterson, and Kemmelmeier (1997) found no strong relationship between authoritarianism, gender, and support for the 1990-1996 Gulf War; however, they did conclude that participants who supported the war were motivated by different reasons. Although no one facet of personality accounted for a subject’s support for war, the combinations of personality traits differed from subject to subject. According to Doty and his colleagues (1997), men tended to show high levels of authoritarianism and support for the war to further their traditional gender roles, the aggression and physical activity associated with the act of war. Women, interestingly enough, showed the same pattern, they displayed high levels of authoritarianism and supported the war to support their traditional gender roles, manifested by the template of “the weeping widow” or “the victim”: recipient of the “sexualized violence” of war (Doty et al., 1997).

Authoritarianism has also been found to be closely related to militarism, a tendency toward military aggression, and nationalism (Eckhardt, 1991). No statistically significant relationship was found between militarism and nationalism; rather, the two traits were shown as components of personality strongly related to authoritarianism (Eckhardt, 1991). The meaning of this is that, by virtue of Eckhardt’s (1991) research, someone high in authoritarianism is more likely to favor military action and is more likely to feel his/her country has a right to be dominant over other countries. It is therefore reasonable to believe that authoritarianism is going to be related to how an individual perceives, feels, and acts about a war situation. Granberg and May (1972) illustrated this in their study of students’ attitudes towards the Vietnam War. They found that authoritarianism was negatively correlated with protest activity (Granberg & May, 1972), meaning that students with high authoritarianism scores tended not to engage in protest behavior against the war. Again, authoritarianism has been linked to support for military action.

Relationships With Aggression

However, authoritarianism like patriotism is not correlated with aggression. Furthermore, there has been little connection between individual aggression and support for war in past research (Feshbach, 1994). Rabbie (1989) points out that while personality constructs like patriotism and nationalism alone cannot indicate how aggressive a person will be, high levels of any in-group identification (e.g., nationalism) can lead to higher levels of aggression, or higher levels of support for group aggression, when that in-group is threatened or otherwise in competition with another group. Rabbi (1989) also found that groups tend to be less capable of restraining their aggression, and so it would then be reasonable to expect group aggression
to be much higher than individual aggression and to occur with less provocation. In terms of war these constructs become somewhat abstract, it is very hard to conceptualize an individual waging war on anything. However, in terms of intensity of aggression, it is relatively easy to equate the attitudes of war in the group, represented by actions and policy, to the opinions of and attitudes towards war displayed by individuals.

Struch and Schwartz (1989) found that there was no strong relationship between in-group favoritism and out-group aggression or aggression towards members of the out-group. These findings reflect a great deal of the research already presented. The distinction between feelings of superiority and racism in those high in authoritarianism is very similar, because the presence of superior feelings (or a preference for those of a like kind) does not imply hostility towards those who are not of a like kind. Similarly, the concepts of patriotism and nationalism again come into play here. A love for the in-group and its symbols does not necessarily imply a desire to harm or otherwise antagonize the out-group, even though that love for the in-group may include a feeling of superiority to the out-group.

The pattern in previous research seems to indicate that overall aggression is rarely linked to attitudes or perceptions of war. That is why aggression itself is not a variable in the present study, and the negativism and suspicion subgroups of aggression from Buss and Durkee’s (1957) research are used in its place. Negativism is defined as “oppositional behavior, usually directed against authority. This behavior involves a refusal to cooperate that may vary from passive non-compliance to open rebellion against rules or conventions” (Buss and Durkee, 1957, p. 343). The nature of negativism seems contrary to the nature of authoritarianism, and it is for that reason that negativism has been included as a variable in this study. If authoritarianism, which traditionally includes compliance as a characteristic, is related to support for military action than it seems reasonable that negativism, characterized by a distain for social convention, would be related to opposition of military action. This opposition to the action would then, by the theory of reactivity (Schwartz, Bless, Stack, Klumpp, Rittenauer-Schatka, & Simons, 1991), result in a predisposition to perceive images of war as negative, and consequently favor the idea of war less.

Buss and Durkee (1957) define suspicion as “projection of hostility onto others. This varies from merely being distrustful and wary of people to beliefs that others are being derogatory or are planning harm (p. 343).” Rabbie (1989) has pointed out that when a group perceives itself to be in competition with an out-group it will react more aggressively. On the individual scale this would translate to an individual who perceives himself in competition with others (or merely an other) to react more aggressively, and by extension favor more aggressive responses. When this assumption is combined with Rothman and Hardin’s (1997) study on heuristics in social judgment, which found a tendency for people to apply more negative schemas with regards to out-groups, it seems reasonable to assume that suspicious people will favor aggressive actions towards out-groups, and therefore apply their negative interpretations to images of such aggression. Stagner and Osgood (1946) also found that individual perceptions of individuals could affect perception of specific situations. Stagner and Osgood’s (1946) findings that stereotypes of other nations can affect the interpretation of political events, support the supposition that an individual’s schemas for certain groups of people will color how that individual will perceive a given image.

Support for War

The Stagner and Osgood (1946) study, as well as the Rothman and Hardin (1997) study, relate directly to the variable concerned with perceptions of war imagery; support for war. Stagner and Osgood (1946) found that war, and information about war, has “drastically” changed American perceptions of Germans, Russians, the English, and the French. Considering that Stagner and Osgood worked in the years immediately following World War II, it seems likely that in light of changes in world politics, not to mention the collapse of the Soviet Union, perceptions of the aforementioned groups are very different from the way Stagner and Osgood found them. The basic principle, however, remains the same; information is capable of altering perception of certain groups (Stagner & Osgood, 1946).

Rothman and Hardin (1997) found that preexisting schemas could influence memory and behavior in certain social settings. Again, as in Stagner and Osgood’s study (1946), schemas, an underlying cognitive component of the self, are being altered by a external stimulus. Perception of the given situation leads a particular schema to be recalled and applied (Rothman & Hardin, 1997). The personality traits examined in the present study are similar to Rothman and Hardin’s (1997) schemas in that they are components of the self that influence how certain things are perceived: in this case, images of war. Our schemas are formed by our experiences, and experience is only possible through the filter of personality (Rothman & Hardin, 1997). Therefore, just as Rothman and Hardin’s (1997) schemas affected memory and behav-
ior, so too will the various personality traits assessed in the present study affect perception of imagery.

Schwartz, Bless, Strack, Klumpp, Rittener-Schatka, and Simons (1991) conducted an experiment similar to Rothman and Hardin. Schwartz et al. (1991) found that recall of information became harder when participants were reminded of instances where they had been less assertive than they tend to view themselves. The more less than normal assertive behaviors the participants recalled the worse their performance on a memory task. Here, unlike in the Rothman and Hardin experiment, memory is being altered directly by an aspect of personality: self-perception (Schwartz, Bless, Strack, Klumpp, Rittener-Schatka, & Simon, 1991). Schwartz et al. shows the direct link between personality and behavior; this study leads directly into the present study, an observation of how the various personality traits already discussed, influence how an individual perceives imagery of war.

It is hypothesized that students with high levels of nationalism will show more support for war than students with low levels of nationalism. Similarly, students high in levels of group based dominance orientation will show more support for war than students low in group based dominance orientation. Also, students high in smugness will show more support for war than students low in smugness. Similarly, it is believed that students high in authoritarianism will show more support for war than students low in authoritarianism. Contrarily, it is hypothesized that students high in negativism will show less support for war than students low in negativism, while students high in suspicion will show more support for war than students low in suspicion. While a relationship between patriotism and perception of the images is expected, the hypothesis is non-directional.

**Methods**

**Participants**

78 undergraduates participated in this study. Participants were drawn primarily, but not entirely, from the freshman Introduction to Psychology courses and the Psychology Department Research Participant Pool. There were more female participants than male participants, as the gender demographics for the university are roughly 70% female and 30% male. The same percentages were found in the sample which was composed of 55 female participants (70.5%) and 23 male participants (29.5%). Participants ranged in age from 17 to 32, and because the majority of participants were freshman, the mean age was 19.6 years. Because the experiment deals with concepts very closely related to national identity, such as patriotism and nationalism, only citizens of the United States participated. Participants were recruited on a voluntary basis and were not compensated by the experimenter for their time. Instructors may have encouraged participation in studies by offering class credit.

**Materials**

**Patriotism.** Patriotism was assessed using two surveys; the Pena and Sidanius (2002) patriotism and group-based dominance orientation survey, and the Kosterman and Feshbach (1989) patriotism, nationalism, and smugness survey (see Appendix B). Questions 1 to 3 on the Pena and Sidanius survey correspond to patriotism. Each question is answered using a 5-point Likert-type scale where 1 (strongly disagree) represents low patriotism and 5 (strongly agree) represents high patriotism. The internal consistency for this survey was 0.77.

Questions 1 through 12 of the Kosterman and Feshbach scale correspond to patriotism. Each of these questions is scored using a 5-point Likert-type scale where 1 (strongly disagree) represents low patriotism and 5 (strongly agree) represents high patriotism. Five items are reversed scored, specifically numbers 6, 9, 10, 11, and 12. In the case of these questions, a score of 1 (strongly disagree) represents high patriotism and a score of 5 (strongly agree) represents low patriotism.

**Nationalism.** Nationalism was measured using the Kosterman and Feshbach patriotism, nationalism and smugness survey. Questions 13 through 20 of the Kosterman and Feshbach survey correspond to nationalism. Questions number 13 through 19 are scored using a 5-point Likert-type scale where a score of 1 (strongly disagree) represents low nationalism and a score of 5 (strongly agree) represents high nationalism. Question number 20 is reverse scored, so a score of 1 (strongly disagree) represents high nationalism and a score of 5 (strongly agree) represents low nationalism.

**Group Based Dominance Orientation.** Group-based dominance orientation, as already discussed, is a personality construct similar to nationalism. The central difference is that group-based dominance orientation does not necessarily divide people into national in-groups. The trait was assessed using the Pena and Sidanius patriotism and group-based dominance orientation questionnaire. Questions 4 through 9 on the Pena and Sidanius survey correspond to group-based dominance orientation. Each question is scored with a 5-point Likert-type scale where a score of 1 (strongly disagree) represents low group-based dominance orientation and a score of 5 (strongly agree) represents high group-based dominance orientation. The measure was found by its creators to have an internal consistency of 0.80.
**Smugness.** Smugness, an extreme form of nationalism, was assessed using the smugness scale of Kosterman and Feshbach’s survey. Questions 21 through 24 correspond to smugness. Each question is scored using a 5-point Likert-type scale where a score of 1 (strongly disagree) represents low smugness and a score of 5 (strongly agree) represents high smugness. None of the items are reversed scored.

**Authoritarianism.** Authoritarianism was assessed using the Altemeyer (1991) right-wing authoritarianism scale. The entire 24-item questionnaire was used. Each question is scored using a 6-point Likert-type scale where a score of 1 (disagree strongly) represents low authoritarianism and a score of 6 (agree strongly) represents high authoritarianism. 12 of the 24 items are reversed scored, specifically items 2, 5, 6, 8, 9, 11, 13, 16, 18, 19, 22, and 23. In the case of these items a score of 1 (disagree strongly) represents high authoritarianism and a score of 6 (agree strongly) represents low authoritarianism. Reliability for the measure has been found to be 0.90; validity of the measure, however, was not discussed in detail as higher reliability measures, tend to have lower validity (Altemeyer 1991).

**Negativism and Suspicion.** The Buss and Durkee hostility survey (1957) was used to assess negativism and suspicion. Questions 1 through 5 correspond to negativism and questions 6 through 15 correspond to suspicion. Each question is scored using a weighting system. In the case of most items “true” answers are preferable and indicate the presence of the specific type of aggression. However, there are some reverse, or “false,” scored items, where the answer of “false” indicates the presence of the specific type of aggression. Questions number 14 and 15 are “false” scored item.

**Support for War.** Support for war was assessed using an experimenter-constructed questionnaire. For each of the 20 images the following 2 statements were given. 1) I would say this picture makes me favor the idea of US military action and 2) I am certain I know who/what this is a picture of. Each question is scored on a 5-point Likert-type scale where a score of 1 (disagree strongly) represents little support for war and a score of 5 (agree strongly) represents a great deal of support for war. The second question was to ensure that the student understands what is being presented. A low score, below 2, on the second question indicates a problem with the reliability of the answer to the first question. If the students do not feel certain in any way that they understand who or what they are looking at, their perceptions of the image will not be as accurate as the perceptions of students who are certain what they are looking at.

**Design and Procedure**

The study is a non-experimental, correlational design. The variables are the personality constructs of patriotism; nationalism, including the related construct of group-based dominance orientation; smugness, an extreme form of nationalism; authoritarianism; negativism and suspicion, each subscales of aggression; and support for war as determined by question 1 of the image perception questionnaire. Because the focus of this study is on perceptions of war imagery it is difficult to establish controls.

A person’s attitudes towards war, and by extension their perceptions of war imagery, are deeply personal and influenced by a number of traits and personal experiences. A relatively large sample size was sought in an attempt to control for a few individuals with extreme views from upsetting the data set. Furthermore, non-U.S. citizens were excluded from the sample set because the focus of this study is on American perceptions of images of American armed conflict. Therefore the perceptions of non-U.S. students will likely be colored in some way by their nationalism/patriotic feelings for their country of origin.

A varied list of personality traits was assessed in this study because the relationships between patriotism and nationalism to attitudes and perceptions have been shown to be complicated in the past (e.g., Pena & Sidanius 2002, Lester 1994, Rosenbaum & Rosenbaum 1973, Granberg & Mary 1972, and Stangner & Osgood 1946). By assessing multiple personality traits it becomes easier to identify if any traits, or if an interaction between any traits, impacts perception in some way by removing some doubt as to if the measured effect alone were responsible for the influence; for example, if patriotism alone were studied and a relationship between patriotism and perception were found, it would not be clear if patriotism alone were responsible for that relationship.

The study was conducted in groups ranging from 2 to 15 people. Each participant was given the five personality surveys once they had read and signed the informed consent form. Following the completion of the six personality surveys the participants were given the image perception questionnaire. The participants were then shown the 20 images constituting the image set and asked to respond to the questions for each image. The image set was given to the participants at the same time as the image perception questionnaire. Following the end of the image set the experimenter collected the surveys and the participants were debriefed as to the nature of the study and urged to contact the Student Counseling Center should they feel bothered in any way by the images. Following the debriefing the participants were free to leave. Each
session lasted somewhere between 20 and 35 minutes, depending on how much time participants took to fill out the six questionnaires.

**Results**

**Patriotism**
For the variable of patriotism a significant positive correlation was found with support for war. Both patriotism as determined by the Kosterman and Feshbach (1989) survey ($r(76) = .570, p < .01$) and patriotism as determined by the Pena and Sidanius (2002) survey ($r(76) = .568, p < .01$) yielded positive correlations with support for war. Furthermore an average of the two patriotism scores was also correlated with the support for war scores and a significant correlation was found ($r(76) = .583, p < .01$). The coefficient alpha for the Kosterman and Feshbach scale was found to be .9311, while the coefficient alpha for the Pena and Sidanius survey was found to be .91.

**Nationalism**
Nationalism as assessed by the Kosterman and Feshbach (1989) survey yielded a positive correlation with support for war ($r(76) = .602, p < .01$). The coefficient alpha for this measure was found to be 0.85.

**Group Based Dominance Orientation**
The trait of group based dominance orientation was hypothesized to show the same trend as nationalism, as the concepts are very closely related. This belief was supported by the data. A significant correlation was found between group based dominance orientation and support for war ($r(76) = .423, p < .05$). The coefficient alpha for this measure was found to be 0.87.

**Smugness**
Smugness, another trait closely related to nationalism, was positively correlated with support for war ($r(76) = .633, p < .01$). The smugness measure was found to have a coefficient alpha of .85.

**Authoritarianism**
Authoritarian scores from the Altemeyer right wing authoritarianism scale (1991) found a positive correlation with support for war ($r(76) = .633, p < .01$).

**TABLE 1**

<table>
<thead>
<tr>
<th></th>
<th>Support for War</th>
<th>Patriotism 1</th>
<th>Patriotism 2</th>
<th>Overall Patriotism</th>
<th>Nationalism</th>
<th>Smugness</th>
<th>GBDO</th>
<th>Authoritarianism</th>
<th>Negativism</th>
<th>Suspicion</th>
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<td>.242*</td>
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<td>.655**</td>
<td>.530**</td>
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<td>-.016</td>
<td>-.045</td>
<td>.361**</td>
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</tr>
</tbody>
</table>

** **$p < 0.01$, *$p < 0.05$, $N = 78$
0.01). This measure was found to have a coefficient alpha of .86.

**Negativism**

No significant correlation was found between the negativism subscale of aggression (Buss and Durkee 1957) and support for war ($r(76) = .030$). The negativism measure was found to have a low coefficient alpha, .40

**Suspicion**

Similarly, there was no significant correlation found between the suspicion subscale of aggression and support for war ($r(76) = .082$). The suspicion measure, like the negativism measure, was found to have a low coefficient alpha, .0341.

**Support for war**

Responses to question 1 on the image questionnaire, “This image makes me favor the idea of U.S. military action,” for each of the 20 images were averaged to find an overall score, called support for war. Correlations between the other personality variables and the support for war for each individual image showed no noticeable trend. That is to say, no one image appeared to have higher levels of support than all others in all participants. However, the coefficient alpha for the questionnaire was found to be .920. No images were removed from the sample based on responses to the second question: “I am certain I know who/what this is a picture of.” The mean responses showed least certainty ($M = 2.3205, SD = 1.2431$) for image 2 (a photo of the Kosovo conflict) and the most certainty ($M = 4.5256, SD = 1.00291$) for image 19 (the flag raising at Iwo Jima).

**Other Findings**

Correlations were found between many of the measures (Table 1). The Kosterman and Feshbach patriotism score (pat1) correlated positively with scores for nationalism, smugness, and authoritarianism as well ($r(76)_{nat} = .344, r(76)_{smug} = .573, r(76)_{auth} = .646, p < .01$). Similarly the Pena and Sidanius patriotism score (pat2) also correlated positively with the same other scores ($r(76)_{nat} = .421, r(76)_{smug} = .569, r(76)_{auth} = .656, p < .01$). Logically, the overall score for patriotism also correlated positively with these variables ($r(76)_{nat} = .397, r(76)_{smug} = .585, r(76)_{auth} = .667, p < .01$). Also, nationalism positively correlated with smugness, as well as authoritarianism ($r(76)_{smug} = .592, r(76)_{auth} = .603, p < .01$). In addition smugness positively correlated to authoritarianism ($r(76) = .517, p < .01$). Group based dominance orientation correlated significantly with nationalism, smugness, and authoritarianism; also, a weaker correlation was found between group based dominance orientation and the Pena and Sidanius patriotism measure ($r(78)_{nat} = .655, r(78)_{smug} = .530, r(78)_{auth} = .444, p < .01, r(78)_{auth} = .242, p < .05$).

**Discussion**

Many, but not all, of the hypotheses set forth in the beginning of this project were supported. The patriotism hypothesis was supported; a relationship was found between patriotism and support for war. The original hypothesis was non-directional, however, the relationship was found to be a positive one. Students high in patriotism—on either scale and in overall patriotism—were found to show more support for US military action than students low in patriotism. The nationalism hypothesis was also supported; students high in nationalism were found to show more support for US military action than students low in nationalism.

Group based dominance orientation, is closely related to nationalism (Pena & Sidanius, 2002), and so there was also a relationship found between group based dominance orientation and support for war as well as between group based dominance orientation and nationalism and smugness. Therefore, the group based dominance orientation hypothesis was supported. Interestingly enough, in the Pena and Sidanius (2002) study where the measure was developed, a relationship was found in their study between patriotism and group based dominance orientation. In the current study such a relationship was found, but it was a relatively weak relationship. Group based dominance orientation was more closely related to nationalism, smugness and authoritarianism. Logically though, group based dominance orientation would relate very closely to these concepts, as smugness is itself an extreme form of nationalism, and one of the traits of authoritarianism is nationalism. Even Pena and Sidanius (2002) describe group based dominance orientation as being closely related to nationalism.

Likewise, the smugness hypothesis was supported; students high in smugness were found to show more support for US military action than students low in smugness. It is logical that smugness would show a correlation similar to nationalism’s as smugness is defined as a severe form of nationalism. In the same line of thinking, it is also logical that there was a positive correlation found between nationalism and smugness. The authoritarianism hypothesis was supported: it was found that students scoring high on the authoritarianism measure also showed higher levels of support for US military action than students scoring low on the authoritarianism measure.

Neither the negativism nor suspicion hypotheses were supported. Students high in negativism were not
found to show lower levels of support for US military intervention than students low in negativism; and students high in suspicion were not found to show higher levels of support for US military action than students low in suspicion. These measures were both found to have very low internal consistency as measured with coefficient alpha. However, the findings of Buss and Durkee (1957) showed no correlation between measures of patriotism or nationalism and aggression. For this study smaller subscales of aggression were studied instead of an overall aggression variable in the hope that some relationship may appear. Unfortunately, no relationships appeared. It is possible than measures for these subscales of aggression that are more reliable could yield different results, however, given the findings of Buss and Durkee, it does not seem likely that any relationship exists between these subscales of aggression and patriotism, nationalism, or support for war.

The images used in the current study all yielded some variation in support for war between subjects and appeared to elicit some response to at least one of the variables. Also, they all appeared to be readily identifiable, although more recent conflicts such as Kosovo and some South American conflicts of the 1990s were not as easily recognized by subjects as images of Vietnam and World War II. It is possible that the correlations would be stronger if the images used were all from a specific war. It would be interesting to see how students today perceive the events of the Vietnam War. Perhaps future researchers could consider this as an option: using images entirely from one war. Similarly, it would be interesting to see what results would be found if all the images used were from the most recent conflicts (e.g. Kosovo, Somalia, Iraq, and Afghanistan). Iraq and Afghanistan were not included in this study because of the topical and potentially very personal connections subjects could have if they themselves have family in the military. However, the feelings of students about the current (or at least, most current) military action should be recorded, if for no other reason than to be compared to feelings about the same conflict years later.

It was suggested by several participants that images of humanitarian efforts could be included in the image set. It was commented that all of the images appeared to be of the negative actions taken during war, and none showed the good done by US soldiers. Originally some images of humanitarian effort were included in the image set. However, these images were removed because they were not very clear when or where they were occurring. In future research, however, these pictures could be included to see if any difference is seen as to how students react to images of soldiers dispensing food and medicine or removing land mines, for example. While it will be harder to find such images, as Humanitarian organizations like the Red Cross tend to be more active in such activities than combat soldiers, and because photojournalists are more apt to take pictures of more sensational situations and therefore less images of humanitarian efforts exist.

This study was limited by some of the instruments being poor in internal consistency as measured with coefficient alpha and also by the scale of the study. If more funding had been available higher quality reproductions of the images could have been used, and a larger sample could have been gathered by offering some form of compensation for participants. Had they been compensated the image set could have been larger, as participants would not object greatly to 10 or 15 more images were they being compensated in some way, be it with food or money. With a larger sample size the sample could be further broken down into Americans of various ethnic identities, which could yield very interesting results. It is unlikely, given the findings of past researchers that any relationship exists between aggression and any war related personality constructs. With that in mind, future researchers may remove the measures of negativism and suspicion from the survey set.

References


When coming to live on a university campus, students are in many cases away from home and the watchful eye of their parents for the first time. In a sense, they are living on their own but they must, in fact, live according to the standards of the university. The Office of Residential Life is the department in charge of creating rules and regulations and then implementing and enforcing them. This authority over students may be met with any number of responses. Personality may play an important role in their reactions.

Lounsbury and DeNeui (1996) reported Extraversion scores correlated significantly with psychological sense of community (PSC) scores and resulted in more interactions and more involvement in activities. Extraverts sought out shared experiences and engaged in social interaction. In addition, extraverts came to campus with high expectations for social involvement and community. Introverts, on the other hand, interacted less often and spent less time socializing.

Morossanova (2003) reported that extraverts are also impulsive. This study found negative correlations between Modified Eysenck Personality Questionnaire scores with both planning and flexibility. Extraverts showed fewer instances of self-regulation than introverts. The profile of the extravert showed high action programming with little developed goal planning. Introverts were more meticulous in planning their actions and considering different plans whereas extraverts were more likely to act and then consider their actions later.

Fischer, Smith, Anderson, and Flory (2003) investigated the effect extraversion plays in drinking behaviors of college students. Extraverted individuals were more likely to have social expectancies of alcohol as a facilitator of social interaction. Hussong (2003) reported that extraverts have social motives for their drinking that unfortunately predict more problem behaviors. With the expectation that alcohol facilitates social behavior, extraverts are more likely to engage in behaviors that violate Residential Life policy.

Extraverted individuals are expected to have more involvement in social situations as well as underage drinking alcohol in social situations which is associated with risky behaviors which is associated with infractions of Residential Life rules and negative opinions of this office. This study linked college conduct problems to personality through alcohol. Important differences between seniors and freshman, sophomores, and juniors were frequently noted.

Kathryn Alarcon (1985-2007) passed away suddenly at age 22, shortly after joining Psi Chi and earning her BS with honors in psychology at Fordham University. This revised article is dedicated to her memory. Address any inquiries to her mentor Warren W. Tryon, wtryon@fordham.edu or Department of Psychology, Fordham, 441 East Fordham Road, Bronx, NY 10458-9993.
drinking and thus have more experiences with the Office of Residential Life. Vik, Carrello, Tate, and Field (2000) reported that 75 – 90% of college students reported alcohol consumption and that this consumption often contributed to interactions with authority figures. 33.9% of 342 participants reported authority problems on campus including 23.7% reporting getting into trouble with their resident assistant. Extraverts are therefore expected to be more likely to react unfavorably to such involvement Introverted individuals, however, are expected to have less involvement with the Office of Residential Life and, as a result, hold a more favorable view of the office. They are likely to have interacted with the office only under non-stressful, problem-free situations as opposed to interactions concerning problematic behavior or rule violations.

Obst and White (2005) found that social identification factors such as association within groups and ties to these groups predicted a student’s psychological sense of community. This sense of community related positively to affect as well as cognitive aspects of the person. Pretty (1990) found that a positive feeling towards community in a residence hall was associated with environmental success as well as better interpersonal relationships. Involvement was significantly related with the psychological sense of community. The community within a residence hall relies on the interactions between students and each other as well as students and authority figures. These interactions provide numerous opportunities for personalities to either mesh or clash.

One very important issue students in a residential life setting face is that of interacting with authority figures who very often are fellow students. Dormitory residents frequently disagree with Resident Advisors regarding the boundaries between personal choice and college authority. Helwig, Arnold, Tan, and Boyd (2003) noted that people question authority based on what they believe to lie within the purview of their own personal autonomy.

The purpose of the present study was to study personality as a contributing factor to the frequency with which students encounter the disciplinary arm of Residential Life. Specifically, this study aimed to identify the role that introversion-extraversion plays in situations where students are interacting with authority figures in their places of residence.

**Method**

**Participants**

Participants were 149 undergraduate students between the ages of 18 and 22. A total of 126 were female (84.6%) and 22 were male (14.8%) and 1 participant (.7%) failed to indicate their gender. A total of 10 participants were freshmen, 59 sophomores, 49 juniors, 23 seniors, and 17 did not report their class year. Regarding ethnicity, 119 (79.9%) were non-Hispanic whites, and the remainder Black (8), Hispanic (8), East Asian (3), South Asian (1), American Indian (1), and “other” (9). The sample was drawn from Fordham University’s Rose Hill campus which is a private, Jesuit university in the Bronx, New York. The University’s demographics were reported at the time of this study as 58.8% female and 75.3% were Non-Hispanic/White. Participants needed to have been on-campus residents in university housing for at least one semester. Participation was completely voluntary with no compensation given.

**Measures**

Participants initially completed an informed consent sheet. They then completed a demographic questionnaire including gender, class year, ethnicity, and GPA. Participants then completed a Residential Life Survey regarding the level and quality of interaction participants had had with Residential Life staff members at their university. This measure consisted of ten items that were answered using a five point Likert-type scale. Finally, participants completed a brief version of the Eysenck Personality Questionnaire (EPQ-BV: Sato, 2005). This version of the Personality Questionnaire was designed to identify introversion/extraversion as well as neuroticism using a short but reliable scale. The Eysenck Personality Questionnaire Brief Version is a scale that has been adapted from the longer version. The psychoticism scale was eliminated by Sato because his abbreviated scale was intended to be used with college students. The introversion/extraversion (I/E) and neuroticism scales were reduced by Sato to two 24 item scales. Participants register their responses on a five point Likert-type scale where 1 is not at all and 5 is extremely. Items 13 and 19 are reverse scored. The sum of the odd numbered items constitutes the I/E score where high scores indicate extraversion and low scores indicate introversion. The sum of the even numbered items constitutes the neuroticism score where high scores indicate a strong degree of neuroticism. Both measures took approximately five to ten minutes to complete.

**Procedure**

Participants were given the option of completing the questionnaires at floor meetings held in every building on campus prior to the university’s spring break. The meetings were a gathering of all residents living on a particular floor in a building. Buildings
were chosen based on the time of their meetings as well as the population of the building as it was the hope for a balance between freshmen, sophomores, juniors, and seniors. If they chose to participate, participants read and signed an informed consent form and instructed that participation was completely optional. Approximately one third of the students solicited chose to participate in the study. Participants were then given the questionnaire designed for gathering information concerning residential life followed by the Eysenck Personality Questionnaire Brief Version. Questionnaires were distributed and collected by the first author.

**Results**

Table 1 shows that students were mainly sophomores having been on campus for just over a year and a half on average. The participants were good students with a reported G.P.A. of 3.86 (SD = .71). Table 2 presents the means and standard deviations for the residential life questions. The highest mean score for the questionnaire concerning the Office of Residential Life and interactions with them was for the question of how satisfied students were with their overall on-campus experience. The means were also high for the questions of the importance of the Residential Life staff, how pleased students were with their interactions with these staff members, and how fair students believed the rules in the residence halls were. This is consistent with low scores for negative feelings towards the Office of Residential Life. The mean for the question regarding the frequency of use of alcohol was also high, higher than the frequency with which students reported participating in Residential Life sponsored programming. Participants did not report high levels of feelings that alcohol negatively affecting life in a residence hall.

| TABLE 1 |
|---|---|---|
| **Descriptive Statistics for Demographic Information** |
| Item | Mean | SD | N |
| Class year | 1.60 | .84 | 141 |
| G.P.A. | 3.86 | .71 | 148 |

| TABLE 2 |
|---|---|---|
| **Descriptive Statistics for the Residential Life Survey** |
| Item | Mean | SD | N |
| How many semesters, including the current one, have you lived on campus? | 2.61 | 1.00 | 149 |
| How often do you participate in programming put together by Residential Life staff? | 2.06 | .86 | 148 |
| How many times have you been documented by an employee of the Office of Residential Life? | 1.57 | .78 | 149 |
| How pleased are you with your interactions with Residential Life staff members? | 3.40 | .82 | 149 |
| How important do you think the presence of Residential Life staff members in the residence halls is? | 3.53 | .87 | 149 |
| How fair do you think Residential Life rules in the residence halls are? | 3.12 | .95 | 149 |
| How satisfied are you with your overall on-campus experience? | 3.60 | .96 | 149 |
| How frequently do you consume alcohol? | 3.05 | .98 | 146 |
| How many alcoholic drinks do you typically consume per event? | 2.96 | 1.06 | 149 |
| To what degree do you think alcohol negatively affects life in the residence halls? | 2.79 | 1.05 | 149 |
Table 3 presents descriptive statistics for the Extraversion and Neuroticism scales of the EPQ-BV. Reliability was assessed using Cronbach’s coefficient alpha (Cronbach, 1951). The internal consistency of the Extraversion score was .94 and the internal consistency of the Neuroticism score was .88. An indirect indicator of scale validity is the expectation that the Extraversion and Neuroticism scores are inversely related on the basis that neuroticism consists mainly of depression and anxiety which are internalizing, in contrast with externalizing, symptoms. The significant negative correlation between neuroticism and extraversion on the EPQ-BV, $r(135) = -.36$, $p < .001$, supports the validity of this scale. Further evidence that the EPQ-BV is measuring what it purports to measure is provided by the results of an exploratory factor analysis for which the scree plot revealed two main components (see Figure 1). Notice that the third factor is both much lower than the second factor and comparable to the fourth and remaining factors. This pattern favors a two-factor interpretation.

<table>
<thead>
<tr>
<th>TABLE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive Statistics for Sato’s Modified Eysenck Personality Questionnaire</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPQ Extraversion score</td>
<td>42.55</td>
<td>8.76</td>
<td>145</td>
</tr>
<tr>
<td>EPQ Neuroticism score</td>
<td>29.72</td>
<td>8.52</td>
<td>141</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FIGURE 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scree plot for the exploratory factor analysis of the brief version of the Eysenck Personality Questionnaire (Sato, 2005).</td>
</tr>
</tbody>
</table>

Personality Related Correlations

Pearson product moment correlation coefficients were calculated to quantify the relationships among personality, alcohol consumption, residential life attitudes, and behavior (infractions). It was expected that students with high extraversion would report higher levels of dissatisfaction with the rules set forth and those who enforce the rules. How fair students believed the rules set forth by the office of residential life to be was negatively correlated with extraversion, $r(143) = -.20$, $p < .02$. On the basis that students mature as they go through college and on the basis that the legal drinking age in New York State is 21 which means that typically only seniors are of legal age, the data for the 23 seniors were analyzed separately from the 114 other participants. Fairness was negatively correlated with extraversion for freshman, sophomores, and juniors, $r(112) = -.24$, $p < .02$, but positively for seniors, $r(21) = .29$, $p < .051$. Although not significantly different from zero, these two correlation coefficients are significantly different, $Z = 2.23$, $p < .05$.

Extraversion was found, as expected, to correlate positively with the number of times a student was documented by a staff member from the Office of Residential Life, $r(143) = .17$, $p < .05$. This relationship was slightly stronger for seniors, $r(21) = .27$, $p > .05$, than for freshman, sophomores, and juniors, $r(112) = .24$, $p < .02$. Although not significantly different from zero, these two correlation coefficients are significantly different, $Z = 2.23$, $p < .05$.

Alcohol Related Correlations

It was expected that those students who consumed more alcohol and drank more frequently would report being documented more and express more negative attitudes towards the Office of Residential Life. The number of times that a student was documented was positively correlated with how frequently a student consumed alcohol, $r(144) = .29$, $p = .001$, and how many drinks they consumed per event, $r(145) = .33$, $p = .001$. This finding was more due to freshman, sophomores, and juniors, $r(110) = .21$, $p < .03$, than to seniors, $r(21) = .168$, $p > .05$.

How many drinks a student consumed per event was negatively correlated with how fair they thought the rules in the residence halls were, $r(145) = -.22$, $p < .01$. This finding was largely due to freshman, sophomores, and juniors, $r(116) = -.22$, $p < .02$. The relationship was positive for seniors though not significantly different from zero, $r(21) = .120$, $p > .05$. The difference between these correlations of different sign was not statistically significant, $Z = 1.43$, $p > .05$. For most students, higher levels of alcohol consumption were associated with more dissatisfaction with the office.

It was expected that extraverts would consume alcohol as a social facilitator more than introverts lead-
ing to more risky behaviors. Extraversion was correlated positively with how frequently a student consumed alcohol, \( r(140) = .22, p > .01 \). This relationship was mainly due to freshman, sophomores, and juniors, \( r(110) = .21, p < .03 \), than seniors, \( r(21) = .17, p > .05 \). It was also expected that extraversion was positively correlated with how many drinks per event a student typically consumed, \( r(143) = .25, p < .01 \). This relationship was also mainly due to freshman, sophomores, and juniors, \( r(112) = .27, p < .01 \), than seniors, \( r(21) = .09, p > .05 \).

It was hypothesized that students who had been documented by Residential Life staff more often would have more negative attitudes towards the rules and those who enforce them in the residence halls. The number of times a student was documented correlated negatively with how pleased they were with their interactions with staff members, \( r(147) = -.19, p < .02 \). This relationship was somewhat stronger for freshman, sophomores, and juniors, \( r(116) = -.226, p < .02 \), than for seniors, \( r(21) = -.15, p > .05 \). It was also hypothesized that the number of times that a student was documented correlated negatively with how fair they felt the rules in the residence halls were, \( r(147) = .27, p < .001 \). This relationship is primarily due to freshman, sophomores, and juniors, \( r(116) = -.37, p < .001 \). A slight positive correlation emerged for seniors, \( r(21) = .17, p > .05 \), which while not significantly different from zero was significantly different from the negative correlation found for freshman, sophomores, and juniors, \( Z = 2.35, p < .05 \).

**Gender Related Correlations**

It was expected that males would consume more alcohol than females and would therefore be documented more frequently. Female gender was negatively correlated with the number of times a student had been documented by a staff member, \( r(146) = -.23, p < .01 \). This relationship was about the same for freshman, sophomores, and juniors, \( r(115) = -.14, p > .05 \), as for seniors, \( r(21) = -.20, p > .05 \). How frequently a student consumed alcohol was also expected to be negatively correlated with female gender, \( r(143) = -.17, p < .04 \). This effect was slightly stronger for freshman, sophomores, and juniors, \( r(113) = -.21, p > .05 \), than for seniors, \( r(21) = -.19, p > .05 \). It was expected that female gender was negatively correlated with how many drinks they typically consumed at an event, \( r(146) = -.23, p < .01 \). This effect was mainly due to freshman, sophomores, and juniors, \( r(115) = -.29, p < .002 \). Seniors demonstrated no such effect, \( r(21) = .05, p > .05 \).

**Community Involvement Correlations**

It was expected that students who were more involved in the community within the residence hall and therefore attended more Residential Life programming would have more positive attitudes towards the office in general. Student participation in Office of Residential Life program correlated positively with how pleased students were with their interactions with staff members, \( r(146) = .29, p < .001 \). This relationship was somewhat stronger for freshman, sophomores, and juniors, \( r(115) = .35, p < .001 \), than for seniors, \( r(21) = .12, p > .05 \), although the difference between these two correlations was not statistically significant, \( Z = 1.04, p > .05 \).

Students who participated in more Office of Residential Life programs were more likely to believe that Residential Life staff members were important, \( r(146) = .32, p < .001 \). This relationship was somewhat stronger for freshman, sophomores, and juniors, \( r(115) = .34, p < .001 \), than it was for seniors, \( r(21) = .24, p > .05 \). Students who participated in more Office of Residential Life programs were more likely to believe that Residential Life staff members were fair in enforcing the rules, \( r(146) = .27, p < .001 \). This effect was essentially due to freshman, sophomores, and juniors, \( r(115) = .33, p < .001 \), as seniors showed little effect, \( r(21) = -.04, p > .05 \). The difference between these correlations was not statistically significant, \( Z = 1.61, p > .05 \). Students who participated in more Office of Residential Life programs were more likely to be satisfied with their overall campus experience, \( r(146) = .24, p < .003 \). This effect was entirely due to freshman, sophomores, and juniors, \( r(115) = .29, p < .001 \), as no effect was found for seniors, \( r(21) = -.01, p > .05 \). Students who participated in more Office of Residential Life programs believed that alcohol negatively affected life in the halls, \( r(146) = .31, p < .001 \). This finding was more strongly associated with freshman, sophomores, and juniors, \( r(115) = .33, p < .001 \), than with seniors, \( r(21) = .24, p > .05 \). Participation in programming negatively correlated with how frequently students consumed alcohol, \( r(143) = -.22, p < .01 \). However, this view was held more strongly by freshman, sophomores, and juniors, \( r(113) = -.30, p < .001 \), than by seniors, \( r(21) = -.09, p > .05 \). Students who participated in more Residential Life programs consumed fewer drinks per event, \( r(146) = -.20, p < .02 \). This relationship was somewhat stronger for freshman, sophomores, and juniors, \( r(115) = -.23, p < .03 \), than for seniors, \( r(21) = -.14, p > .05 \).
Discussion

The purpose of this study was to investigate the role personality plays in a student’s attitudes towards authority figures in residence halls. We found that extraversion correlated negatively with perceived fairness of Residential Life rules for freshman, sophomores, and juniors but positively for seniors. On the presumption that seniors are more mature and oriented towards graduation and commencement of their career compared to the new found independence of freshman and party orientation of sophomores, perhaps this differential personality expression may be explained by greater maturity for seniors.

Extraversion was also associated with more documented incidents. Morossanova (2003) reported that extraverts are more likely to be engaging in risky behaviors and these are exactly the behaviors that staff members from the Office of Residential Life are charged with confronting and addressing.

Alcohol consumption was also more strongly related to alcohol consumption by freshman, sophomores, and juniors than seniors and was positively related to the number of documented incidents and number of drinks per event which was negatively related of perceived fairness of Residential Life staff and negative attitudes towards them. A maturity factor seems to be a reasonable explanation here as well. Community involvement appeared to have effects opposite those of alcohol.

Correlations with gender were about the same for seniors as for freshman, sophomores, and juniors. This finding is not surprising given that gender does not undergo development through college.

Limitations

This study was conducted using a series of self-report measures. This method does open up the research to inaccuracies in reporting from the participants. The questionnaire regarding interactions with the Office of Residential Life could have benefited from gathering information from the authority figures themselves on the infractions reported by students. This could clarify which documentation were for more major infractions and which were for more minor rule breaking.

Future research may benefit from introducing the personality construct of authoritarianism to the study. The authoritarian personality is marked by its relation to order and rules (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950). External standards, such as those put forth by the Office of Residential Life influence the behavior of the authoritarian personality. This dynamic could add to the understanding of the way personality interacts with attitudes towards authority in the residence halls.

References


## APPENDIX

**Residential Life Survey**

<table>
<thead>
<tr>
<th>School/Class year:</th>
<th>FC</th>
<th>CBA</th>
<th>Senior</th>
<th>Junior</th>
<th>Sophomore</th>
<th>Freshman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender: Male/Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity (optional):</td>
<td>___________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G.P.A.</td>
<td>&lt;1.5</td>
<td>1.6 – 2.0</td>
<td>2.1 – 2.5</td>
<td>2.6 – 3.0</td>
<td>3.1 – 3.5</td>
<td>3.6 – 4.0</td>
</tr>
</tbody>
</table>

1) How many semesters, including the current one, have you lived on campus?
   - <2
   - 2–4
   - 5–6
   - 7–8
   - 8–10

2) How often do you participate in programming put together by Residential Life staff?
   - Never
   - Sometimes
   - Often
   - Very Often

3) How many times have you been documented by an employee of the Office of Residential Life?
   - 0
   - 1–2
   - 3–4
   - 5–6
   - >7

4) How pleased are you with your interactions with Residential Life staff members
   - Very dissatisfied
   - dissatisfied
   - neutral
   - satisfied
   - very satisfied

5) How important do you think the presence of Residential Life Staff members in the residence halls?
   - Very unimportant
   - unimportant
   - neutral
   - important
   - very important

6) How fair do you think Residential Life rules in the residence halls are?
   - Very unfair
   - unfair
   - neutral
   - fair
   - very fair

7) How satisfied are you with your overall on-campus experience?
   - Very unsatisfied
   - unsatisfied
   - neutral
   - satisfied
   - very satisfied

8) How frequently do you consume alcohol?
   - I don’t consume alcohol
   - more than once per week
   - once per week
   - 2 – 3 times per week
   - almost every day
   - every day

9) How many alcoholic drinks do you typically consume per event?
   - I don’t consume alcohol
   - 1–2 drinks
   - 3–4 drinks
   - 5–6 drinks
   - >8 drinks

10) To what degree do you think alcohol negatively affects life in the residence halls?
    - Not at all
    - barely
    - moderately
    - very little
    - a lot
Standardized tests are commonly used to assess general cognitive ability and to evaluate student retention of academic knowledge. Many students take standardized college entrance exams, such as the SAT, to gain admission to undergraduate colleges or universities. Furthermore, college entrance exams are used in the admission process for professional and graduate schools (e.g., Graduate Record Exam). Given this, it is important to understand students’ perceptions of the utility of such standardized tests, with respect to what these tests actually measure and their relevance to academic success for men and women. According to the 2006 College Board National Report, men, on average, scored better than women on both the verbal and mathematics sections of the SAT. This follows a trend that has existed since 1972 despite repeated changes in the testing format (College Board SAT, 2006). Conversely, in the same student population, women reported higher overall high school grade point averages (GPA) than men. Moreover, researchers have found that despite lower average SAT scores, women maintain a higher GPA than men during their first year of college (Cullen, Hardison & Sackett, 2004). In fact, the SAT under predicts college performance for women (Leonard & Jiang, 1999). Altogether, these gender discrepancies highlight the need for continued research on academic achievement and standardized tests, particularly among college women.

Standardized testing has become an integral part of education culture in America. Socialization is a process through which individuals learn cultural norms and values from those around them (Vandell, 2000; Mulvenon, Stegman & Ritter, 2005; Guimond, 1999). In education, these norms can include students’ beliefs about academic success and performance on achievement test. Socialization researchers have argued that siblings and parents, as well as peer groups and teachers, are all important social influences on youth development (Vandell, 2000). Researchers have found that socialization in the academic arena manifests as performance on standardized tests and that academic success is emphasized as an integral part of education by students, teachers, parents, guidance counselors, and...
administrators during high school (Mulvenon, Stegman & Ritter, 2005). Thus, students’ beliefs about academic success and standardized tests can be shaped by multiple social sources including parents, faculty, and peers.

Early social influences can impact students’ academic beliefs in young adulthood. Research suggests that among college students, both normative social influences such as family and peers and informational sources of influence such as faculty, as well as courses within their academic major account for attitude change and formation of beliefs during college (Guimond, 1999). For example, in one study, peer group identification, a normative social influence, was shown to influence military orientation whereas academic major, an informational source of influence, was associated with sociopolitical attitudes in students attending a conservative military university (Guimond, 1999). Findings also showed that these students became more conservative from their first to their third year of college. Moreover, in a review of the literature, Lamport (1993) emphasized the importance of faculty during college socialization because students with more frequent faculty interaction performed better academically and faculty encouragement is an important factor in a student’s decision to pursue graduate studies. Sax, Bryant, and Harper (2005) found, in their study of college students, that trivializing comments and actions of faculty (e.g., feeling as though a professor did not take one’s comments seriously in class) can have detrimental effects on female students’ academic confidence. Additionally, faculty interaction with students increases student academic persistence and decreases withdrawal from the university. Thus, as students continue to develop perceptions about education throughout high school and college, their interactions with college faculty and peers can influence their academic beliefs.

**Study Aims**

Given both the emphasis placed on academic achievement in college and the gender disparities found in academic achievement and standardized test performance, it is important that researchers and college faculty and staff understand the factors that can potentially shape academic success for college women and their attitudes and perceptions toward academic success and standardized tests. While studies to date have examined how cognitive factors impact school performance and academic matriculation, no research has explored the extent to which parents, teachers, and peers help shape and influence college women’s perceptions of standardized tests and their relevance to future academic success. Investigating the lasting effects of social influences that remain from high school and throughout college can help researchers and administrators better understand ways to pro-

![FIGURE 1](image-url)
mote consistent academic and professional development for young women. Therefore, the research aims of the present descriptive study were twofold: (1) to examine college women’s beliefs (e.g., “If you do not test well, you cannot succeed”) about standardized tests and academic success and (2) to explore who or what has influenced those beliefs in high school and college. In light of socialization research and group socialization theory, we expected to find that social forces including family, teachers and peers will be influential in shaping students’ perceptions of standardized tests. Given the exploratory and descriptive nature of this investigation, we did not advance any specific hypotheses nor did we specify any hypotheses regarding the most or least influential social force.

Method

Participants

Participants (N = 54; M age = 20.66, SD = 3.98, range = 18–30) were students from a women’s private liberal arts college in the Northeastern United States. We recruited respondents from a large psychology survey course as well as through on-campus flyers.

Procedure

Participants were given the option to complete the survey in a lab or to complete the survey on their own time and return it to the investigator (E.C.M). The primary investigator gave each participant a written informed consent and assigned each survey a participant number so that no identifying information could be found on the surveys. Respondents completed the measures used in this analysis as part of a 30 minute, self-report survey on academic attitudes and behaviors. First, students indicated their level of agreement to 10 statements (see Table 1 for specific items) regarding academics success and standardized tests using a scale from 1 (strongly disagree) to 5 (strongly agree). Second, they reported whether or not parents, family, friends, teachers, counselors, college advisors or other sources (e.g., media) influenced their attitudes and perceptions regarding those 10 statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Influence During High School</th>
<th>Influence During College</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, men perform better than women on standardized tests</td>
<td>7.4% 29.6% 25.9% 9.3% 7.4% 7.4% 18.5% 14.8% 37.5% 5.6%</td>
<td></td>
</tr>
<tr>
<td>Ethnic minority groups under perform compared to whites</td>
<td>14.8% 27.8% 27.8% 7.4% 13.0% 14.8% 22.2% 27.8% 3.7% 9.3%</td>
<td></td>
</tr>
<tr>
<td>Standardized testing is the most important measure of intelligence</td>
<td>13.0% 16.7% 22.2% 13.0% 3.7% 9.3% 11.1% 7.4% 7.4% 3.7%</td>
<td></td>
</tr>
<tr>
<td>High school GPA determines college success</td>
<td>35.1% 38.9% 44.4% 38.9% 9.3% 13.0% 16.7% 14.8% 14.8% 7.5%</td>
<td></td>
</tr>
<tr>
<td>If you do not test well, you cannot succeed</td>
<td>13.0% 25.9% 27.8% 20.4% 3.7% 11.1% 9.3% 13.0% 7.4% 3.7%</td>
<td></td>
</tr>
<tr>
<td>Standardized tests are biased</td>
<td>16.7% 20.4% 24.1% 11.1% 5.6% 13.0% 27.8% 25.9% 1.9% 1.9%</td>
<td></td>
</tr>
<tr>
<td>Financial success is dependent upon good test scores</td>
<td>16.7% 14.8% 7.4% 7.4% 7.4% 9.3% 11.1% 5.6% 5.6% 5.6%</td>
<td></td>
</tr>
<tr>
<td>Practice increases your chances of doing well</td>
<td>51.9% 46.3% 57.4% 55.6% 13.0% 35.2% 33.3% 48.1% 31.5% 9.3%</td>
<td></td>
</tr>
<tr>
<td>Standardized tests accurately measure intelligence</td>
<td>7.4% 16.7% 11.1% 11.1% 3.7% 7.4% 5.6% 3.7% 5.6% 3.7%</td>
<td></td>
</tr>
<tr>
<td>Performance on the SAT determines performance on future tests</td>
<td>11.1% 13.0% 18.5% 16.7% 7.4% 5.6% 9.3% 9.3% 7.4% 5.6%</td>
<td></td>
</tr>
</tbody>
</table>
during high school and college. The host college IRB approved all study protocol and procedure.

Results

We conducted descriptive analyses in SPSS to examine the research questions. Findings revealed a variety of different responses to each of the 10 statements as well as many sources influencing those beliefs (see Figure 1 and Table 1).

Testing and Bias

For the three statements regarding standardized tests and biases (“In general, men perform better than women on standardized tests”; “Ethnic minority groups tend to underperform on standardized tests when compared to White European Americans”; “Standardized tests are biased towards success of one particular ethnic group”) in general, respondents believed that men do not perform better than women on standardized tests (M = 2.5, SD = 1.1). Thirty percent of respondents indicated that their friends/peers influenced that belief and 26% indicated their teachers influenced that belief during high school. On average, students were neutral with respect to the belief that standardized tests are biased towards the success of one particular ethnic group (M = 3.1, SD = 1.3).

The social influences for those perceptions were college peers (28%), college professors (26%) and high school teachers (24%). Additionally, students had neutral beliefs regarding the belief that ethnic minorities underperform compared to White Americans (M = 3.2, SD = 1.3). The social influences for this perception stemmed from college professors (28%), high school teachers (27%) and high school peers (27%).

Testing and Intelligence

Participants also reported their level of agreement to statements regarding the link between standardized tests and intelligence. On average, students disagreed with the statement “Standardized testing is the most important measure of intelligence” (M = 1.3, SD = 0.7). The highest reported social influence for that perception was teachers during high school (22%). On average, many students also disagreed with the statement that standardized tests accurately measure intelligence (M = 1.6, SD = 0.7); friends/peers were the most influential to that belief (17%).

Testing and Success

Overall, students disagreed with all three statements regarding the link between standardized tests, grade point averages, and both academic and financial success. On average, students slightly disagreed with the notion that high school GPA determines college success (M = 2.7, SD = 1.1). Teachers (44%), friends/peers (39%) and counselors (39%) during high school were influential to many respondents. Participants tended to disagree (M = 1.8, SD = 1.1) with the idea that if you do not test well, you cannot succeed; friends (26%) and teachers (28%) were the most noted social influences. Finally, students were likely to disagree with the perception that financial success is dependent upon good test scores (M = 2.0, SD = 1.0). Parents and family (17%) and friends/peers (15%) were strong social influences for that belief.

Testing and Practice

On average, students overwhelmingly agreed that practice and exposure to testing formats increases their chances of doing well (M = 4.2, SD = 0.9). The social influences for that perception included high school teachers (57%), high school counselors (56%), and parents/family during high school (52%). Conversely, many did not believe that performance on the SAT will determine performance on future standardized tests (M = 2.4, SD = 1.1). The social influences for that belief were teachers (19%) and counselors (17%) during high school.

Discussion

The present descriptive study was designed to examine perceptions endorsed by college women regarding academic success and standardized tests. Additionally, we considered the social influences that help shape these beliefs. Overall, findings showed that teachers, particularly during high school, were highly influential with respect to students’ attitudes and beliefs about standardized tests and academic success. Friends and peers were also very influential across all perceptions while parents and family were reported least frequently as a prominent influence. These findings are consistent with socialization theory that posulates that teachers and parents are just as influential in child and adolescent development as siblings and peer groups (Vandell, 2000). Additionally, these findings support prior research that has highlighted the importance of faculty in the formation of beliefs and in academic persistence among college women (Guimond, 1999, Lamont, 1993, & Sax, Bryant & Harper, 2005). Thus, faculty, teacher, and parental influence during high school and throughout college are important with respect to young women’s perceptions about academic success and the relevance of standardized tests throughout their college careers.

The present findings should be considered in light of several limitations. This study was conducted using self-reports; thus, it is possible that participants may have under- or over-reported their responses on
some of the survey questions. Furthermore, the present study was conducted at a selective women's college, with a small sample size possibly limiting the generalizability of the results. Future research should include a larger sample of women at public universities and coeducational institutions. Additionally, in this investigation we did not correlate academic and standardized test perceptions with actual standardized test scores or academic performance. Future research should consider investigating the associations among social sources of academic influence, academic and standardized test perceptions, and actual performance on standardized tests.

Conclusions and Implications

The present investigation has several implications for educational programming and intervention efforts. Programming efforts geared towards positive academic reinforcement from parents, family, educators and administration seem to have a long-lasting effect and are therefore important to the success of young women during high school, undergraduate studies, and graduate educational pursuits. As a source of social influence, college counselors and student outreach programs can make use of the potential effect they have on young women, throughout high school and into undergraduate studies. For example, in the present study, undergraduate women thought that practice and exposure to testing formats would increase their chances of doing well. They also reported that this belief was most influenced by teachers and counselors during high school. Teachers and administrators can use this information to provide practice exams and test help sessions to further promote opportunities in higher education and academic excellence among women. In order to promote higher education and academic success among young women, parents and educators must understand the robust academic social influences that persist from high school through college.

References


The reading wars have raged for most of the 20th century, and they continue into the 21st. What is the best way to teach reading? From whole word to whole language, various approaches have been tried, rejected, and revived. The National Reading Panel’s (2000a, b) recent report has only added to the debate it was designed to settle. The Panel, convened to “assess the status of research-based knowledge, including the effectiveness of various approaches to teaching children to read,” published a report in 2000 (National Reading Panel, a, p.1) The report immediately came under attack and is still being criticized for its methodology as well as its findings (see Garan, 2001a, b; Wilson, Martens, Arya, & Altwerger, 2004; Yatvin, 2002). Much of the controversy focuses on the Phonics section, which is predictable since phonics and whole language are the major approaches in the “great debate.”

What is the difference between phonics and whole language? A teacher using a phonics, or a skills-based, perspective focuses on the relationships between letters and sounds and teaches them explicitly. Once students begin to recognize letters with greater speed, the students can move up to word recognition. Usually, teachers incorporate sight word instruction early on; in this method, children are taught to recognize common words such as my, the, and at on sight instead of sounding them out. Once students get faster at both recognizing sight words and sounding out words, they can begin to process sentences and eventually paragraphs. With increased fluency, students have more cognitive ability to devote to comprehension (see Adams, 1990; Liberman & Liberman, 1992).

For whole-language theorists, comprehension does not happen after children can read fluently. Whole-language advocates see reading as making sense of text. Children not only bring meaning to what they read, they are constantly constructing meaning as they read (see Goodman, 1996; Wilde, 1997). Breaking language into abstract categories like individual letters is unnecessary. In a whole-language perspective, contrary to a phonics perspective, one does not need to read every single word or letter to get meaning (Goodman). Instead, readers take as little information as necessary from the print to infer the meaning. As children gain experience with text, they develop better schemas that allow them to make more effective and efficient inferences. Whole-language theorists

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**Reading Instruction Beliefs and Practices of Early Elementary School Teachers**

This study examines the beliefs and practices of 30 kindergarten through third grade teachers in a suburban school district. Participants completed an online survey about their beliefs, classroom practices, and familiarity with certain terms. Results showed that the participants were more whole-language oriented in philosophy and used more whole-language practices than phonics practices. The curriculum was not a primary source of conflict as the participants felt they had control over their reading programs. Knowledge base did not vary by demographic factors. Finally, achievement data showed how successful this district was, which supported the participants’ beliefs that their programs were effective. Instead of continuing the “great debate,” teachers may be exploring what works best for their students by combining both approaches.

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**CHRISTY M. BYRD**

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**This study examines the beliefs and practices of 30 kindergarten through third grade teachers in a suburban school district. Participants completed an online survey about their beliefs, classroom practices, and familiarity with certain terms. Results showed that the participants were more whole-language oriented in philosophy and used more whole-language practices than phonics practices. The curriculum was not a primary source of conflict as the participants felt they had control over their reading programs. Knowledge base did not vary by demographic factors. Finally, achievement data showed how successful this district was, which supported the participants’ beliefs that their programs were effective. Instead of continuing the “great debate,” teachers may be exploring what works best for their students by combining both approaches.**
relate learning to read to learning to speak and advocate literature-rich environments (e.g. Goodman, Wilde).

Though these two theories seem very different, whole-language teachers do not exclude phonics and phonics teachers do not spend all their time in workbooks. In fact, some studies show that most teachers support a balanced or eclectic approach. For example, Baumann, Hoffman, Moon, and Duffy-Hester (1998) found just that when they surveyed over 1,000 kindergarten through fifth grade teachers. Nearly 90% of the teachers said they believed in a balanced approach. Baumann et al. also found that few teachers endorsed one particular approach over the other: only 22% indicated that they saw themselves as “traditionalist,” and only 34% described themselves as “whole-language” teachers (Baumann, et al., p. 642). Burgess, Lundgren, Lloyd, and Pianta (2001) found similar results with preschool teachers. In their sample, 6% selected “I am a phonics teacher,” and 25% selected “I am a whole-language teacher.” According to these results, less than one-third of teachers use one approach exclusively.

Though previous research suggests that most teachers support a balanced view, the curriculum may not be balanced. The National Reading Panel (2000) report strongly endorsed phonics over other instructional methods; this emphasis has transferred into national policy and state curricula. For instance, the curriculum for Georgia, the state where the current study takes place, views reading from a phonics approach. In kindergarten, children are expected to know letter-sound correspondences, phoneme blending, and sight words. Each year through third grade, students increase their speed and accuracy of recognition under very specific terms. To meet the standard in kindergarten, each student should read “previously taught high frequency words at the rate of 30 words correct per minute” (Cox, n.d.). The standard increases to 60 words per minute in first grade, then to 90 words in second grade, and finally to 120 words in third grade. Whole-language advocates would say that this emphasis on correct oral reading is unnecessary and could actually get in the way of comprehension (Goodman, 1996). Children could focus so much on getting the words right that they lose meaning. However, Georgia’s curriculum does not neglect meaning, as different levels of comprehension are goals in each grade. For the most part, however, the Georgia curriculum is phonics-based.

What does a phonics-based curriculum mean for teachers who believe in a more balanced approach or a whole-language approach? Do they modify their program to match their beliefs? According to Islam (1999), teachers’ theoretical orientations influence their choices about instruction. Even implicit beliefs are important. So, do the beliefs and practices of most teachers align, or do other factors, such as the curriculum, have more control?

Researchers have looked at the question of beliefs and practices in reading instruction in different ways. They have used self-report instruments, interviews, observations, and varying combinations of those methods. Frerichs (1993) studied 16 kindergarten teachers in seven schools in one district. She used a survey to determine if the participants’ beliefs and practices matched in four areas: Reading, Writing, Concepts About Print, and Letter/Sound Association. Using correlations, she found that teachers’ beliefs and practices did not match. She found no significant correlations in Reading, and in only 4 of 14 possible matches did teachers state that they conducted practices that matched their beliefs in that area. The teachers endorsed attitudes consistent with the recommendations of Marie Clay, creator of the Reading Recovery program. Frerichs described this program as “emergent literacy” (Frerichs, p. 4), another term for whole language. The teachers, however, did not use Clay’s recommendations in their classrooms. They held whole-language beliefs but their practices did not match those beliefs.

On the other hand, Burgess et al. (2001) found that beliefs were consistent with practices. They surveyed 240 preschool teachers throughout Virginia and analyzed the surveys with factor analysis and ANOVA. The teachers in their sample believed in and used practices that were more whole-language oriented. For instance, they felt that letter-naming and knowing letter/sound correspondences were not that important, and their classroom activities reflected this belief. Islam (1999) also looked at preschool teachers in addition to kindergarten and first grade teachers in one Mississippi county. When she compared the beliefs, practices, and knowledge bases of 350 teachers, she found that there was a high (i.e., .89) correlation between what the teachers believed and what they did in the classroom, regardless of the teachers’ theoretical orientations. While Frerichs (1993) found that beliefs and practices did not match, Burgess et al. and Islam found that they did. Why there is a difference is not clear, as Frerichs did not provide enough data about her participants to compare them to those of Burgess et al. and Islam.

Conclusions about beliefs and practices matching are not limited to survey studies. Using interviews, focus-group meetings, observations, and a questionnaire, Foertsch (2003) found that kindergarten through eighth grade teachers’ practices in reading and lan-
guage arts matched their beliefs. When asked to place themselves on a continuum between whole language and phonics, most teachers said they were balanced. Additionally, the Georgia Department of Education, as part of an evaluation of its Reading First program, examined teachers’ beliefs and practices using discussion groups, site visits, and surveys. They found that teachers generally agreed with the Reading First philosophy, and that their practices supported the program. The Reading First program calls for direct, systematic phonics instruction and sight word development, but it also emphasizes quality literature. Additionally, the evaluators found that few differences existed in beliefs or practices between Reading First teachers and teachers who used other programs (Schrenko, 2000; 2001). With the exception of Frerichs (1993), the above research supports the conclusion that, however measured, the beliefs and practices of teachers tend to match.

In the studies where beliefs and practices matched, the teachers supported central ideas that were the focus of the curriculum. This study considers a school district in Georgia where, as we have seen, the curriculum is more phonics-based than whole-language-based. City Schools of Decatur is an independent district in Dekalb County, Georgia that has an enrollment of about 2,000 in one preschool, four elementary schools, one middle school, and one high school. As a very successful district, all of the elementary schools had met their Annual Yearly Progress for three consecutive years in 2006 (City Schools of Decatur, n.d.). The district’s performance on Georgia’s statewide tests is consistently higher than Dekalb County schools or the state of Georgia as a whole (Governor’s Office of Student Achievement, 2005).

Within City Schools of Decatur, this study looks at kindergarten through third grade teachers. President Bush’s No Child Left Behind policy states that every child should read by third grade (U.S. Department of Education, n.d.). Therefore, it is important to consider what happens in the classrooms up to this benchmark and not just in the early grades. The primary purpose of this study is to replicate previous research and add to it by comparing the results to the state curriculum and achievement scores. Is there conflict between the beliefs of these teachers and the teachers’ practices? If there is, are the emphases in the curriculum to blame? This study differs from those above in that, instead of viewing teachers on a continuum between phonics and whole language, it considers the degree to which teachers endorse aspects of both. It may be inappropriate to view whole-language teachers and phonics teachers as diametrically opposed. To that end, I measure beliefs and practices in two ways: by the average agreement with whole-language items and phonics items, and by participants’ self-ratings.

Another question I consider is what factors are related to a teacher’s theoretical orientation? Islam (1999) found that teachers with less than six years of experience were more likely to endorse an emergent literacy, or whole-language perspective, as were first grade teachers and African American teachers. I also examine the factors teachers felt were important in reading instruction as well as their beliefs about standardized testing. Another analysis will consider the knowledge bases of teachers and whether their beliefs are related to their familiarity with certain terms. Islam reported that teachers’ beliefs did not relate to their knowledge base, indicating that teachers were equally knowledgeable despite their theoretical orientation. Finally, I will compare achievement data with the level of conflict these teachers face in order to determine if conflict has any effect on achievement.

In summary, the first hypothesis tests the conclusions of Baumann et al. (1998), and Burgess et al. (2001)—that is, participants will endorse a balanced approach. The second hypothesis is that beliefs and practices will match, in agreement with the studies discussed above. Considering the Georgia curriculum’s focus on phonics skills and the implications that beliefs and practices will match when teachers support the focus of the curriculum, the third hypothesis is that any conflict between beliefs and practices will be due to the curriculum. Additionally, because the teachers share common standards, the fourth hypothesis is that the level of conflict will not vary by school or grade level. Finally, to concur with Islam’s (1999) results, the fifth hypothesis is that the level of conflict will vary by demographic factors such as experience and race.

Method

Participants

Participants were 30 teachers in City Schools of Decatur, located in Decatur, Georgia. The school district has three elementary schools that are comprised of kindergarten through third grades. The K-3 schools are Clairemont, Oakhurst, and Winnona Park. After receiving IRB approval for the study, I obtained e-mail addresses for all head and support teachers in those schools from the school websites and sent a link to the survey to 80 teachers. The respondents were mostly female (28 female, 2 male): 20 were Caucasian, 6 were African American, 2 were Asian or Pacific Islander, 1 was Hispanic, and 1 was “mixed”; 13 were from Winnona Park, 9 were from Clairemont, and 8 were from Oakhurst. Most teachers had either a bachelor’s
degree or a Master of Arts in Teaching (n = 11, n = 14, respectively), and the median years of teaching experience was 6-10. Most of the participants (26) were head teachers.

Materials

The survey used items from Islam (1999) and Schrenko (2001). I edited some statements for wording. For instance, “Reading readiness is my primary literacy philosophy” became “Reading readiness is my primary philosophy.” I eliminated “extremely” from the statement “Standardized testing is an extremely appropriate way to determine early literacy development” to make it more moderate. The majority of statements were not modified. I also added “A significant amount of class time should be devoted to preparing for standardized tests” to the Beliefs section and “Onset/rimes” to the knowledge base terms.

The final survey contained three sections and began by collecting demographic information, including at which school participants taught and whether they had taught at this school in 2004-2005. Items asked participants which reading programs they used and how long they had been using them. I took the list of reading programs from Schrenko (2001); they included Reading First, Reading Rescue, Reading Recovery, the Patricia Cunningham Four Block Method, and Success for All. The participants then indicated their level of agreement with nine statements on a scale of 1 (Strongly Disagree) to 6 (Strongly Agree). These statements addressed their satisfaction with their jobs, their reading programs, their level of autonomy, and whether they felt their programs were balanced between phonics and whole language.

The Beliefs section consisted of 28 statements, about half reflecting a whole-language attitude, and half reflecting a phonics attitude. An example of a whole-language statement is, “It is not necessary for a child to know the letters of the alphabet in order to read.” An example of a phonics statement is, “When children do not know a word, they should be instructed to sound out its parts.” Participants indicated their level of agreement using the same 6-point scale as above. Three additional questions concerned standardized testing and computer use.

The Practices section consisted of two parts. Using the scale above, participants first indicated their level of agreement with 18 statements, half whole-language practices and half phonics practices. An example of a whole-language practice is, “I conduct literature circles.” An example of a phonics practice is, “I teach spelling and phonics rules.” In the second portion, I asked participants to “Enter the percentage of your total instructional time spent on each of the follow-

Results

First, I computed average agreement with each type of item as well as a Conflict Score (CS). The CS was equal to the absolute value of the Phonics Practices Score (PP) subtracted from the Phonics Belief Score (PB) added to the absolute value of the Whole-language Practices Score (WP) subtracted from the Whole-language Beliefs Score (WB), or

Procedure

Participants took the survey online. Instructions indicated, “The purpose of this research is to collect information about the training, philosophies, and reading programs of K-3 teachers in City Schools of Decatur” and informed the participants that their responses would be kept confidential and not reported in any way that could identify an individual respondent (i.e. third grade teachers at a particular school). The participants had about three weeks to complete the survey, and I sent three reminders during that period. I coded statements in the Beliefs and Practices sections as phonics, whole language, or other, and computed the average level of agreement for four categories: Phonics beliefs, phonics practices, whole-language beliefs, and whole-language practices. I will refer to these averages as Belief Scores or Practices Scores. Too few participants responded to the second part of the Practices section, which asked for percentages of time spent on certain activities, so I did not analyze it.
The minimum possible CS was zero and the maximum was ten. This score reflects the extent to which teachers reported they used practices more than they agreed with them. Additionally, I computed descriptive statistics and performed Spearman correlations, Mann-Whitney U and Kruskal-Wallis comparison tests. Because of the small sample size, \( p = .10 \) was used as the significance level.

**Reading programs used.** The most popular programs were Reading Recovery (\( n = 21 \)) and Teacher’s College Reading and Writing Project (\( n = 22 \)). Five or fewer participants used the other programs, which included SRA Direct Instruction and Reading First.

**Hypothesis 1: Participants will endorse a balanced approach.** Participants would endorse a balanced approach if they agreed with items favoring a balanced approach, i.e. that the most effective programs were balanced, and indicated that their programs were balanced. Additionally, individual items would show that participants were balanced. On the six-point scale of Strongly Disagree to Strongly Agree, the median agreement with beliefs items was 3.88, while the median agreement with practices items was 3.50.

First, the participants strongly agreed that schools should adopt a balanced approach to reading instruction (\( \text{Med.} = 6.00 \)), but they only moderately agreed that their programs were balanced (\( \text{Med.} = 5.00 \)). The participants strongly agreed that they were satisfied with their jobs (\( \text{Med.} = 6.00 \)), and they felt their reading programs were effective (\( \text{Med.} = 6.00 \)). Teachers agreed slightly less about their reading programs being the “most effective way to teach reading” (\( \text{Med.} = 5.00 \)). Participants who agreed more strongly that their programs were balanced also agreed more strongly that their programs were the most effective way to teach reading (\( r = .73, p < .01 \)). A significant, negative relationship existed between wanting more freedom in determining their instruction and feeling their program was balanced (\( r = -.35, p < .10 \)), indicating that those who were dissatisfied with their programs were less likely to feel that their programs were balanced. Participants felt that a balanced approach was best and that they taught using a balanced method. Those who were most satisfied also felt that their programs were balanced. Table 1 shows descriptive statistics for beliefs and practices in general and when separated by philosophy.

Table 2 demonstrates that the participants tended to agree more with the whole-language items than with the phonics items in both their beliefs and practices. Therefore, the participants were not balanced. Looking at the two items “Reading readiness is my primary philosophy” and “Emergent literacy is my primary philosophy,” 17% moderately agreed with the first statement (none strongly agreed), while 41% moderately or strongly agreed with the second statement. This indicates that more of the sample was whole-language oriented. Participants’ self-ratings supported this conclusion. When asked to rate their beliefs on a continuum, participants tended to place themselves on the whole-language side, that is, 9 or above out of 15, with 8 as balanced (\( \text{Med.} = 9.50 \)). The lack of balance was even more apparent for practices (\( \text{Med.} = 11.00 \)). Out of 16 participants, 1 selected “N/A” on the practices scale. None selected “N/A” on the beliefs scale. Most of the participants felt they were on a continuum between phonics and whole language. The participants endorsed more whole-language beliefs and practices than phonics beliefs or practices. In fact, participants who were more satisfied with their jobs used more whole-language practices (\( r = .57, p < .05 \)).

**Hypothesis 2: Beliefs and practices will match.** For beliefs and practices to match, the correlations...
between beliefs and practices scores would be significant, as would correlations between individual beliefs and practices items. The Conflict Score would not be significantly different from zero. The results showed that the correlation for beliefs and practices in general was .22 (ns). When looking at the different approaches, the correlation between whole-language beliefs and whole-language practices was .10 (ns). The correlation between phonics beliefs and phonics practices was significant, .42 (p < .10). Those who held stronger phonics beliefs also used more phonics practices. On the participants’ self-ratings, there was a .47 correlation (ns) between their ratings of their beliefs and their ratings of their practices. The correlation matrix for the calculated scores is in Table 2. Most of the correlations were not significant because of the small sample size, as only 19 of 31 participants responded to the practices section of the survey. In summary, those who used phonics practices appeared to have more of a belief in phonics. However, the results did not show a significant relationship for whole language.

The Conflict Score (CS) was another measure of the degree to which participants’ beliefs and practices matched. The average level of conflict was significantly different from zero, t(18) = 8.00, p < .001. This supports the conclusion that beliefs and practices did not match.

Finally, I examined the relationships between individual items. In whole language, there was a significant relationship between agreeing that reader’s theaters and author circles were good ways to assess literacy and those who used literature circles (r = .53, p < .05). I also found a relationship between those who agreed that invented spelling was an important stage in the writing process and allowing students to use invented spellings (r = .77, p < .01). A significant relationship existed between agreeing that literacy could be assessed through any area in an integrated curriculum and evaluating literacy during an integrated unit (r = .79, p < .01). Moderate to strong relationships existed between these whole-language beliefs and practices.

In phonics, there was a non-significant relationship between teaching spelling and phonics rules and believing that having children verbalize phonics rules was a good way to assess reading (r = .14, ns). I found no relationship between believing that correct oral reading was important and using Round Robin reading (r = .09, ns). Round Robin reading is a practice in which students take turns reading short passages from a text aloud. Finally, there was no relationship between feeling that the recognition of alphabet letters was essential and teaching letter sound correspondences (r = -.02, ns). When comparing individual items, there were fewer significant relationships between phonics items than whole-language items. Nevertheless, the 18 practices items did not match up to a particular belief, so Hypothesis 2 is rejected. The teachers’ beliefs matched more in phonics than whole language generally, and more on individual whole-language items than on phonics items. Overall, these results indicate a lack of strong alignment between beliefs and practices.

**Hypothesis 3: The conflict between beliefs and practices will be due to the curriculum.** If the curriculum were a source of conflict, then teachers would use more phonics practices than whole-language practices though they endorsed whole-language. They would also agree that they wanted more control over their instruction. The relationship between the Conflict Score and participants’ ratings of their beliefs was .37 (ns), while the relationship between CS and participants’ ratings of their practices was -.14 (ns).

When looking at medians, participants believed in phonics (3.60) more than they practiced it (2.67), and believed in whole language (4.20) less than they practiced it (4.75). The difference between whole-language and phonics beliefs was less than the difference between whole-language and phonics practices. The amount of conflict teachers experienced was not related to their ratings of their beliefs or their practices and whole-language practices were more prevalent in the curriculum at the expense of phonics practices.

Participants tended to agree that curriculum standards determined their instruction (Med. = 5.00) but they also felt that they determined the focus of their reading programs (Med. = 5.00). They tended to somewhat disagree with the statement, “I do not have much time for texts or activities outside the curriculum” (Med. = 3.00) as well as with a statement saying they would like more freedom (Med. = 3.00). In general, participants felt they had enough autonomy to develop their instructional programs while still meeting curriculum standards.

A correlation revealed a significant, positive relationship between participants agreeing that their reading program was the most effective program and agreeing that they determined the focus of their reading program (r = .45, p < .05). Those who agreed more with their program’s effectiveness agreed that they had more autonomy. A significant, negative correlation existed between feeling that a program was the most effective way to teach and wanting more freedom (r = -.53, p < .01). Teachers who agreed more that their programs were the most effective disagreed with wanting more freedom. Finally, teachers having an effective program was negatively related to agreeing that...
they did not have time for things outside of the curriculum ($r = -.63, p < .01$). Those who agreed that their programs were effective tended to disagree that they did not have enough time for extra activities. Those who had control and freedom felt their programs were more effective. Since teachers felt they had control over their programs in general, Hypothesis 3 is rejected. Though the curriculum was more phonics-oriented, teachers did not use more phonics practices; they chose to use whole-language practices.

**Hypothesis 4: The level of conflict will not vary by school or grade level.** In Table 3, we see the participants grouped by the school in which they taught. The $n$ is the lowest number of participants available for all of the statistics. The following results are tentative because of the small number of participants in certain groups.

Clairemont had the highest Conflict Score and the highest phonics belief score. The differences between schools by Conflict Score was significant (Kruskal-Wallis $H(2) = 6.41, p < .05$). A Mann-Whitney $U$ comparison revealed that the difference in Conflict Score between Clairemont and Oakhurst was significant ($U = .00, p < .01$), as was the difference between Oakhurst and Winnona Park ($U = 4.000, p < .10$). The difference between Clairemont and Winnona Park was not significant.

Table 4 shows that participants who taught second grade agreed the least with phonics beliefs and phonics practices. The first grade teachers agreed most with whole-language beliefs, while kindergarten teachers agreed to using whole-language practices the most. These differences were not significant. Grade levels also differed significantly by Conflict Score (Kruskal-Wallis $H(3) = 8.69, p < .05$). Participants who taught second grade were significantly lower in conflict than participants in each of the other grade levels were ($U = .00, p < .05$ for kindergarten, first, and third). Despite these results, no conclusion is made for Hypothesis 4. Differences in conflict did exist by school and grade level, but the sample sizes are too small to support a definitive answer.

**Hypothesis 5: The level of conflict will vary by demographic factors such as experience or race.** On the following variables reported (except gender), participants were recoded into two or three groups to obtain the largest possible number of participants in each group. I found no significant differences by age, professional participation, highest degree obtained, or gender in phonics beliefs, phonics practices, whole-language beliefs, whole-language practices, or Conflict Score.

A significant difference existed between Caucasian and non-Caucasian participants ($n = 16, n = 7$, respec-

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**Table 3**

<table>
<thead>
<tr>
<th>School</th>
<th>CS</th>
<th>Beliefs</th>
<th>Practices</th>
<th>Beliefs</th>
<th>Practices</th>
<th>$n$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clairemont</td>
<td>1.67</td>
<td>4.03</td>
<td>3.50</td>
<td>3.87</td>
<td>4.25</td>
<td>7</td>
</tr>
<tr>
<td>Oakhurst</td>
<td>.53</td>
<td>3.83</td>
<td>3.50</td>
<td>3.33</td>
<td>4.55</td>
<td>3</td>
</tr>
<tr>
<td>Winnona Park</td>
<td>1.28</td>
<td>3.78</td>
<td>3.53</td>
<td>3.43</td>
<td>4.08</td>
<td>9</td>
</tr>
</tbody>
</table>

*CS = Conflict Score, WL = Whole Language*

**Table 4**

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>CS</th>
<th>Beliefs</th>
<th>Practices</th>
<th>Beliefs</th>
<th>Practices</th>
<th>$n$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td>1.67</td>
<td>3.87</td>
<td>4.13</td>
<td>3.50</td>
<td>4.14</td>
<td>6</td>
</tr>
<tr>
<td>First</td>
<td>1.35</td>
<td>4.09</td>
<td>3.42</td>
<td>3.68</td>
<td>4.79</td>
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</tr>
<tr>
<td>Second</td>
<td>.55</td>
<td>3.71</td>
<td>3.33</td>
<td>3.33</td>
<td>4.43</td>
<td>3</td>
</tr>
<tr>
<td>Third</td>
<td>1.97</td>
<td>4.07</td>
<td>3.50</td>
<td>3.89</td>
<td>4.08</td>
<td>5</td>
</tr>
</tbody>
</table>

*WL = Whole language, CS = Conflict Score*
on a six-point scale of Very Unfamiliar to Very Familiar, the most familiar term was “invented spelling” \( (M = 6.69, SD = .60) \). The least familiar terms were “sub-skills” \( (M = 4.12, SD = 1.59) \) and “onset/rimes” \( (M = 4.18, SD = 1.68) \). Onsets and rimes are phonological divisions similar to syllables. On average, all the terms were familiar to participants. The median familiarities were all above four, and most were five or six. Participants’ self-ratings of their philosophy were not significantly related to any of the terms. Ratings of their practices were related to several items, but no pattern emerged.

For the final analysis, participants responded to two statements in relation to standardized testing. In general, they strongly disagreed that standardized testing was an appropriate way to assess early literacy development \((N = 23, Med. = 1.69, M = 1.69, SD = .97)\). They also moderately disagreed that a significant amount of class time should be devoted to preparing for standardized tests \((N = 21, Med. = 2.00, M = 2.19, SD = 1.40)\). These participants did not agree with the use of standardized testing for early literacy, and disagreed that much class time should be devoted to preparing for tests.

**Discussion**

Some of the hypotheses were supported and some were not. The teachers in this study felt their reading programs were balanced and that having balance was an effective strategy. The measure revealed, however, that the teachers’ beliefs and their programs were not balanced but more whole-language oriented (Hypothesis 1). My sample was similar Burgess et al.’s (2001) sample and dissimilar to Frerichs (1993) and Islam’s (1999) samples, who were balanced. While in Burgess et al.’s sample, 25% reported that they were whole-language teachers, 41% of my sample moderately or strongly agreed to being whole-language teachers. Most of the participants in my sample were satisfied with their jobs and felt they had freedom over their programs. Even though their reading programs were more whole-language oriented, the teachers used them, probably because they believed in the programs’ effectiveness. Beliefs and practices did not match except for those who endorsed a phonics approach (Hypothesis 2), and teachers did not experience conflict from a lack of control over their curriculum (Hypothesis 3). It appears that the curriculum did not have a primary influence on the participants’ reading programs. Most of the teachers used whole-language practices regardless of how much they endorsed whole-language, so further study would need to address why the teachers used whole language.

Teachers did differ based on school and ethnicity, but the results were not conclusive (Hypotheses 4 and 5). Analyses revealed significant differences by ethnicity and position, but the differences were small with respect to ethnicity and may likely be due to sample size with respect to position.

Other results. I asked participants to rank eight factors in order of their importance in reading development. The rankings are listed in Table 5. Participants felt that a combination of home factors and teacher factors were influential, with pre-school experiences being most important. Student and school factors were relatively less important. Participants could list up to three other factors they felt were important. Other factors listed were “Lower class size,” “Student’s development,” “Time to plan instruction,” and “Staff development.”

When assessing the participants’ knowledge bases on a six-point scale of Very Unfamiliar to Very Familiar, the median agreement with phonics belief items for Caucasian participants was 3.48, while the median for non-Caucasian participants was 4.07. Participants also differed significantly on phonics practices \((H(1) = 2.79, p < .10)\). The median for Caucasian participants was 2.60 and for non-Caucasian participants, 2.80. Non-Caucasian participants were somewhat more phonics oriented than Caucasian participants.

Analysis revealed a significant difference in phonics beliefs by position \((H(1) = 4.23, p < .05)\). Head teachers \((n = 20)\) endorsed phonics less \( (Med. = 3.48) \) than support teachers \((n = 5, Med. = 4.13)\), though this may be an artifact of the different sample sizes. Again, no conclusion is made for Hypothesis 5. Analyses revealed significant differences by ethnicity and position, but the differences were small with respect to ethnicity and may likely be due to sample size with respect to position.

**TABLE 5**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Median Ranking</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-school reading experiences (parents reading to children, etc.)</td>
<td>1.50</td>
<td>14</td>
</tr>
<tr>
<td>Home environment</td>
<td>2.00</td>
<td>15</td>
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<tr>
<td>Instructional program</td>
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<td>14</td>
</tr>
<tr>
<td>Parent involvement</td>
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<td>14</td>
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<tr>
<td>Teacher involvement and</td>
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<tr>
<td>individual attention</td>
<td>3.00</td>
<td>13</td>
</tr>
<tr>
<td>Student’s motivation</td>
<td>3.00</td>
<td>11</td>
</tr>
<tr>
<td>Student’s intelligence</td>
<td>5.00</td>
<td>11</td>
</tr>
<tr>
<td>School environment</td>
<td>5.00</td>
<td>11</td>
</tr>
</tbody>
</table>
This study shows that in Decatur, teachers think of balance in a unique way. The reading programs most participants used, Reading Recovery and the Teachers’ College Reading and Writing Workshop, are designed to be balanced, but the teachers still used more whole-language practices. If the teachers are using the programs as they were designed, then balance is more about using a whole-language perspective to address the skills needed for reading, including recognizing letter/sound correspondences and other phonics skills. An unbalanced view would be, for example, using phonics only without making reading meaningful or integrated, or only focusing on literature without paying attention to the alphabet. Balance, then, could mean incorporating phonics skills into the classroom but viewing those skills in context. Participants tended to disagree with items that emphasized isolated skills; they favor an integrated approach. Not all teachers felt this way, however. Some desired more explicit emphasis on phonics and sight word instruction. Further study would determine how balanced the programs are as designed and investigate how closely teachers adhere to the design of the programs.

These results are surprising considering the emphasis in the Georgia curriculum on specific skills. However, it appears that these teachers have found a way to meet those standards without losing focus on broader concerns, most likely because they have control over their instruction. Table 6 presents the scores on the Georgia Criterion Referenced Competency Tests in reading for 2004-2005. Students in first grade and above take these tests every year (Georgia Department of Education, 2005). For the Conflict Scores, participants were grouped by the school in which they taught in 2004-2005.

As can be seen in Table 6, the three elementary schools in the study are highly successful. Though the teachers did not advocate the use of standardized testing, they prepared their students to perform well on them. The achievement scores support the teachers’ feelings that their programs were effective. When looking at the rankings of important factors, teachers saw their programs as being very important in the success of their students. Nevertheless, home factors played as much of a role. This seems to indicate that the Decatur teachers’ view of balance, and the autonomy they have to implement it, works for this district. Whether it holds true for other districts remains to be seen.

Finally, further study should use a larger and more diverse sample. For instance, it would be interesting to look at a poorly performing district to see what kinds of approaches the teachers are using. In addition to a small sample size, the self-report format was a limitation for this study. A more informative design would be to combine a survey with classroom observations and interviews. This would better answer the question of how the teachers see themselves achieving balance in the classroom. A future study should also have specific items in the beliefs and practices sections of the survey to match each other, allowing for an assessment of particular strategies. A final consideration could be that, though the teachers endorsed whole language more, they felt it would be more socially appropriate to indicate that they endorsed a balanced approach. Observations could rule out this possibility.

In terms of the great debate, this study confirms that teachers do not see whole language and phonics as diametrically opposed. They can use strategies from both to get the best result. However, this means seeing reading as a more integrated process, which is contrary to a phonics perspective. Whether to call that view balanced or whole language is debatable. In conclusion, research that proclaims one approach over

### TABLE 6

<table>
<thead>
<tr>
<th>Conflict Score</th>
<th>CRCT-1</th>
<th>CRCT-2</th>
<th>CRCT-3</th>
</tr>
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<tbody>
<tr>
<td>Clairemont</td>
<td>1.93</td>
<td>97%</td>
<td>92%</td>
</tr>
<tr>
<td>Oakhurst</td>
<td>0.93</td>
<td>98%</td>
<td>95%</td>
</tr>
<tr>
<td>Winnona Park</td>
<td>1.28</td>
<td>95%</td>
<td>97%</td>
</tr>
<tr>
<td>District</td>
<td>1.42</td>
<td>97%</td>
<td>95%</td>
</tr>
<tr>
<td>Georgia</td>
<td>1.42</td>
<td>91%</td>
<td>87%</td>
</tr>
</tbody>
</table>

Source: Governor’s Office of Student Achievement (2005)
the other may not settle the debate. Instead of rejecting an approach completely, administrators should trust teachers to use their best judgments to design programs that work.

References


For many years, Attention-Deficit/Hyperactivity Disorder (ADHD) has been studied in children. Children with ADHD may have trouble paying attention in class, may fidget when required to sit for long periods of time, and may have a hard time waiting their turn (Diagnostic and Statistical Manual of Mental Disorders, 4th ed. [DSM-IV]; American Psychiatric Association [APA], 1994; Koyama, Tachimori, Osada, Kurita, 2006; Maniadaki, Sonuga-Barke, Kakouros, & Karaba, 2007). Only recently has research begun to focus on ADHD found in adults. Much of this research indicates that the symptoms of ADHD can be found in adults as well as in children. For example, Young (2000) has found that about 0.5% to 1% of young adults have continuing symptoms from childhood ADHD. Another estimate given by Weiss and Murray (2003) suggests that anywhere from 2%-6% of adults suffer from ADHD. In a self-report study done on university students, 2.9% of men from the United States and 3.9% of women reported symptoms of ADHD that would classify them as having ADHD (DuPaul et al., 2001).

The symptoms included in a diagnosis of ADHD for adults consist of behaviors that may not be as extreme as the behaviors found in childhood ADHD. This is apparent in the Diagnostic and Statistical Manual of Mental Disorders (APA, 1994) which states that ADHD symptoms are usually at their most prominent stage in elementary school. Also according to the DSM-IV, ADHD in adults can cause a person to miss details and make mistakes, and ADHD can cause adults to perform messy work that may never be completed. Adults with ADHD also may show symptoms of hyperactivity and impulsivity (e.g., restlessness) in situations that require a person to be still, and then may show impatience and an inability to wait (APA, 1994).

In order to be diagnosed with ADHD, a person must meet at least six of the nine DSM-IV criteria in either the inattention category or the hyperactivity-impulsivity category, or six of the nine criteria in both categories. Included in the inattention category are symptoms such as not paying attention to details, not finishing tasks, being unorganized, and getting distracted easily. With these symptoms present, a person would be labeled as having attention-deficit/hyperactivity disorder, predominantly inattentive type. A second type, called attention-deficit/hyperactivity disorder, predominantly hyperactive-impulsive type,
occurs when a person meets criteria such as fidgeting in a seat, feelings of restlessness, an excessive amount of talking, and interrupting others when they are speaking. Attention-deficit/hyperactivity disorder, combined type, includes the occurrence of symptoms from both the inattention and hyperactivity/impulsivity types (APA, 1994). Each symptom can influence many aspects of a person’s life, and research has shown the different areas of life that are affected by ADHD.

A number of researchers have begun to study some of the behavioral and interpersonal costs associated with adult ADHD. McGough et al. (2005) found that young adults with ADHD did not display as much educational success as those without ADHD, and were less likely to have a college degree. Kern, Rasmussen, Byrd, and Wittschen (1999) focused on the 3-5% of the college population that has adult ADHD. Students with symptoms of ADHD in college face numerous problems and have trouble with self-discipline, peer relationships, academic achievement, remembering important tasks, and organization (DuPaul et al., 2001; Jackson & Farrugia, 1997; Kern et al., 1999).

Woods, Lovejoy, and Ball (2002) discovered that adults with ADHD had difficulties with sustained and divided attention, verbal fluency, and organization, which are all necessary tools for the average working adult. Moore (2005) conducted a more in depth study on adults with ADHD in the workforce, and compared 18 adults diagnosed with ADHD to a control group of 18 adults who did not meet the DSM-IV criteria. The participants spent a full day in a work environment and were evaluated on each task completed throughout the day. The results showed that the participants with ADHD demonstrated considerable difficulty in reading, thinking critically, multitasking, and other structured work-related tasks. In fact, those with ADHD reported hyperactivity difficulties on every task completed during the day, except for a problem-solving task. Other research evidence indicated that the ADHD participants seemed to experience considerable internal struggle, although they seemed rather calm on the outside (Moore, 2005).

Other research studying the costs of ADHD found that adults with ADHD were more likely to use and abuse substances (e.g., alcohol and drugs) (Van der Linden, Young, Ryan, & Toone, 2000; Weiss & Murray, 2003). A possible explanation for the use and abuse of drugs is that adults with ADHD want to find some way to cope with the symptoms and the effect those symptoms have on their lives (Jackson & Farrugia, 1997). Jackson and Farrugia also found that adults with ADHD tend to be overly aggressive and tend to have a harder time following the law than those without ADHD. Young (2000) found similar information in many studies that supported the evidence of children with ADHD facing serious problems of behavior, emotion, and relationships in adulthood. ADHD was found to increase the likelihood of criminal activity in adulthood and to increase the likelihood of alcohol abuse. Depression and anxiety were also found at higher rates in people with ADHD, and more suicide attempts were made by hyperactive adults (Young 2000).

Peer relationships have also shown to be a problem in those identified as having ADHD (Young, 2000). The DSM-IV recognizes that children with ADHD experience peer rejection and social adjustment problems (APA, 1994). Many studies show that interpersonal relationships are still affected as ADHD continues into adulthood. Canu and Carlson did a study (as cited in Weyant & DuPaul, 2006) revealing that men with ADHD, predominantly inattentive type, showed heterosexual impairment and were more likely to face rejection from females than males without ADHD, predominantly inattentive type. Shaw-Zirt, Popali-Lehane, Chaplin, and Bergman (2005) discovered that participants of their study who had ADHD reported fewer social skills than their peers. Problems with attention that people with ADHD face seem to carry over into their relationships, and emotional incompetence could be a reason for this, though it has not been studied in adults (Rapport, Friedman, Tzelepis, & Van Voorhis, 2002). The affects of ADHD on adults can be very serious, and there are many ways to evaluate the symptoms and types of ADHD in order to control those affects.

ADHD is often assessed in adults using self-report methods. The Conners’ Adult ADHD Rating Scale (CAARS) is an adult self-report method that consists of 18 items that correspond with the 18 diagnostic criteria listed in the DSM-IV (Reimherr et al., 2005). Each item is rated on a 4-point scale and measures the inattention, hyperactivity, and impulsivity subscales of adult ADHD. The SNAP-IV is a revision of the Swanson, Nolan, and Pelham Questionnaire (Swanson et al., 2001) and is a second self-report method commonly used in assessing ADHD in adults. The SNAP-IV includes questions on ADHD symptoms and questions on Oppositional Defiant Disorder (ODD) symptoms (Swanson et al., 2001). Each question is based off DSM-IV criteria. The SNAP-IV has been used in multiple studies measuring ADHD and ODD in participants (MTA Cooperative Group, 2003; Swanson et al., 2001), showing its reliability and validity in measuring symptoms of ADHD and ODD. A third self-report instrument that is commonly used to assess adult ADHD is the Adult ADHD Self-Report Scale (ASRS; Kessler et al., 2005). The ASRS contains questions based on DSM-IV criteria and consists of
two categories: one for inattentiveness and one for hyperactivity/impulsivity. The inattentiveness category consists of nine questions that address difficulties people experience in concentrating and focusing on specific tasks, and the hyperactivity/impulsivity category also contains nine questions that focus on difficulties in sitting still and waiting.

The ASRS is found to be a reliable and valid way to test adults for ADHD (Murphy & Adler, 2004). One study provided evidence of a strong consistency between an investigator-administered test and a patient-administered test. Individual test items showed a considerable amount of agreement, supporting the reliability and validity of the ASRS (Murphy & Adler, 2004). Another study conducted by Young and Gudjonsson (2005) found that adults with ADHD do tend to give accurate information when filling out self-report tests.

Adult ADHD is often found to be co-morbid with ODD. The DSM-IV states that ADHD is often found in children with ODD (APA, 1994), and ODD and ADHD both normally become apparent in people during childhood. The DSM-IV criteria for ODD are based on a pattern of symptoms that must last at least 6 months. These symptoms include an uncontrollable temper, arguing, deliberately disobeying rules, knowingly annoying others, blaming others for own behavior, high irritability, often showing anger, and spitefulness, four of which must be present for a diagnosis of ODD (APA, 1994).

When ODD and ADHD are both present in childhood, the chances that a person will have ADHD in adulthood are increased (Pliszka, 2000). Those with lifetime ADHD have shown significantly higher rates of co-morbidity with ODD than those without lifetime ADHD (McGough et al., 2005). Also, people with the combined or hyperactive-impulsive subtype of ADHD tend to have a higher rate of co-morbidity with ODD than those with inattentive subtype ADHD (McGough et al., 2005). In a study comparing people with ADHD to those without ADHD, 18 percent of the participants diagnosed with ADHD also were diagnosed with ODD.

The purpose of the present research was to examine the influence of adult ADHD and ODD on the emotional intelligence of college students. Researchers and professionals have just begun to study the emotional aspect of intelligence, with previous research focusing only on the cognitive aspect of intelligence (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). Emotional intelligence gets its origin from social intelligence, which includes one’s ability to understand and manage things of the self (Salovey & Mayer, 1990). Emotional intelligence has been defined by Salovey and Mayer as the ability to evaluate and express emotion in one’s self and others, the ability to regulate emotions in one’s self and others, and the ability to use this information to motivate one’s thoughts and actions. These three aspects of emotional intelligence combine to provide a way for people to interact successfully with others and to form and maintain proper social relationships with others. Those with a high level of emotional intelligence tend to be highly aware of personal feelings and feelings of others, which may add to the overall well-being of a person (Mayer & Salovey, 1993). Several researchers have studied the effects of emotional intelligence on mental health. Mayer and Stevens (1994) researched information on the emotionally intelligent person who is very proficient at understanding and handling his or her feelings. These emotionally open individuals are thought to be healthy in their personalities by showing an ability to work well with others and communicate openly. Monsen, Eilertsen, Melgard, and Odegard (1996) state that a person with high emotional awareness should have good mental health, allowing intimacy and close-ness with others, allowing control over their or her social life, and allowing for motivation to achieve goals. In people with personality disorders, long-term therapy addressing affect consciousness helped considerably in treatment of the disorders (Monsen, Odland, Faugli, Daas, & Eilertsen, 1995).

In another study, emotional intelligence is identified as the point where the cognitive system and the emotional system meet (Mayer & Salovey, 1995). When children are young, the two systems seem to be separate, but as a person grows and matures, the systems seem to combine to form something complex. The emotional intelligence of an individual also affects that person’s ability to solve problems (Mayer & Geher, 1996). In order to understand and solve emotional problems, a person must first be able to recognize and process emotional information, which is a basic aspect of a person’s emotional well-being (Mayer & Geher, 1996).

Recently, researchers have begun studying the important role emotional intelligence plays in people’s lives. Salovey and Mayer (1990) researched the effect of emotional intelligence on the well-being of individuals. They concluded that people with high emotional intelligence are aware of their own feelings and the feelings of those around them, and they are able to label and communicate both positive and negative aspects of internal experiences. Salovey and Mayer also stated that those with high emotional intelligence are pleasant to be around and make others feel better. Emotional intelligence can help people regulate emotions in order to achieve goals, and it can help a person to focus on what is best in the long-run rather than letting emotions control what happens in the present. Monsen and Monsen (1999) state
that emotions are a main aspect to organizing self-experience, and emotions influence the formation and maintenance of organizing principles. Emotional intelligence has also been credited for preventing emotional dissonance and ethical role conflict in a person’s life (Abraham, 1999).

Levine, Marziali, and Hood (1997) researched emotional processing in patients with borderline personality disorder (BPD). Patients with BPD were less able to recognize, differentiate, and integrate emotions than those without BPD, and patients with BPD had more intense negative emotions. Western (as cited in Levine et al., 1997) said that dysregulation of emotions underlies most of the diagnostic criteria for BPD. Salovey and Mayer (1990) also found issues faced by those with low levels of emotional intelligence: an inability to regulate emotions properly may lead to becoming enslaved to emotions, an inability to recognize emotions in others may make others feel bad and lead to isolation of the one with low emotional intelligence, and an inability of recognition of emotion in one’s self may lead to a life that is not emotionally fulfilling, leading to depression or even suicide.

To measure emotional intelligence, Salovey, Mayer, and their colleagues developed two self-report instruments. The State Meta-Mood Scale (SMMS; Mayer & Stevens, 1994) measures an individual’s state of mood at a given time. The Trait Meta-Mood Scale (TMMS; Salovey et al., 1995) is used to measure an individual’s lasting qualities of mood and the consistent individual differences in the way people pay attention to emotions, the amount of clarity people have between emotions, and the way people regulate emotions. Mayer and Gaschke (as cited in Salovey et al., 1995) defined meta-mood experience as the continuous process of regulating, evaluating, monitoring, and thinking about feelings. A different self-report method of emotional intelligence is the Multidimensional Emotional Awareness Questionnaire (MEAQ), which consists of 20 questions and measures three aspects of emotional awareness (Leible & Snell, 2004). The three aspects of emotional awareness that are measured include private emotional attention (the tendency to pay attention to one’s own emotions), private emotional preoccupation and rumination (the tendency to think about and meditate on one’s own emotions), and public emotional monitoring (the tendency to notice and be concerned with other’s reactions of one’s own emotions; Leible & Snell, 2004).

Hypotheses

It was predicted that university students with adult ADHD would report lower scores on the measures of emotional intelligence. The particular aspects of emotional intelligence that were anticipated to characterize college students with adult ADHD were emotional clarity and emotional repair. More specifically, the inattentiveness subscale of the ASRS was predicted to be negatively correlated with the emotional clarity subscale of the TMMS. Also, the hyperactivity-impulsivity subscale of the ASRS was predicted to be negatively correlated with the emotional repair subscale of the TMMS. This prediction was based on previous research by Rapport et al. (2002), who found that adults with ADHD did not recognize emotions in others as well as adults without ADHD. In another study by Casey (as cited in Rapport et al., 2002), affect recognition was reported to be more difficult for children with ADHD than for children without ADHD. The emotional clarity subscale of the TMMS addresses the awareness of a person’s feelings and the ability to differentiate between feelings (Salovey et al., 1995), and thus it was expected to be negatively correlated with adult ADHD inattentiveness. In one study conducted by Reimherr et al. (2005), researchers examined the prevalence of emotional dysregulation in adults with ADHD. They found that emotional dysregulation was fairly prevalent in adults with ADHD, and especially in

Summary

Some individuals with psychological disorders are found to have impairments in emotional intelligence (Levine et al., 1997; Salovey et al., 1995). There has been no previous research on the disorders of ADHD and ODD that shows a direct relationship with emotional intelligence, but the purpose of the present study was to determine if emotional intelligence in young adult college students would be associated with ADHD and ODD. Adult ADHD was measured using the ASRS (Kessler et al., 2005) and the SNAP-IV (Swanson et al., 2001) self-report scales. The ASRS contains 18 questions measuring two aspects of adult ADHD (inattentiveness and hyperactivity-impulsivity) (Kessler et al., 2005). The SNAP-IV is comprised of 100 questions, including questions on the inattentiveness and hyperactivity-impulsivity aspects of ADHD, and questions measuring ODD in individuals (Swanson et al., 2001). Emotional intelligence was measured using both the TMMS (Salovey et al., 1995) and the MEAQ (Leible & Snell, 2004) self-report scales. The TMMS measures three facets of emotional intelligence: a person’s ability to pay attention to emotions, a person’s ability to experience clarity of emotions, and a person’s ability to regulate emotions (Salovey et al., 1995). The MEAQ measures three other aspects of emotional awareness: private emotional attention, private emotional preoccupation and rumination, and public emotional monitoring (Leible & Snell, 2004).
adults with ADHD hyperactive-impulsiveness. The TMMS subscale of emotional repair may also be conceptualized as involving emotional regulation in that it addresses people’s ability to control their moods and emotions (Salovey et al., 1995), and thus emotional repair was expected to be negatively correlated with adult ADHD hyperactivity-impulsivity.

Method

Participants

The participants in the present research came from a sample drawn from several lower division psychology courses at a small Midwestern university. The sample consisted of 87 participants (39 males and 48 females) who were assessed during the spring of 2007. The participants volunteered to participate in the research projects as one way to partially fulfill requirements in their course. About 80% of the sample (n = 69) were lower-division students, and the others were juniors (n = 11), seniors (n = 6), or some other academic status (n = 1). About 90% of the sample (n = 79) reported that they had never been married, and the others were either currently in their first marriage (n = 5), divorced (n = 2), or else remarried (n = 1). Roughly 71% of the sample (n = 62) were 16 to 20 years of age, and the others were older (n = 25). About 87% (n = 76) reported being European American, about 8% (n = 7) reported being African-American, about 2% (n = 2) reported being Hispanic American, and the others (n = 2) were some other ethnicity.

Measures

Demographics. Twelve questions were included in the survey, designed to measure the following demographics: age, academic class, gender, marital status, number of children, income, and ethnic heritage. Questions were also included to determine the participant’s current relationship status, as well as to determine if the participants believed they were in love at the time of the survey and if they had ever been to a therapist concerning love. Participants were also asked to gauge their maturity level and to indicate if they were currently engaged in an exclusive dating relationship. The participants also responded to four romantic relationship questions: (1) What type of relationship are you currently involved in? [none (1) vs. cohabiting/married (5)]; (2) Are you in love now? [yes (1) vs. no (2)]; (3) Have you ever seen a therapist about relationship issues/problems? [yes (1) vs. no (2)]; and (4) Are you currently dating someone exclusively? [yes (1) vs. no (2)].

ASRS measure of adult ADHD. The Adult ADHD Self-Report Scale (ASRS; Kessler et al., 2005) was designed to assess the inattentiveness and hyperactivity-impulsivity characteristics of adult ADHD. Eighteen questions were generated about ADHD symptoms commonly exhibited by adults, and these questions were then overlapped with the 18 DSM-IV Criterion A symptoms (Kessler et al., 2005). Nine of the eighteen questions reflect inattentiveness symptoms, and the remaining half of the questions reflects hyperactivity-impulsivity symptoms (Kessler et al., 2005). In responding to the ASRS measure of adult ADHD, the participants were asked to indicate how much each statement characterized them over the past 6 months, using a 5-point Likert scale with each item being scored from 0 to 4: never (0), rarely (1), sometimes (2), often (3), very often (4). Subscale scores were calculated by summing the item scores within the domains of inattentiveness (I) and hyperactivity-impulsivity (HI). Higher scores corresponded to greater inattentiveness (I) and/or hyperactivity/impulsivity (HI). There is evidence for the reliability and validity of the ASRS (e. g., Kessler et al., 2005).

SNAP-IV measure of adult ADHD and adult ODD. The Swanson Nolan and Pelham-IV (SNAP-IV; Swanson et al., 2001) was designed to measure both ADHD and ODD in adult participants. More specifically, the SNAP-IV is designed to measure inattention, hyperactivity/impulsivity, and opposition/defiance characteristics in respondents. The questionnaire consists of 26 multiple choice questions pertaining to symptoms associated with ADHD and ODD. The responses were to be marked on a 4-point Likert scale based on severity described by the participant: (0) not at all; (1) just a little; (2) quite a bit; or (3) very much. Higher scores corresponded to greater ADHD or ODD symptoms. The reliability and validity of the SNAP-IV was cited by March et al. (2000) who stated that the SNAP-IV showed excellent construct validity and test-retest reliability in ADHD samples. Evidence has also been provided for the reliability and validity of the SNAP-IV measure of ODD (MTA Cooperative Group, 1999; Swanson, et al., 2001).

Multidimensional Emotional Awareness Questionnaire. The Multidimensional Emotional Awareness Questionnaire (MEAQ; Snell, 1999) consists of 20 items designed to measure 3 aspects of emotional awareness: (a) private emotional attention (defined as the dispositional tendency to pay attention to, to be concerned with, and to be aware of one’s internal and privately felt emotional experiences), (b) private emotional preoccupation and rumination (defined as the dispositional tendency to be preoccupied with and to ruminate about one’s internal and privately felt emotional experiences), and (c) public emotional monitoring (defined as the dispositional tendency to pay attention to, to be concerned with,
and to be aware of public reactions to one’s privately felt emotional experiences). The research participants were asked to respond to the MEAQ statements based on how much each statement characterized them using a 5-point Likert scale with each item being scored from 0 to 4: (0) not at all characteristic of me; (1) slightly characteristic of me; (2) somewhat characteristic of me; (3) moderately characteristic of me; and (4) very characteristic of me. Higher scores corresponded to greater emotional consciousness and emotional monitoring, respectively. Evidence for reliability and validity for the Multidimensional Emotional Awareness Questionnaire was provided by Snell (1999) and Leible and Snell (2004).

Trait Meta-Mood Scale. The Trait Meta-Mood Scale (TMMS; Salovey et al., 1995) is an objective self-report instrument designed to measure several aspects of emotional intelligence. The scale is divided into 3 primary item domains: the degree of attention devoted to feelings, clarity of the experience of those feelings, and the regulation of those feelings. Items in each domain are divided into half worded positively and half worded negatively. Attention items were scored based on the highest positive loaded item (e.g., “I pay a substantial amount of attention to how I feel.”) and the highest negative loaded item (e.g., “I do not pay a substantial amount of attention to my feelings.”). Items on clarity of feeling were scored based on the highest positive loaded item (e.g., “Most of the time I am very clear about my feelings.”) and the highest negative loaded item (e.g., “I do not understand my feelings.”). Finally, regulating items (mood repair) were scored based on the highest positive loaded item (e.g., “Even though I am sometimes sad, I am mostly optimistic.”) and the highest negative loaded item (e.g., “Even though sometimes I am happy, I am mostly pes-

TABLE 1

Correlations Between the Measures of Adult ADHD/ODD and both the Multidimensional Emotional Awareness Questionnaire (MEAQ) and the Trait Meta-Mood Scale (TMMS) Among University Students

<table>
<thead>
<tr>
<th>Adult ADHD and ODD</th>
<th>MEAQ</th>
<th>TMMS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PEA</td>
<td>PEP</td>
</tr>
<tr>
<td>ASRS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inattention (I)</td>
<td>-.04</td>
<td>.11</td>
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<tr>
<td>Hyperactivity/Impulsiveness (HI)</td>
<td>-.10</td>
<td>.10</td>
</tr>
<tr>
<td>Total (I &amp; HI)</td>
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<td>.12</td>
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<tr>
<td>SNAP-IV:</td>
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<td></td>
</tr>
<tr>
<td>Inattention (I)</td>
<td>-.17</td>
<td>-.10</td>
</tr>
<tr>
<td>Hyperactivity/Impulsiveness (HI)</td>
<td>-.19</td>
<td>-.06</td>
</tr>
<tr>
<td>Total (I &amp; HI)</td>
<td>-.21</td>
<td>-.09</td>
</tr>
<tr>
<td>SNAP-IV: ODD</td>
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<td>-.08</td>
</tr>
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</table>

Note. N = 87. PEA = private emotional awareness. PEP = private emotional preoccupation/rumination. PEM = private emotional monitoring. EC = emotional clarity. EA = emotional attention. ER = emotional repair. ODD = oppositional defiant disorder. Higher scores on the measures of adult ADHD correspond to greater amounts of the symptoms associated with each instrument. Higher ODD scores correspond to greater symptomatology associated with operational defiant disorder. Higher MEAQ scores correspond to greater private emotional consciousness (PEC), private emotional preoccupation (PEP), and public emotional monitoring (PEM), respectively. Higher TMMS scores correspond to greater emotional clarity (EC), emotional attention (EA), and emotional regulation and repair (ER), respectively.

\[ p < .10, \quad * p < .05, \quad ^{*} p < .01, \quad ^{**} p < .005, \quad ^{***} p < .001. \]
EMOTIONAL INTELLIGENCE IN ADULTS WITH ADHD

Fleming and Snell

Correlated with emotional clarity ($r = -.25, p < .02$), emotional repair ($r = -.38, p < .001$), and emotional attention ($r = -.23, p < .04$). Negative correlations were also found to exist between ADHD hyperactivity/impulsivity and both the emotional repair ($r = -.33, p < .01$) and the emotional attention ($r = -.23, p < .04$) subscales of the TMMS. The overall ADHD score was also found to be negatively correlated with emotional clarity ($r = -.25, p < .02$), emotional repair ($r = -.39, p < .001$), and emotional attention ($r = -.27, p < .02$). These results support the previously made predictions of relationships and also indicate that other unpredicted relationships are present between the overall scores of ADHD and the overall scores of emotional intelligence.

Results for SNAP-IV Measure of Adult ODD

An inspection of Table 1 indicates that the SNAP-IV measure of ODD was found to be negatively correlated with emotional repair ($r = -.42, p < .001$) as well as with emotional attention ($r = -.33, p < .01$). As ODD symptoms are found to be positively correlated with symptoms of ADHD, these results support the relationships predicted between ADHD/ODD and emotional intelligence.

Discussion

The present study focused on the symptoms of attention-deficit/hyperactivity disorder (ADHD) and oppositional defiant disorder (ODD) in young adult college students; more specifically, this research examined the relationship between ADHD and emotional intelligence in young adults. It was predicted that the inattentiveness aspect of ADHD would be inversely related to the emotional clarity facet of emotional intelligence. It was also predicted that the hyperactivity-impulsivity aspect of ADHD would be similarly related in an inverse fashion to the emotional repair facet of emotional intelligence. The research findings provided support for both of these predictions, indicating that ADHD inattentiveness predicted emotional clarity and that ADHD hyperactivity-impulsivity predicted emotional repair. Thus, the results of the present investigation showed that young adults who have symptoms of ADHD inattentiveness and hyperactivity, respectively, were more likely to report less emotional clarity and less emotional repair than young adults without symptoms of ADHD.

Several unexpected findings were also revealed in the present research study. Some of the subscales on the ASRS (Kessler et al., 2005) and the TMMS (Salovey et al., 1995) were found to be indirectly associated. In particular, ADHD inattentiveness was found to be inversely associated with emotional repair and ADHD

Procedure

When the participants arrived at the testing room, the purpose of the study was briefly described to them and they were asked to read and sign an informed consent form. They were guaranteed complete anonymity and were assured that their responses would be kept in complete confidentiality. All participants who entered the experiment agreed to participate. Each participant then received a questionnaire booklet containing the various measures. The presentation order was as shown above. Following the completion of the measures, the participants received a written debriefing form that explained the purpose of the study. The completion of the questionnaire booklet required approximately 30 to 45 minutes. Small groups of up to 20 participants were tested during each session of the 8 separate sessions.

Results

The correlations between the measures of adult ADHD and ODD and the measures of emotional intelligence are presented in Table 1.

Results for ASRS Measure of Adult ADHD

An inspection of Table 1 indicates that there was a negative correlation between ADHD hyperactivity/impulsivity and both emotional clarity ($r = -.28, p < .01$) and emotional repair ($r = -.23, p < .04$). There was also a negative correlation between ADHD inattentiveness and both emotional clarity ($r = -.28, p < .01$) and emotional repair ($r = -.25, p < .02$). Finally, a negative correlation was found between the total ASRS score and both emotional clarity ($r = -.32, p < .01$) and emotional repair ($r = -.27, p < .02$). These results support the predictions stated previously between the relationship of hyperactivity/impulsivity and emotional repair, and between the relationship of inattentiveness and emotional clarity; furthermore, the results indicate that more relationships are present than expected.

Results for SNAP-IV Measure of Adult ADHD

As an inspection of Table 1 indicates, the ADHD measure of inattentiveness was found to be negatively correlated with emotional clarity ($r = -.25, p < .02$), emotional repair ($r = -.38, p < .001$), and emotional attention ($r = -.23, p < .04$). Negative correlations were also found to exist between ADHD hyperactivity/impulsivity and both the emotional repair ($r = -.33, p < .01$) and the emotional attention ($r = -.23, p < .04$) subscales of the TMMS. The overall ADHD score was also found to be negatively correlated with emotional clarity ($r = -.25, p < .02$), emotional repair ($r = -.39, p < .001$), and emotional attention ($r = -.27, p < .02$). These results support the previously made predictions of relationships and also indicate that other unpredicted relationships are present between the overall scores of ADHD and the overall scores of emotional intelligence.

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Several unexpected findings were also revealed in the present research study. Some of the subscales on the ASRS (Kessler et al., 2005) and the TMMS (Salovey et al., 1995) were found to be indirectly associated. In particular, ADHD inattentiveness was found to be inversely associated with emotional repair and ADHD

Results for SNAP-IV Measure of Adult ODD

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The present study focused on the symptoms of attention-deficit/hyperactivity disorder (ADHD) and oppositional defiant disorder (ODD) in young adult college students; more specifically, this research examined the relationship between ADHD and emotional intelligence in young adults. It was predicted that the inattentiveness aspect of ADHD would be inversely related to the emotional clarity facet of emotional intelligence. It was also predicted that the hyperactivity-impulsivity aspect of ADHD would be similarly related in an inverse fashion to the emotional repair facet of emotional intelligence. The research findings provided support for both of these predictions, indicating that ADHD inattentiveness predicted emotional clarity and that ADHD hyperactivity-impulsivity predicted emotional repair. Thus, the results of the present investigation showed that young adults who have symptoms of ADHD inattentiveness and hyperactivity, respectively, were more likely to report less emotional clarity and less emotional repair than young adults without symptoms of ADHD.

Several unexpected findings were also revealed in the present research study. Some of the subscales on the ASRS (Kessler et al., 2005) and the TMMS (Salovey et al., 1995) were found to be indirectly associated. In particular, ADHD inattentiveness was found to be inversely associated with emotional repair and ADHD
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hyperactivity-impulsivity was found to be inversely associated with emotional clarity. Several other unanticipated findings were associated with the SNAP-IV (Swanson et al., 2001): (a) the SNAP-IV measure of ADHD inattentiveness was found to be inversely related to the TMMS measures of emotional clarity, emotional repair, and emotional attention; (b) the SNAP-IV measure of ADHD hyperactivity-impulsivity was found to be inversely related to the TMMS measures of both emotional repair and emotional attention; and (c) the SNAP-IV measure of ODD was found to be inversely related to the TMMS measures of emotional repair and emotional attention. These findings may have occurred because when people lack a relatively clear sense of their feelings and emotions, they may not be able to properly regulate those feelings and emotions. Moreover, without the ability to identify their emotional problems (i.e., those adults with ADHD), such individuals would probably be unable to repair (to regulate and moderate the intensity of their emotional states) their emotional problems. Emotional repair and emotional clarity are both facets that work together to comprise people's overall emotional intelligence (Salovey et al., 1995).

A third facet of emotional intelligence involves emotional attention, and the present results revealed that the SNAP-IV measure of ADHD inattentiveness was inversely associated with the TMMS measure of emotional attention, which demonstrates even more how the three subscales of emotional intelligence are interrelated. Finally, some unexpected findings were associated with the SNAP-IV measure of ODD: The SNAP-IV measure of ODD was inversely associated with the TMMS measures of emotional repair and emotional attention. The SNAP-IV results for ODD support the growing evidence of a comorbidity between ADHD and ODD (APA, 1994), demonstrating the similarities between the effects of ODD on emotional intelligence and the effects of ADHD on emotional intelligence.

The results of the present study were consistent with results from previous studies, including a study by Rapport et al. (2002) which revealed that adults with ADHD showed less accuracy at recognizing and identifying others’ emotions than adults without ADHD. A second study also confirmed that people with ADHD have a difficult time understanding others’ emotions from their facial expressions (Wasted lives – missed opportunities, n.d.). In the present study, a deficit in emotional clarity was found to characterize adults with symptoms of ADHD, which is consistent with the previous studies that have similarly found a deficit in emotional clarity among adults with ADHD. Although further research is necessary in this area to clarify the nature of the parallels between the previous results and the results from the current study, it may be possible that the lack of a clear understanding of one’s own emotions may be similarly related to the lack of a clear understanding of other people’s emotions as well. The study by Rapport also revealed that emotions seem to be experienced more intensely by adults with ADHD, relative to adults without ADHD. The present study revealed a diminished ability of young adults with ADHD symptoms to regulate and repair their own negative emotional states, which would result in a more intense and uncontrolled experience of those emotions. Another study by Jensen and Rosen (2004) focused on children with ADHD who showed higher levels of emotional reactivity than children without ADHD, which also demonstrates the diminished ability of people with ADHD to regulate and repair emotions.

Several important implications are associated with the present research findings. Given the results of the present research, it is apparent that emotional intelligence and ADHD inversely relate to each other. There are also several studies suggesting that emotional intelligence has an influence on the social aspects of people’s lives, and this influence first emerges in children with ADHD (Wasted lives – missed opportunities, n.d.; Young, 2000; Young, Heptinstall, Sonuga-Barke, Chadwick, & Tayler, 2005). Hyperactivity was found to be a good predictor of social problems in girls, particularly regarding any interpersonal relationship problems that they may experience (Young et al., 2005). While hyperactivity may play a huge role in peer relationships in youngsters, almost all children with any type of ADHD face significant social problems (Young, 2000). Since symptoms of ADHD continue into adulthood (APA, 1994; DuPaul et al., 2001; Weiss & Murray, 2003; Young, 2000), it is likely that effects of childhood ADHD continue into adulthood, emphasizing the importance of addressing interpersonal relationship problems and the reasons for these problems. Another study revealed the diminished ability of people with ADHD to read others' emotions by their facial expressions, which is an important element of any social interaction (Wasted lives – missed opportunities, n.d.). Unidentified and untreated symptoms of ADHD that affect emotional intelligence (i.e., the ability to evaluate and express emotion in one’s self and others, the ability to regulate emotions in one’s self and others, and the ability to use this information to motivate one’s thoughts and actions) may result in people’s failure to reach their full potential in relationships and social aspects of life. Thus, clearly there is a need to help such individuals.
Several limitations of the present study must be acknowledged. The sample size of 87 was rather small for the research topic, and the majority of participants were unmarried undergraduate students. A larger sample size would be beneficial for future studies, along with the use of a wider variety of individuals with varying age and marital status. Another restriction in the current research study concerned the use of self-report techniques to assess the symptoms of ADHD and emotional intelligence in individuals. While such self-report instruments may be useful, a more complete and accurate assessment could probably be obtained from a multimodal assessment approach that includes such things as history checks, parent evaluations, and other methods of evaluating symptoms. If it was actually known which students were identified as having ADHD and which students were not, this would make the results more clear and precise.

Further research should be conducted on the topic of adult ADHD to help identify the underlying nature of the relationships found. The present study revealed that ADHD symptoms are associated with a lower level of emotional intelligence, but the mediating nature of this finding is unknown. More research should be conducted in the future to determine the reason people with the inattentiveness aspect of ADHD are unclear about their feelings, and more research should be conducted to determine why people with ADHD hyperactivity-impulsivity have a difficult time in controlling and regulating their emotions. It is also important to study the difficulties that such adults have in their interpersonal relationships. Many studies have been conducted to examine the problems that children with ADHD have in their relationships, but the social difficulties of adults with ADHD have barely been studied. It would also be beneficial for future research to identify possible ways to address and treat the emotional deficits of those with ADHD. Since people’s ability to have and maintain peer relationships are affected by their ability to be emotionally aware, the issue of deficits in emotional intelligence could have great consequences if unaddressed. Emotional intelligence is an integral part of people’s interpersonal relationships, and thus this topic should be addressed in the lives of those with ADHD.

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Death is one of the few guarantees of human existence, and yet is one of the greatest mysteries of life. The unknown aspect of death, combined with its inevitability and universality, results in some measure of death anxiety for much of humanity. Death anxiety, its various aspects, and the factors that contribute to and correlate with it have been the subject of numerous research studies over the past few decades, which have uncovered a number of consistent predictors of death anxiety, including age, gender, and self-esteem. The goal of the present study is to further investigate the impact of these variables on death anxiety and to uncover any interactions that may occur between them.

**Death Anxiety and Age**

According to Russac, Gatliff, Reece, and Spottswood (2007), death anxiety literature consistently demonstrates an age effect, which “refers to the fact that young adults often report higher levels of concern over mortality issues than older adults” (p. 549). In their own experiments investigating the relationship between death anxiety and age, using both the Collett-Lester Fear of Death Scale-Revised (CL-R; Lester, 1994, as cited in Russac et al.) and the Revised Death Anxiety Scale (RDAS; Thorson & Powell, 1994), Russac et al. found death anxiety to be highest in the 20’s and lowest in old age (65+ years). In his unpublished dissertation investigating the demographic and socio-cultural variables impacting death anxiety, Scovel (1999) also found that older participants reported less fear of death than younger participants.

Thorson and Powell (1994) found a negative linear relationship between age and death anxiety during the development of the RDAS, as an ANOVA revealed significant differences between young adults (18-20 years), adults (21-36 years), and the two older age groups combined (37-88 years). In a different study, Thorson and Powell (2000) found that age correlated negatively with death anxiety and depression and positively with religiosity; the young scored lower on the Intrinsic Religious Motivation scale (IRM; Hoge, 1972, as cited in Thorson & Powell, 2000) and higher on the RDAS than the old.

Rasmussen and Brems (1996) tried to tease apart the distinction between age and psychosocial maturity in an attempt to better understand the age effects associated with death anxiety. After distributing the DAS and the Constantinople Inventory of Psychosocial Development (CIPD; Constantinople, 1973, as cited in...
Rasmussen & Brems) to participants aged 18-80 years, they found that although both age and psychosocial maturity have significant negative relationships with death anxiety scores, psychosocial maturity has greater predictive power when it comes to death anxiety than does age alone.

While a linear correlation between age and death anxiety is fairly consistent, some complexities have been found which require a more sophisticated understanding of their relationship. For example, Keller, Sherry, and Piotrowski (1984) found that older adults (aged 60+ years) reported the least death anxiety related to self but the most anxiety about death in general, while those in late middle-age (50-59 years) had the least anxiety about death in general. Also, when Tomer, Eliason, and Smith (2000) administered the RDAS to 102 young adults (mean age = 19.98 years) and 89 older adults (mean age = 69.04 years), they reported that young adults had significantly higher death anxiety scores than older adults, even though the older adults reported thinking about death more frequently than did the younger cohort. Contrasting this somewhat, in his book on older adults’ views of death, Cicirelli (2002) found that older adults (aged 60+ years) actively avoided thinking about death, but reported the lowest levels of death anxiety. He also noted that although the literature supports a negative linear relationship between age and death anxiety, the majority of “elderly” samples have been made up of young-old participants (aged 60-75 years), and little is therefore known about what happens beyond age 75.

Along this line, Fortner and Neimeyer (1999) challenged the accepted negative linear relationship between age and death anxiety in their quantitative review of 49 studies looking at death anxiety in the elderly, reporting that within that group, “gender, age, and religiosity do not appear to reliably predict death anxiety” (p. 400). They went on to say that, although death anxiety does correlate negatively with age, it stabilizes somewhat in old age, as the oldest adults do not necessarily have the least death anxiety. The conclusion was that age has a greater effect on death anxiety in younger cohorts than in the older ones.

**Death Anxiety and Gender**

A gender effect has also been a consistent finding in death anxiety research, with women tending to report significantly higher levels of death anxiety than men (Russac et al., 2007). Rose and O’Sullivan (2002) found this effect when undergraduate women scored higher on the Death Anxiety Scale (DAS; Templer, 1970) than undergraduate men. Harding, Flannely, Weaver, and Costa (2005) found that women in their sample of 130 Episcopal parishioners had higher DAS scores than men across age groups; women also had higher DAS scores than men in the study by Pierce, Cohen, Chambers, and Meade (2007) investigating the impact of religious variables and gender on death anxiety in students. Keller et al. (1984) noted that women reported higher death anxiety related to self than men, and Tomer et al. (2000) found that regardless of age, women taking the RDAS scored significantly higher than did men. Thorson and Powell (1994), in their development of the RDAS, found a slight significant correlation between gender and death anxiety (women had higher RDAS scores), but gender failed to reach significance in the ANOVA.

Like the age effect, research has uncovered some intricacies in the gender effect that require a more careful examination of its implications. In their quantitative review, Fortner and Neimeyer (1999) found that women reported higher death anxiety than men in younger cohorts, but these effects failed to generalize to older populations. Davis, Bremer, Anderson, and Tramill (1983) found that women had higher death anxiety scores than men, but also noted that men tend to have higher self-esteem and ego strength, two significant negative correlates of death anxiety; they therefore suggested that the relationship between self-esteem and death anxiety is more salient than the relationship between gender and death anxiety.

However, in his book reviewing the death anxiety literature, Cicirelli (2002) pointed out that although some studies do not find gender differences (Scovel, 1999; McDermott, 1994), all of those that do find differences show that women have higher scores than men, rather than vice versa. Thus, the preponderance of existing research indicates that one’s gender does affect death anxiety to an extent.

**Death Anxiety and Self-Esteem**

As noted above, existing research has established a strong negative relationship between self-esteem and death anxiety. Davis et al. (1983) found a negative correlation between scores on the DAS and scores on the self-esteem measure of the Texas Social Behavior Inventory (Helmreich & Stapp, 1974, as cited in Davis et al.). In a series of three experiments investigating self-esteem and death anxiety through the lens of terror management theory, Harmon-Jones et al. (1997) consistently found a negative relationship between self-esteem and death anxiety, and asserted that their findings “provide the strongest evidence to date that self-esteem provides protection against deeply rooted anxiety about mortality” (p. 35).

Reviews of the literature have repeatedly found a negative relationship between measures of self-esteem
and death anxiety scores. In their empirical review of research examining self-esteem and death anxiety, Pyszczynski, Greenberg, Solomon, Arndt, and Schimel (2004) came to the conclusion that “self-esteem functions as a buffer against the potential for anxiety that results from awareness of the inevitability of death” (p. 452). Buzzanga, Miller, Perne, Sander, and Davis (1989), in their reassessment of the relationship between death anxiety and self-esteem, found that participants low in self-esteem had higher death anxiety scores on the DAS than their high self-esteem counterparts. Finally, in his examination of death anxiety in older adults, Cicirelli (2002) posited that one of the major reasons that the elderly report lower levels of death anxiety could be the fact that they also maintain high levels of self-esteem, despite increasing age, disease, loneliness, and dependency.

**Interactions**

There are a number of potential interactions between the variables age, gender, self-esteem, and death anxiety, but only a few of these have been researched. As pointed out above, gender and age may interact in their effect on death anxiety, as some studies have found a gender difference in younger cohorts but not in the older ones (Forman & Neimeyer, 1999). Another possible interaction is that of age and self-esteem, as older people tend to have both higher levels of self-esteem and lower levels of death anxiety than younger people (Cicirelli, 2002). Self-esteem and gender may also interact, as women tend to report lower levels of self-esteem and higher levels of death anxiety across age groups (Robins & Trzesniewski, 2005; Davis et al., 1983). Finally, a three-way interaction is possible among all of the variables, as age, gender, and self-esteem may influence one another in their combined impact on an individual’s level of death anxiety.

**Purpose and Hypotheses**

While the effects of gender, age, and self-esteem on death anxiety have been fairly established in the literature, very little investigation into the potential interactions of these variables has been conducted. The goal of the present study is to attempt to fill that gap in the research by looking for any interactions between gender, age, and self-esteem, and addressing the implications of the findings.

Based on the literature presented above, the hypotheses of the present study are as follows: 1) women will have higher death anxiety than men across self-esteem and age groups; 2) older adults (60+) will have the lowest overall death anxiety scores, and young adults (18-25) will have the highest death anxiety scores overall; 3) those in the higher self-esteem group (SES scores 21-30) will have lower death anxiety scores overall than those in the lower self-esteem group (SES scores 11-20); 4) self-esteem scores will correlate negatively with death anxiety scores across age and gender; 5) on the gender-age interaction, young women will have the highest death anxiety scores and older men will have the lowest; 6) on the age-self-esteem interaction, older adults with high self-esteem will have the lowest death anxiety scores and younger adults with low self-esteem will have the highest; 7) on the gender-self-esteem interaction, women with low self-esteem will have the highest death anxiety scores and men with high self-esteem will have the lowest; and 8) on the three-way interaction, women in the young adult age group with low self-esteem will have the highest death anxiety, while men in the older adult age group with high self-esteem will have the lowest.

**Method**

**Participants**

Participants (N = 136) consisted of 83 undergraduate students aged 18-25 years (36 men and 47 women); 19 university faculty and staff members aged 35-50 years (9 men and 10 women); and 34 university faculty, staff, and emeriti members aged 60+ years (19 men and 15 women). The undergraduate students consisted of 29 freshman, 30 sophomore, 14 junior, and 10 senior students. All of the middle-aged and approximately half of the older adult participants were employed, with 16 in the 60 and older group identifying themselves as retired. When asked if they believed in “some form of afterlife,” all but 7 participants circled “yes” (3 in the young age group circled “no,” and 4—2 young and 2 old—left it blank). All participants were volunteers and were affiliated with a private Christian liberal arts university in the northwest region of the United States; ethnic, religious, educational, and socioeconomic demographic data was not requested.

**Materials**

The death anxiety measure used was the 25-item Revised Death Anxiety Scale (RDAS; Thorson & Powell, 1994). Items such as “I fear dying a painful death” and “the subject of life after death troubles me greatly” were rated on a 5-point Likert-type scale ranging in value from 4 (strongly agree) to 0 (strongly disagree), with 2 being the neutral score (which was assigned to any items left blank). Eight of the 25 items are reverse-scored. This study used the total RDAS score as a measure of overall death anxiety, although 7 sub-factors have also been established (fear of pain, fear of not
being, bear of isolation, fear of being left out, fear of loss of control, and fear over the uncertainty of an afterlife; Thorson & Powell, 2000). Thorson and Powell reported a Cronbach reliability alpha of .83 for the measure, and established internal validity by correlating the 7 factors that make up the measure. The RDAS has been used in a number of death anxiety studies (Tomer et al., 2000; Thorson & Powell, 2000; Russac et al., 2007), and is an established measure of death anxiety.

The self-esteem measure used was the 10-item Rosenberg Self-Esteem Scale (SES; Rosenberg, 1965). Items such as “on the whole, I am satisfied with myself” and “at times I think I am no good at all” were rated on a 4-point Likert-type scale ranging in value from 3 (strongly agree) to 0 (strongly disagree); 5 of the 10 items are reverse-scored. The items making up the measure have face validity, and Rosenberg established construct validity by correlating SES scores to nurses’ observations and self-reports of behaviors and affects having been found to correlate positively or negatively with self-esteem (e.g., depression, neurosis; Rosenberg, 1965, p. 17). Silbert and Tippett (1965) established convergent validity when the SES and the Heath Self-Image Questionnaire (Heath, 1965) demonstrated a Pearson correlation coefficient of .83. Silbert and Tippett (1965) also found a 2-week test-retest reliability coefficient of .85, and McCarthy and Hoge (1982) found a 1-year reliability coefficient of .77.

The materials also included a standard individual consent form and a 5-item demographic questionnaire ascertaining age group, gender, belief in an afterlife (“Do you believe in some form of afterlife?” yes or no), student/occupation RETirement status, and year in school.

Procedure
To recruit the undergraduate student participants, the experimenter positioned herself immediately outside the entrance to the campus cafeteria during the lunch hour on the same day of the week for 2 consecutive weeks. As they entered the cafeteria, students were invited to take the surveys; if they agreed, they read and signed an individual consent form, returned it immediately to the researcher, and received the survey packet in return. The researcher placed the signed consent forms face-down in a pile apart from the data collection packet. The experimenter separated the returned survey packets and individual consent forms immediately upon receipt so as to ensure anonymity. The emeriti participants received the results of the study via email.

Those participants aged 60 years and older who did not work on campus were members of the university emeriti, and were recruited via postal mail—they received a letter inviting participation in the study, long with the survey packet and consent form. The experimenter separated the returned survey packets and individual consent forms immediately upon receipt so as to ensure anonymity. The emeriti participants received the results of the study via postal mail. Once data had been collected, the researcher scored the scales and entered the data into SPSS for statistical analysis.

Design
Data were collected with a 3 x 2 x 2 factorial design in mind, the independent variables being age (3 levels—young, middle, and old), gender (2 levels—male and female), and self-esteem (2 levels—lower and higher), and the dependent variable being RDAS score. For ANOVA analysis, participant scores on the SES were divided into low and high self-esteem groups; scores 11-20 constituted the lower self-esteem group and scores 21-30 constituted the higher self-esteem group.

Results
The initial 3 x 2 x 2 univariate analysis of variance (ANOVA) analyzing death anxiety by gender, age, and self-esteem, yielded no significant main effects or interactions. However, when self-esteem was left out of the analysis and a 3 x 2 ANOVA with age and gender as factors was conducted, age reached significance with and F age−group (1, 131) = 3.201, p = .044 (M young = 39.25 SD young = 11.74; M middle = 54.05, SD middle = 8.94; M old = 33.62, SD old = 10.32). A Tukey HSD post hoc test revealed that the significant difference was between the young and old participants, p = .031. An independent-samples t-test analyzing death anxiety by gender reached significance, t(134) = 2.552, p = .012 (M men = 34.55, SD men =
10.43; \( M_{\text{men}} = 39.40, SD_{\text{men}} = 11.62 \). Although self-esteem failed to significantly impact death anxiety in the original ANOVA, self-esteem scores were negatively correlated with death anxiety scores (\( r(134) = -.264, p = .002 \)).

**Discussion**

The results supported the first hypothesis that females would have higher death anxiety overall than males, as gender reached significance in the independent-measures t-test. These results support those of the existing death anxiety literature (Russac et al., 2007; Rose & O’Sullivan, 2002; Harding et al., 2005; Pierce et al., 2007; Keller et al., 1984; Tomer et al., 2000; Fortner & Neimeyer, 1999; and Davis et al., 1983). Placed in a practical context, these findings suggest that different therapeutic approaches for men and women may be beneficial when death is concerned. Of course, further research is necessary to better understand the various aspects of death anxiety from the different gender standpoints, as well as to develop more appropriate methods for dealing with death anxiety for both men and women.

The second hypothesis, which posited that death anxiety would be highest in young adulthood and then gradually decline to reach its lowest levels in old age, was also supported. Young adults reported significantly more death anxiety than older adults, and middle-aged adults reported death anxiety levels between those of the young and the old. This difference retained significance across gender and self-esteem groups, indicating that age has a substantial impact on one’s overall level of death anxiety. These findings agree with the results of Russac et al. (2007); Scovel (1999); Thorson and Powell (1994); Thorson and Powell (2000); Fortner and Neimeyer (1999); and Rasmussen and Brems (1996) finding a negative relationship between age and death anxiety. The idea that death anxiety decreases with age suggests that, while age brings us closer to death, it also enables us to develop more efficient and/or effective ways of approaching and coping with it. Another possible contribution to this age effect is that the increasing personal experiences with death that come with age result in a more positive perspective of and relationship to death.

The third hypothesis, that those in the lower self-esteem group would have higher death anxiety than those in the higher self-esteem group was not supported; this may be due to the relative homogeneity of the sample, and the fact that the range of SES scores is limited. However, the fourth hypothesis predicting a negative correlation between death anxiety and self-esteem was supported. This finding has been firmly established in the literature, as is evidenced by the studies of Davis et al. (1983), Harmon-Jones et al. (1997), Pyszczynski et al. (2004), and Cicirelli (2002). When placed in a practical or clinical context, these results provide further rationale for treating death anxiety by endeavoring to raise one’s self-esteem instead of confronting the death anxiety directly, which has the potential to be more threatening.

None of the four hypotheses predicting interactions between age, gender, and self-esteem were supported, as no interactions reached significance in the ANOVA. It is interesting to note that each of the variables reached some measure of significance separately, but there were no significant interactions between them. This suggests that, although each of the variables studied here has a significant impact on death anxiety individually, there is no relationship between them in the extent to which they affect death anxiety.

There are a number of limitations to this study which should be addressed and taken into consideration when assessing the implications of this research. First, the sample size was relatively small and unevenly represented by age group, which may have caused some of the overall means to be skewed toward the scores of the group with the greatest representation in the sample. Second, the participants were all affiliated in some way with a Christian liberal arts university, which restricts the generalizability of the findings to that specific population. Third, as is true with all one-time self-report measures, it is difficult to differentiate states from traits, and conclusions should be hedged accordingly. Fourth, sole reliance on self-report measures, albeit valid and reliable ones, necessarily qualifies any results with the possibility of individual misinterpretations and/or biases. Finally, the study was designed to be analyzed by a univariate 3 x 2 x 2 ANOVA statistic, which revealed no significance; so, those statistics which showed significance were conducted after the fact and the possibility of Type I error is raised as a result.

Despite its limitations, there are at least two things that can be taken away from this study. First, it provides evidence that the impact of gender, age, and self-esteem on death anxiety remains consistent with the literature in a highly homogenous religiously-affiliated population. Second, the fact that no interactions were significant indicates that the three variables represent three completely different sources of influence—they each affect death anxiety in a predictable way, but they do so separately, without affecting one another.

Should this line of research be continued, it would be helpful to have a larger and more representative sample of participants, along with a more comprehensive
DEATH ANXIETY ACROSS ADULTHOOD

Jackson

demographic questionnaire collecting information on gender, age, religion, education, SES, race/ethnicity, etc., as well as family/living situation and social networks. The size of each demographic group in the sample should be controlled as much as possible to match their relative sizes in the population in order to prevent the over-representation of one group over another and increase the generalizability of the results.

Understanding could also be enhanced by repeating the present study with the addition of a measure differentiating psychosocial maturity and age. The impact of religious beliefs and behaviors on age, gender, and self-esteem along with any interactions between them and their effects on death anxiety would also be a worthwhile endeavor, as religious variables have also been found to correlate individually with each factor as well as with death anxiety (Thorson & Powell, 2000; Cicerelli, 2002; Harding et al., 2005). Future studies attempting to measure and map any variable across adulthood should go beyond the previous concept of older adulthood (60+ years) and differentiate among young-old (60-75 years), middle-old (76-89 years), and old-old (90+ years) age groups to ensure the most accurate results. Finally, further research is required to ascertain whether the lack of interactions between variables found in the present study carries over to a sample more representative of the general population or if it is unique to the specific sample used here.

To conclude, the more we understand about death anxiety and its predictors and correlates, the greater our ability to address the issue of death anxiety on an individual level. Once we have reliably established the impact of various demographic, psychological, and social variables on death anxiety, we can begin developing and implementing targeted therapeutic approaches for coping with death anxiety which will have the capacity to improve individual functioning and quality of life in a manner that more general approaches cannot.

References
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<th>Name of Award or Grant</th>
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<tr>
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<td>Up to 16 awards (8 grad, 8 undergrad) presented for the best research papers submitted for APA/APS conventions.</td>
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<td>Regional Chapter Awards</td>
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<tr>
<td>Regional Faculty Advisor Awards</td>
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<td>Faculty Advisor (chapter nomination)</td>
<td>Six $500 awards + Plaque</td>
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<tr>
<td>APA Science Directorate Internship &amp; Relocation Grant</td>
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<td>10-week paid summer internship in the Science Directorate assisting on a variety of projects; covers relocation expenses.</td>
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<tr>
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<tr>
<td>APS Summer Research Grants</td>
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<td>Provides opportunities to conduct research during the summer with sponsors who are APS members.</td>
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<td>Summer Research Grants</td>
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<td>Fourteen $5,000 grants ($3,500/student + $1,500/sponsor)</td>
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<tr>
<td>Kay Wilson Leadership Award</td>
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<tr>
<td>Allyn &amp; Bacon Psychology Awards</td>
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<tr>
<td>Guilford Undergraduate Research Awards</td>
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<td>1st place—$1,000 2nd place—$650 3rd place—$350</td>
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<tr>
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<td>Chapters</td>
<td>$100 each chapter</td>
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**DEADLINES** for 2008–09 regional student research submissions:
- Eastern - November 15, 2008
- Midwestern - November 3, 2008
- Rocky Mountain - January 9, 2009 (students) & January 16, 2009 (faculty)
- Southeastern - October 10, 2008 (intent) & November 21, 2008 (abstract)
- Southwestern - November 21, 2008
- Western - November 15, 2008

Awards and grants submitted online at the Psi Chi national website at [www.psichi.org](http://www.psichi.org)

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Research Awards
Regional Research Awards
All Psi Chi members (undergraduate and graduate) are eligible to submit research for the Regional Research Awards. Cash awards of $300 each are presented to students submitting the best research papers to Psi Chi sessions at regional conventions. The number of awards in each region varies based on the size of the region; a total of 78 awards of $300 each are available for the academic year. Award monies are distributed at the conventions following the presentations. Deadlines for submissions vary according to region and sometimes from year to year; check your fall regional mailing or the Psi Chi website for details.

National Convention Research Awards
All Psi Chi members (undergraduate and graduate) are eligible to submit their research for the National Convention Research Awards. Cash awards of $300 for undergraduates and $500 for graduates are presented to students submitting the best research for Psi Chi sessions at the APA and APS national conventions. Up to 16 awards are given: 8 for the APA Convention and 8 for the APS Convention. Award monies are distributed at the conventions following the presentations.

Bandura Award
All psychology graduate students who are Psi Chi members and graduate student affiliates of the Association for Psychological Science (APS) are eligible to submit their research for the APS/Allyn & Bacon Bandura Graduate Research Award. The winner receives the following: (1) travel expenses to attend the APS Convention to receive the award, (2) a three-year membership in APS, including subscriptions to all APS journals, and (3) one for the winner and one for the winner’s psychology department as a permanent honor to the winner. In addition, the abstract of the winning paper, as well as a photograph and brief biography of the winner, are published in Eye on Psi Chi. This award is presented during the APS opening ceremony at the APS National Convention.

Newman Award
All psychology graduate students are eligible to submit their research for the Psi Chi/APA Edwin B. Newman Graduate Research Award. The winner receives the following: (1) travel expenses to attend the APA/Psi Chi National Convention to receive the award, (2) a three-year membership subscription to an APA journal or journals of the winner’s choice, and (3) one engraved plaque, one for the winner and one for the winner’s psychology department as a permanent honor to the winner. In addition, the abstract of the winning paper, as well as a photograph, and brief biography of the winner, are published in Eye on Psi Chi. This award is presented during the APS opening ceremony at the APA/Psi Chi National Convention in August.

Allyn & Bacon Awards
The Psi Chi/Allyn & Bacon Psychology Awards, co-sponsored by Allyn & Bacon Publishers, are open to all undergraduate Psi Chi members. All winners receive the following: (1) a check for $3,500, (2) travel expenses to attend the APA Convention to receive the award, and (3) an engraved plaque. Two grants up to $7,000 will be awarded annually for the 14-week unpaid position.

Erbbaum Awards
The Psi Chi/Erbbaum Awards in Cognitive Science, co-sponsored by publisher Lawrence Erlbaum Associates, Inc., are open to all Psi Chi undergraduate and graduate Psi Chi members and are awarded to those who submit the best overall empirical research papers. The awards are $1,000 for first place, $650 for second place, and $350 for third place. The abstracts of the winning papers, as well as photographs and brief biographies of the top three winners, are published in Eye on Psi Chi.

Guilford Awards
All Psi Chi undergraduate members are eligible to submit their research for the Psi Chi/J. P. Guilford Undergraduate Research Awards. Cash awards of $1,000 for first place, $650 for second place, and $350 for third place. The abstracts of the winning papers, as well as photographs and brief biographies of the top three winners, are published in Eye on Psi Chi.

Research Grants
Hunt Research Grants
All Psi Chi student and faculty members are eligible to apply for a Theresa Hunt Research Grant. Up to three grants of up to $5,000 each are presented annually to enable members to complete empirical research that addresses a question directly related to Psi Chi. Unlike other national Psi Chi award/grant programs, the Hunt Grants focus on research directly related to the mission of Psi Chi.

SuperLab Research Grants
All undergraduate and graduate Psi Chi members are eligible to apply for these research grants. The purpose of this program is to provide research grants to aid one undergraduate and one graduate student in conducting computer-based research. Grant winners receive a copy of SuperLab experimental lab software and a response pad from Cedrus®.

Undergraduate Psychology Research Conference Grants
The purpose of this program is to fund provides for local/regional undergraduate psychology research conferences. Funding is intended for conferences that will invite student research presenters from at least three schools in the area and will notify all Psi Chi chapters in the geographic area of the conference. The maximum grant for each conference is $1,000.

Graduate Research Grants
All graduate Psi Chi members are eligible to apply for these graduate research grants. The purpose of this program is to provide funds for members to defray the cost of conducting a research project. Applicants may request up to $1,500 for each project. A total of $10,000 has been allotted for this student grant program.

Undergraduate Research Grants
All undergraduate Psi Chi members are eligible to apply for these undergraduate research grants. The purpose of this program is to provide funds for members to defray the cost of conducting a research project. Applicants may request up to $1,500 for each project. A total of $45,000 has been allotted for this student grant program.

APA Science Directorate Internship & Relocation Grant
All undergraduate Psi Chi members are eligible to apply for this internship program. The purpose of this program is to provide one undergraduate student experience in science administration through a summer internship with APA. The Science Directorate pays approximately $3,500 for a 10-week period, while Psi Chi awards up to an additional $3,500 for living and relocation expenses.

FBI NCAV Internship Grants
All undergraduate and graduate Psi Chi members who are accepted as FBI NCAV interns are eligible to apply for this internship grant. The purpose of this program is to provide annual grants to aid two Psi Chi members in conducting research at the FBI NCAV. Two grants up to $7,000 will be awarded annually for the 14-week unpaid position.

APS Summer Research Grants
All undergraduate Psi Chi members are eligible to apply for these grants (research must be conducted while still an undergraduate, not after graduation). The purpose of the program is to provide funds to students to conduct research during the summer with a faculty sponsor who is a member of APS. This allows the student to partner with a faculty mentor who shares the same research interests and may work at a different institution than the student attends. Psi Chi awards six $5,000 grants (a stipend of $3,500 to the student plus $1,500 to the faculty sponsor).

APS Summer Research Grants
All undergraduate Psi Chi members are eligible to apply for these summer research grants (research must be conducted while still an undergraduate, not after graduation). The purpose of the program is to provide funds for members to conduct summer research at nationally recognized research institutions. Psi Chi will award 14 grants of $3,500 (a stipend of $3,000 to the Psi Chi student plus $500 to the sponsoring faculty member at the research institution each year).

Faculty Advisor Research Grants
All current faculty advisors and coadvisors who have served an active Psi Chi chapter for at least one year are eligible to apply for these faculty advisor research grants. The purpose of this program is to provide funds for advisors to defray the costs of conducting a research project (no stipends included). Two grants will be awarded annually within each of Psi Chi’s six regions, for a total of 12 grants. The maximum amount of each grant will be $2,000.

Chapter and Advisor Awards
Denmark Award
The Psi Chi/Florence L. Denmark National Faculty Advisor Award is presented annually to the one Psi Chi faculty advisor who best achieves Psi Chi’s purpose. The award includes (1) travel expenses to attend the Psi Chi/APA National Convention to receive the award and (2) an engraved plaque. The award is intended to recognize Psi Chi faculty advisors for their outstanding service to the chapter and to Psi Chi.

Regional Chapter Awards
The Psi Chi Regional Chapter Awards provide annual recognition for up to two chapters in each region that best achieve Psi Chi’s purpose. Each winning chapter receives a check for $500 and a plaque to display in the winning chapter’s department. The awards are intended to perpetuate the chapters, to identify chapters as role models for others, and to promote the purposes of Psi Chi.

Regional Faculty Adv Awards
This award is presented annually to one Psi Chi faculty advisor from each region who best achieves Psi Chi’s purpose. The award is to recognize and reward actively involved advisor chapter winners. The winning faculty advisor from each region will receive $500 and a plaque.

Cousins Award
All Psi Chi/Ruth Hubbard Cousins National Chapter Award is presented annually to the one chapter that best achieves Psi Chi’s purpose. The winning chapter receives: (1) a check for $3,500, (2) travel expenses for one chapter officer to attend the Psi Chi/APA National Convention to receive the award, and (3) a plaque to display in the winning chapter’s department.

Website Awards
These awards are presented annually to three chapters with websites that are innovative, artistic, and useful, and that advance or support Psi Chi’s purpose. Winning chapters will receive awards of $200 each.

Kay Wilson Leadership Award
The Psi Chi/Kay Wilson Leadership Award for Outstanding Chapter Presidents is presented annually to the one chapter president who demonstrates excellence in leadership of the local chapter. The winning Psi Chi chapter officer receives: (1) a $500 cash award (2) travel expenses for one chapter president to attend and make a short presentation at the Psi Chi/APA National Convention to receive the award, and (3) an engraved plaque commemorating the award.

Model Chapter Awards
Model Chapter Awards of $100 each are presented annually to recognize and reward Psi Chi chapters that consistently maintain outstanding records of membership inductions, chapter correspondence, service projects, and other criteria associated with being an outstanding chapter. All chapters submitting evidence of meeting these criteria are designated as winners.
The Psi Chi Journal of Undergraduate Research is a national, fully reviewed, quarterly journal dedicated to the publication of undergraduate student research. All active Psi Chi chapters receive one complimentary subscription to the journal. We encourage each chapter to see that an additional subscription is obtained for the school library and that other organizations and interested individuals are made aware of its availability. Every effort has been made to provide a high-quality publication and yet offer the journal at affordable subscription rates to ensure its availability to all interested students, faculty members, and institutions. Back issues and bulk orders for classroom use are also available.

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