 Psi Chi
Journal of Undergraduate Research

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Since the articles in this journal are primarily the work of undergraduate students, the reader should bear in mind that: (1) the studies are possibly less complex in design, scope, or sampling than professional publications and (2) the studies are not limited to significant findings. The basis for accepting papers for publication is the agreement among three professional reviewers that the project, hypothesis, and design are well researched and conceived for one with an undergraduate level of competence and experience.

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2. Only original manuscripts (not published or accepted for publication elsewhere) will be accepted.
3. All manuscripts must be prepared according to the Publication Manual of the American Psychological Association (5th ed.).
4. What to submit:
   a. Four copies of the complete manuscript. Near-letter-quality print is required on all copies. Should you desire a masked review, make sure that identifying names, affiliations, etc. appear only on the title page and nowhere else on the manuscript; i.e., manuscripts should be reasonably free of clues to the identity of the authors. Footnotes that identify the author(s) should appear on a separate page. You must request masked review.
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Researchers and theorists have long regarded play as an important stimulus for diverse aspects of child development. Through play, children develop the social, emotional, cognitive, and verbal skills necessary to interact and maintain relationships with peers. Interaction with peers allows children to learn about perspective taking, self-regulation, cooperation, and negotiation (Welsh, Bierman, & Pope, 2000). Katz, McClellan, Fuller, and Walz (1995) proposed that social skills are learned mostly through interactive processes and the give and take of peer play. During play, a child learns to be gentle or aggressive, a friend or a bully. Often, the preschool classroom provides an important opportunity for children to explore and attain these needed social skills. Most of the play that occurs, however, takes place in a formal setting in the presence of a teacher or other adult. Katz and colleagues (1995) maintain that methods of discipline used by teachers can influence children’s social development. The conflicts and social problems that arise in play give the teacher the ideal opportunity to advance children’s social development. However, they warn that while intervention is a part of the teacher’s role, more intervention is not necessarily better. In their view, children must be allowed a chance to work things out for themselves in order to learn to communicate and cooperate effectively. Competent preschool children are not as dependent on an adult’s guidance and supervision to contain impulses, follow rules, and cooperate (Elicker, Englund, & Sroufe, 1992).

One question that arises from the literature is whether the mere presence of a teacher in a classroom (without interacting) has an impact on the play behavior of preschool children. Piaget (1952) suggested that play, in and of itself, is free from conflict; “in play,... the conflicts are transposed in such a way that the ego is revenged, either by suppression of the problem or by giving it an acceptable solution” (p.149). According to his view, the presence (or absence) of a teacher in a classroom would not affect the aggressive behavior of children during play because that behavior does not exist. Unfortunately, current empirical research has not been conducted on adult supervision of preschool children. Perhaps preschool children are assumed to need adult supervision at all times. The research that does exist, however, suggests otherwise.

Siegel (1957) examined changes in the aggressive behavior of children in the absence of an adult. She found that aggression significantly decreased from

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**The Effects of Adult Supervision on Children’s Play**

The present study investigated the effects of gender, pair type, and adult supervision on the type of play of 32 preschool children. The children were assigned to same sex or different sex pairs and allowed to play with a variety of toys for approximately 10 minutes. Each pair was observed and videotaped, once with a familiar adult present and once with that adult absent. The videos were coded according to positive or negative, cooperative, parallel or independent play. The results indicate that children engage in more positive behaviors when an adult is absent. Boy-boy pairs tend to engage in more cooperative play; girl-girl pairs engage in more parallel play; and boy-girl pairs engage in more independent play.

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one play session to the next. This finding contradicted early research conducted by Ruth Phillips (1945; as cited in Siegel, 1957) who found that aggression increased from one session to the next when an adult was present. Thus, Siegel hypothesized that the differences in the two studies might have been due to the presence or absence of an adult.

Siegel and Kohn (1959) conducted a second study to test this hypothesis. They randomly assigned boy-boy pairs to two conditions: Adult-Absence and Adult-Presence. The results indicated that participants in the Adult-Absence condition showed less aggression in the second session. Thus, they concluded that the children were less aggressive in the absence of an adult. Siegel and Kohn did seem to be eliciting aggression for their study by using aggressive toys with boy participants who knew each other.

Besevegis and Lore (1983) attempted to take a broader look at the effects of adult supervision on play. Up until this time, little research had been conducted on the role of adult supervision on cooperative play. For their experiment, Besevegis and Lore used 12 like-sex pairs (both boy-boy and girl-girl) in two sessions with an adult present. The remaining 12 like-sex pairs participated in two sessions with an adult absent. They defined negative behavior as any movement, gesture or verbalization that intentionally injures a child or reduces the possibility for friendly and cooperative play, and positive behavior as any movement, gesture or verbalization that promotes positive social contact, interaction, and cooperation. They also defined play strategies as cooperative, parallel or independent. Besevegis and Lore found that child pairs in the adult absent condition exhibited significantly less negative behavior than children in the adult present condition. They also found more positive behavior (although not significantly more) in the adult absent condition. In addition, more cooperative play was evident in the absence of the adult. Besevegis and Lore suggested that children learn that when no adult is present to intervene, a peer is likely to respond to an aggressive act with a counterattack, thus lowering initial instances of aggression.

The research findings on adult supervision thus far have been very fascinating and counterintuitive; yet with the limited amount of research conducted, many questions remain unanswered. For example, Siegel (1957) and Besevegis and Lore (1983) used only same-sex and similar age pairs for their experiment. An interesting area for further exploration concerns the effects of adult supervision for mixed-age and mixed-sex pairs. The literature suggests that in normal play situations, same sex pairs engage in more cooperative play, while opposite sex pairs engage in more independent play (Ausch, 1994; Fehr, 1996). The absence or presence of an adult may also have an effect on overall gender differences. In normal play situations, girls tend to engage in more cooperative play and boys in more parallel play (Neppl, 1997; Rubin, Watson, & Jambor, 1978). Also, most of the research conducted on this subject has focused on a passive, unfamiliar adult present. The presence of a familiar adult may cause children to engage in different play strategies.

The purpose of this study was to explore the effects of a familiar adult’s presence (or absence), and gender, on the play strategies and behavior of preschool children (grouped into same and opposite-sex pairs). Specifically, the goals of this study were to determine if preschoolers engage in more cooperative play and positive behaviors when an adult is absent or present; whether there are basic gender differences in play strategies and behaviors; and if pairing children of different ages into same and opposite-sex pairs has any effect on play strategies and behavior. Based on the previous literature, it was hypothesized that children would engage in more cooperative play and positive behavior when the familiar adult is absent, and more aggression and negative behavior when that adult is present. Girls were hypothesized to engage in more cooperative play, while boys engaged in more parallel play. Also, based on research findings, boy-boy pairs were hypothesized to engage in more parallel play, girl-girl pairs in more cooperative play, and boy-girl pairs in more independent play.

Method

Participants

Thirty-two preschool children, 17 boys and 15 girls, from the Heights of Learning Childcare Center in Topeka, Kansas were selected to participate in this study. The ages of the children ranged from 35 months to 72 months with a mean age of 46.1 months. All of the children (except one) were Caucasian. Based upon parental income level, all participants were from middle-class homes.

Each child was randomly assigned to one of 16 pairs (six boy-boy pairs, five girl-girl pairs, and five boy-girl pairs) with two restrictions. First, the children had to be of different ages. Eleven pairs of children were separated in age by one year and four pairs of children were two years apart in age. One pair was the same age due to unforeseen consequences of random assignment to pairs. The mean age difference for all of the pairs was 1.19 (.54). The second restriction was that there were an equal number of “adult present” and “adult absent” sessions. Each pair participated in two 10 min counterbalanced play sessions. In one
session, the adult supervisor (one of the authors) was present and in the other session that adult was absent. All participants were treated in accordance with the ethical standards of the APA (American Psychological Association, 2001).

**Procedure**

All sessions took place in a 4 m X 5 m room that had an open observation window to look through. A glass plate was inserted into the open window in order to make sure the participants did not notice the experimenter. A video camera in the corner of the room recorded the play sessions. The camera began recording before the children entered the room so that they would be less likely to notice its presence. There was a large 1 m X 2 m table in the back of the room for the adult to work at in the adult present condition. The room had many toys including a garage with cars, a farm set, puzzles, Barbies®, Bob the Builder’s Learning Workshop, Buzz Lightyear, a Monsters Inc. book, and a Taz bobo doll. These toys were arranged along the length of the floor. The room also had two chalkboards.

For each play session, the adult supervisor asked the pair of children if they wanted to play with some fun toys. After agreeing, the children were directed to the playroom. On the way there, the adult told the children, “You can play with any of the toys [in the playroom] and then tell me which ones you liked the best.”

If the adult was to be present in the room, the children were then told, “I have some work to do at the table, so you go ahead and play.” If the children initiated interaction with the adult, they were passively responded to by either nodding or asking them to play with the toys. The adult then did her work and, after approximately 10 min, the children were asked which toys they liked the best. They were then taken back to their classroom.

If the adult was to be absent from the room, the same basic procedure was followed. After instructing the children to play with the toys she told them, “I have to go get something and I’ll be right back.” The adult returned approximately 10 min later. Both play sessions were identical, and the orders of the sessions (absent or present) for each pair were randomized to limit any carryover effects. Most of the paired sessions were separated by five to 10 days, with four sessions only three days apart due to time constraints.

**Behavioral Measures**

The experimenter later coded the tapes. To ensure reliability, an advanced undergraduate student (who was blind as to the purpose of the experiment) coded 12 of the 32 sessions. The rating system used to quantify behaviors and play strategies was adapted from Bessevegis and Lore (1983). Behaviors were defined as positive or negative according to verbal, physical, or bodily expressions. Positive verbal behaviors were characterized by propositions for play and cooperation, acceptance of offers, compliance, initiating conversation, share of information, or praise. Negative verbal behaviors were threats of physical violence, commands, refusals to comply, demands, rejections, name calling, and possession claims. Positive motor/physical behaviors included any non-aggressive physical contact, active assistance, patting, hugging, toy offer, toy acceptance, attempts to initiate interaction, and acceptance of initiations. Conversely, hitting, kicking, punching, struggling over a toy, chasing, wrestling, and pushing were recorded as negative motor/physical behaviors. Finally, a smile or laugh was labeled as positive bodily gestures/facial expressions and a frown, grimace, tongue out, threatening stance, raising hand, and clenching teeth were coded as negative bodily gestures/facial expressions. An event sampling technique was used to record each and every occurrence of these behaviors.

Behavior was also coded for the dominant form of play exhibited by each child using time sampling.

**TABLE 1**

<table>
<thead>
<tr>
<th>Variable</th>
<th>boy-boy</th>
<th>girl-girl</th>
<th>boy-girl</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absent</td>
<td>Present</td>
<td></td>
</tr>
<tr>
<td>Cooperative Play</td>
<td>4.33</td>
<td>4.50</td>
<td>.80</td>
</tr>
<tr>
<td>Parallel Play</td>
<td>4.83</td>
<td>3.67</td>
<td>7.00</td>
</tr>
<tr>
<td>Independent Play</td>
<td>1.00</td>
<td>1.33</td>
<td>2.00</td>
</tr>
<tr>
<td>Positive Behavior</td>
<td>19.50</td>
<td>13.75</td>
<td>8.90</td>
</tr>
<tr>
<td>Negative Behavior</td>
<td>1.08</td>
<td>2.08</td>
<td>.80</td>
</tr>
</tbody>
</table>

Again using Besevgegis and Lore’s (1983) system, play was defined as cooperative (peers act together to perform a common task), parallel (children play next to each other, with or without interaction taking place), or independent (children play independently from each other, using different toys in different activities). Each session was divided into one-minute play periods and at the end of each minute, the experimenter recorded, in her judgment, the dominant play type for that minute.

The data coding sheets consisted of a column of the six behaviors and four types of play described above. Two other columns were identified as Subject 1 and 2. The name of the coder, pair number and condition was also indicated on the sheet. Tally marks were used to count positive/negative behaviors, which were later summed for analysis purposes. Tally marks were also used to count the number of intervals in which each type of play occurred. Coding play type and counting positive and negative behaviors were conducted in separate viewings to ensure accuracy in coding.

Results

Reliability

The interobserver reliability of the experimenter and undergraduate student was calculated by dividing the total number of agreements by A (experimenter) and B (student coder) by the total errors made by A and B (Besevgegis & Lore, 1983). The reliability was .80 for twelve of the play sessions.

Statistical Analyses

Two mixed design Analysis of Variances (ANOVAs) were performed on the type of play (cooperative, parallel, and independent) and behavior (positive and negative). One mixed design ANOVA included a two level within factor (adult presence/absence) and a three level between factor (boy-boy, girl-girl, and boy-girl). The other mixed design involved two between subject factors (sex of participant and presence/absence of adult).

Play Type (Cooperative, Parallel and Independent).

There was a significant main effect of gender in that boys tended to engage in more cooperative play, $F(1,31)=9.015, p<.004$, and girls tended to engage in more parallel play, $F(1,31)=10.345, p<.002$. The mean number (and standard deviation) of play strategies by boys and girls were 3.65 (2.50) and 2.00 (1.72) for cooperative play; and 4.59 (1.92) and 6.20 (2.06) for parallel play, respectively.

There was also a significant main effect when looking at differences between 3 pair types (boy-boy, girl-girl, and boy-girl). Boy-boy pairs tended to engage in more cooperative play, $F(1,21)=12.015, p<.001$. Girl-girl pairs tended to engage in the most parallel play, $F(1,21)=10.545, p<.001$. Boy-girl pairs tended to engage in the most independent play, $F(1,21)=5.097, p=.009$. Table 1 shows the mean frequency and standard deviations for the effects of condition and pair type on play strategy (cooperative, parallel, and independent) and behaviors (positive and negative).

There was also a significant interaction between condition and pair type for parallel play, $F(1,21)=9.98, p<.001$. Boy-girl pairs (when the adult was present) exhibited the most parallel play. Boy-boy pairs (when the adult was absent) exhibited the least amount of parallel play (see Table 1). All other main effects and interactions for play strategies (cooperative, parallel, and independent) were not significant ($p >.13$).

Positive Behaviors. Due to a lack of significant individual effects, all instances of positive verbal, motor, and bodily expressions were combined into a sum total for positive behaviors. A significant main effect was found for experimental condition (adult present vs. adult absent), $F(1,31)=10.361, p=.002$; children in the adult absent condition exhibited more positive behaviors than children in the adult present condition. The mean number (and standard deviation) of positive behaviors were 19.41 (12.12) for children in the adult absent condition, and 11.41 (7.11) for children in the adult present condition. All other main effects and interactions were not significant ($p >.47$).

Negative Behaviors. Due to a lack of significant individual effects, all instance of negative verbal, motor, and bodily expressions were combined into a sum total for negative behaviors. Neither the main effects nor the interactions were significant ($p >.41$).

Discussion

This study hypothesized that preschool children would engage in more cooperative play and positive behavior when a familiar adult was present and more aggression when that adult was present. The results of this study support the notion that children do engage in more positive behavior overall when an adult is present. However, children in the adult absent condition did not display more cooperative play than in the adult present condition.

Since more positive behaviors occurred in the absence of an adult, one would expect there to be more negative behaviors in the presence of an adult. However, this was not the case. When taking a closer look at the total occurrences of negative behavior, the lack of significant differences was probably due to the low occurrence of negative behavior overall. Children in the adult absent and present condition had a mean of 1.34 occurrences of negative behavior during one
ADULT SUPERVISION AND CHILDREN’S PLAY □ Greenwood and MacDonald

10 min play session as compared to 17.41 positive behaviors in the same session.

Many possible explanations exist for the low occurrence of negative behaviors (aggression) in this study. First, the pairs of children were assigned according to different ages. This age difference may have inhibited conflict because older children are taught to play nice around those who are younger than they are. The younger children may have been fearful or intimidated by the older children. Second, the two children were not from the same classroom and did not know each other. Even young children are taught by their parents that they are to “use their manners” around strangers. Thus, a child may be hesitant to behave aggressively and may in fact engage in positive interactions with unfamiliar playmates. Third, a variety of toys were available in this experiment. Perhaps the multitude of toy options did not provide enough opportunities for conflict. Fourth, the division of pairs into like and opposite-sex pairs may have been a contributing factor for low aggression because opposite sex pairs are less likely to interact with each other (Edwards, 1992). However, if this were the case, one would expect a decrease in, or lack of, positive behavior as well, which did not happen. Fifth, in Siegel and Kohn’s (1959) study, boy-boy pairs were utilized for the specific purpose of eliciting aggression. The present study looked at boy-boy pairs, as well as boy-girl and girl-girl pairs. Girls are typically not as aggressive as boys (Fehr, 1996), and therefore their behavior may have contributed to a lower mean for negative behaviors. Finally, and perhaps most convincingly, the mere presence of a familiar adult may have restricted the amount of aggression the children were willing to display. In this study the familiar adult was a teacher for most of the children and they knew quite well the boundaries of acceptable behavior in the daycare center. Even in the absence of the adult, the children may have been fearful that the adult was watching or was going to return to the classroom at any moment. Therefore, they may not have engaged in aggressive behavior due to the fear of being caught.

Some of the results of this study are different from those of the Besevegis and Lore’s (1983) study. Besevegis and Lore found more aggressive behavior in the presence of an adult, while this study did not. They also found more cooperative play in the absence of an adult, while this study did not. They did not find a significant difference for positive behavior, which this study did. Many differences exist between our study and Besevegis and Lore’s study, and these differences may account for the discrepancy among the results. One difference was in the procedural method. When the adult was to be absent for the play session, the children were told that the adult would knock before coming back into the room. The children would have to say it was okay for the adult to come in. In this study, knocking was not made apparent. When the adult was absent, perhaps the children feared that the familiar adult would come back and catch them engaging in a non-acceptable manner.

This study also hypothesized that overall gender differences would show that girls tend to engage in more cooperative play and boys more parallel play. The results of this study indicate just the opposite. The boys engaged in more cooperative play and the girls engaged in more parallel play. Also, differences among pair types (boy-boy, girl-girl, and boy-girl) were hypothesized. Boy-boy pairs would engage in more parallel play, girl-girl pairs in more cooperative play, and boy-girl pairs in more independent play. Boy-girl pairs engaged in more independent play; but, once again, boy-boy pairs engaged in more cooperative play and girl-girl pairs engaged in more parallel play. One possible explanation as to why the hypothesis in this study was not supported is that the gender specific toys fostered such a result. Most of the girls who participated in this study were interested in playing with one of three available Barbies. The girls played beside each other with their own Barbies and clothes, interacting only occasionally. Therefore, playing with Barbies appeared to be a task involving parallel play. On the other hand, most of the boys wanted to play with either the Taz bobo doll or the Bob the Builder workshop. Because there was only one bobo doll and one workshop, the boys had to take turns sharing them. Thus, playing with either of these two toys required cooperative play.

One other major limitation of this study was that the coders were not blind to the conditions during the coding process. The coders were aware, when watching the videotape, whether or not the adult stayed in the room and thus the data may reflect that bias.

Further research may focus on eliciting more aggression by reducing the number of toys present and pairing children of the same age and gender, in order to see the differences between experimental conditions. Significant differences, as in the case of cooperative play, might also be obtained simply by gathering a larger sample size of preschool children. Replicating this experiment with an active adult or examining the effects of condition (adult present/absent) order might also be beneficial.

A very important implication can be derived from this study. Edwards (1992) reminds us that so often preschool classrooms are “the organized product of parents’ intention and selection of a peer setting where children will be supervised in modes of playing and
interacting beneficial for school success” (p. 313). The findings of this study support the notion that this method may not be necessary, as children tend to engage in more positive behaviors when a familiar adult is absent. Although this is counterintuitive, it does suggest that children may actually be kinder to one another in the absence of an adult. Perhaps all adults should be made aware that supervision of pre-school children while playing may not be as necessary as once thought.

References
The urge to sleep is one of our most demanding needs and the common observation that sleepiness is irresistible leads to the putative conclusion that sleep is a necessity (Carlson, 2001). Sleep consistency or the amount of sleep a person obtains relative to the amount they desire to obtain, however, appears to be declining among college students. In 1978, 24.4% of college students reported dissatisfaction in sleeping patterns; 10 years later, 53.4% were dissatisfied with their sleeping patterns (Hicks, Mistry, Lucero, Lee, & Pellegrini, 1989). In this study, 147 college students out of a sample of 782 (18.8%) reported they reliably slept for 7 to 8 hr per night for 5 or more years. In 1992 only 83 college students out of a sample of 451 (18.4%) slept 7 to 8 hr reliably for 1 to 5 years and only 50 students (11.09%) slept the same amount of time for 5 or more years (Hicks, Johnson, & Pellegrini, 1992). According to Hicks and Pellegrini (1991), in 1969 the median hours of sleep for college students was 7.75 hr, decreasing in 1979 to 7.13 hr and decreasing further to 6.75 hr by 1989. Mean sleep duration was found to be 7.30 hr, (SD = .86) in 1978, which had decreased to a mean of 6.82 hr, (SD = 1.04) in 1988 (Hicks, et al., 1989). These data represent a decline in the amount of sleep and self-reported sleep consistency over recent decades. The National Sleep Foundation (2002) study of 1,010 adults who were 18 years or older reported that the amount of sleep for individuals had not changed in the years 1998 to 2002, however that study encompassed many age groups, not just college students. It can be tentatively argued that sleep consistency and length may be decreasing in college students but not among the general adult population. The present study was designed in part to examine this possibility.

As to why sleep duration could be decreasing, insomnia might be partly responsible. In recent years, 68% of adults 18 to 29 years of age reported having experienced insomnia a few nights a week (National Sleep Foundation, 2002). This is a higher percentage relative to adults aged 30 to 64 (59%) or adults 65 years or older (44%). Currently, between one third to one fourth of the adult population suffers from insomnia at least occasionally and 9% of the popula-

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tion suffer from insomnia regularly (Ancoli-Israel & Roth, 1999; National Sleep Foundation, 2002). This condition not only affects the amount of sleep obtained each night, but it also creates problems in work production, psychological dysfunction, and mortality (National Commission on Sleep Disorders Research, 1993). In support of this view, the National Sleep Foundation (2002) also found that 44% of the adult participants experienced interference of daily activities at least a few days a month due to daytime sleepiness.

Since the last sleep duration research focusing on college students was completed over a decade ago and to extend the earlier research of sleep length with a college population, the present study examined sleep length over a multi-year period among students at South Dakota State University. Our purpose was to verify the sleep patterns of current college students relative to prior studies and to see if mean sleep length had further decreased relative to the earlier studies.

Method

Participants

In the present study, participants (N = 996) were either college students in an introductory psychology course or students in upper division psychology courses (males = 383, females = 613) in the years 1997-2000 at South Dakota State University (SDSU). All participants were compensated with extra credit points in their respective classes. Demographic data for the participants was assumed to closely mirror the present-day demographics of the SDSU student population, however, actual demographic data for the participant pool was only reported by a small fraction of participants and we cannot conclude the participants are a truly random sample of the typical student population at South Dakota State University. Females were more likely to be enrolled in psychology courses than were males, a trend seen nationally (Denmark, 1998). In the fall of 2002, the student body was 52.5% female and 47.5% male. Ethnicity data for SDSU students was as follows: 98.3% of the student body was White/Caucasian, 1.0% American Indian/Alaska Native, 0.05% African-American/Black, 0.05% Native Hawaiian/Pacific Islander, and 0.07% other. In the population of new students at SDSU in the fall of 2002, 97% graduated from high school in 2002.

Design and Procedure

Participants were instructed to maintain a sleep diary, reporting data on the time they went to bed (hour and minute, e.g., 11:35 p.m.), the time they awoke and stayed up and awake for the day (e.g., 8:45 a.m.), and the point in time they had set their alarms as the intended awakening time (e.g., 8:45 a.m.) in a self-report method. Naps were not included in data collection and mid-sleep period awakenings due to extraneous variables (hunger, thirst, urination, etc.) were not defined as awakening for the day. Naps were not included so that the primary intended sleep period was the data of interest; naps may supplement a person’s total amount of sleep but are not typically the main sleep period of most persons. All participants were instructed to make all observations of these times with the same clock. The sleep reports were measured over a period of 5 (n = 550), 7 (n = 213), 10 (n = 111), 20 (n = 39), and 25 (n = 83) consecutive nights. The different numbers of observations is largely due to participant choice. Most participants were willing to monitor the sleep for a five day school week. When weekend nights and longer periods of observation were requested, far fewer participants were willing to participate and the compensation rate for extra credit points was perceived as less favorable by most participants. The different number of observations were collected to look for periods when sleep might have been altered by a short term period of high demand such as a series of midterm exams. It was hoped that these different intervals of sleep observations could be used to reveal trends in the data and to increase external validity. Since, however, few participants were willing to monitor and record their sleep on weekends and for longer periods of time than five days, these data are not included in our analysis.

The total hours of sleep were identified per participant, per sleep period, and averaged for the respective groups of males or females and number of days of data collection. The raw data were given to different researchers for calculating the average sleep length and agreement across different researchers for these calculations was found to be 89.65%. Interrater agreement rates of over 80% are considered acceptable (Kazdin, 1982). Errors in calculation were subsequently corrected.

Results

Our results are reported in terms of both the mode and an overall mean. Although our participants reported on their sleep for different intervals, the most frequently reported length of sleep was not significantly different for the different groups based on a two sample t test. The mean sleep length for the different groups also overlapped greatly. As a result, the data are discussed here only in an aggregate sense. The most frequently reported sleep length (the mode) for males and females in terms of whole hour blocks
was 7 to 8 hr per night \((n = 381)\); an overall average of all participants was found to be \(M = 7.69\), \((SD = 0.99)\). The second most common sleep length obtained in terms of whole hour blocks was 8 to 9 hr \((n = 286)\). The third most common amount of sleep was 6 to 7 hr \((n = 198)\). The number of participants who reported their length of sleep above 8 to 9 hr \((n = 92)\) and less than 6 hr \((n = 38)\) was substantially less. A two sample \(t\) test was calculated to compare the actual difference between the sleep length of males and females. There was a slight difference in the amount of sleep of male participants \((M = 7.63 \text{ hr, } SD = .97)\) and female participants \((M = 7.73 \text{ hr, } SD = 1.00)\) but this difference was not statistically significant \((t(df = 994), p > .05)\). Since the participant pool included far more females than males, Figure 1 presents the percentages of males and females reporting the differing sleep lengths (see Figure 1). Although the present data on gender differences were not statistically significant, the present data do resemble other findings. The National Sleep Foundation (2002) reported that males were less likely to sleep as long as females (6.7 hr versus 7.0 hr respectively) although the difference was not as small. While the difference found between males and females in the present study was small, approximately 6 min, the difference found between the sexes in the 2002 study was substantially more, approximately 18 min.

Discussion

The present data add to and clarify the results of other studies on length of sleep in college students. The results of this study showed that the mean length of sleep was 7.69 hr for both males and females and the modal length of sleep was between 7-8 hr in terms of whole-hour blocks. In 1978, the mean reported length of sleep was 7.30 hr, and in 1988, participants slept for 6.82 hr as the mean reported sleep length (Hicks, Mistry, Lucero, Marical, & Pellegrini, 1990). The present data would tend to indicate that average sleep length has not decreased as predicted by earlier studies and the average sleep length has actually increased substantially, at least as reported by the present participants. The difference between the present mean and the 1978 or the 1988 mean cannot be tested for sta-
ostistical significance as the 1990 publication does not report sufficient measures of dispersion.

The reason for the most common amount of reported sleep being approximately 8 hr ($M = 7.69$ in the present study) was likely due to the age of the participants (Carskadon & Dement, 1987). These researchers found that as individuals age, they tend to engage in less sleep. In pre-adolescent children, the average sleep time is 10 hr whereas an individual who is in their late teens is averaging about 7 hr of sleep. There could be many reasons for decreased sleep among late adolescents and young adults such as the increased demand of academic interests and high expectations, not to mention social activities (e.g., “partying” and non-social actions such as playing video games and Internet use by college students. In addition, basic physiological changes could be responsible for the decrease (Carlson, 2001.)

There are many other factors to consider that might affect the length of sleep of students such as demands from school and social activities. It is likely that work and study schedules influence the amount of sleep a student obtains (Medeiros, Mendes, Lima, & Araujo, 2001). The more time that a person spends working, studying or in active recreation, less time is subsequently available in which to sleep, although specific actions of a participant can alter slow wave sleep duration (Horne & Minard, 1985) or rapid-eye movement sleep (REM) duration (Smith & Lapp, 1991). That is to say, different activities during the waking hours such as demanding physical tasks versus a high mental demand can alter the relative percentages of slow wave sleep and or REM sleep in a subsequent sleep period.

The current data have the limitations of any survey or study based on participants’ self-report, including issues of truthfulness, and the fact that these are retrospective data and therefore based on the participant’s ability to remember. The validity of such self-reported measures may be questionable due to reactivity by participants (Kazdin, 1982). The fact that the participants were self-monitoring may have altered their sleep habits. Studies of sleep conducted outside of a laboratory necessarily rely on self-report as it is almost impossible to conduct a study such as this without the self-report of participants. Although these participants used a non-standardized instrument in the form of a sleep diary, the use of instruments such as the Daily Sleep Questionnaire (Munroe, 1967) have been used and also suffer from lack of standardization and possible reactivity (Ascher & Gilligan, 1988). Other studies, however, have found sizable positive correlations between sleep laboratory recordings and participant’s self-reported measurements of sleep (Bootzin & Engle-Friedman, 1981). The 2002 study by the National Sleep Foundation cited herein is itself a self-report survey of sleep habits. The use of sleep diaries to have participants record their sleep behaviors is not necessarily a fatal flaw in the current study and will likely have to be used in such studies in the future.

Studies of sleep length such as the present study are important and informative for a number of reasons. Without adequate sleep, workers are much more at risk for industrial accidents. Most industrial accidents occur on the overnight shift (e.g., “the graveyard shift”) when the demand for sleep is likely greatest. Also, insomnia has been correlated with lost time at work, symptoms of depression, and increased risk of various health problems (Benca, 2001; Simon & VonKorff, 1997). Sleep length has been correlated with mortality rates in a number of studies (Kripke, Simons, Garfinkel, & Hammond, 1979; National Commission on Sleep Disorders Research, 1993). The amount of sleep that any person obtains is very basic biological data with significant implications far beyond the bedroom.

References


Television (TV) program viewing is an activity that most people engage in and enjoy. In 1998, 98% of American households contained TV sets and the average time spent watching TV was 14 hours per week (Famighetti, 2000). In addition, Americans spend the majority of their leisure time watching TV rather than exploring other activities. In fact, Robinson and Skill (1993) looked at past research and found that people tend to watch more TV as they age. Specifically, elderly adults utilize TV more frequently than children, middle age and young adults because they have the most leisure time.

People watch TV for entertainment purposes and to acquire information (Huston et al., 1992a). People also use TV as a means of socializing and relieving tension. According to Huston et al., the elderly depend heavily on TV because it is a source of information, recreation, mental stimulation and companionship. TV also serves as a replacement for previous occupational status, child-rearing responsibilities and domestic tasks among the elderly (Huston et al.). The types of programs that the elderly watch are different from those of middle age and young populations. The elderly enjoy watching “news, documentaries and public affairs programs” (Huston et al., p. 15). Huston et al. propose that these programs provide a “social informational network” that one often loses after employment ends (p. 15).

Portrayals of people on TV are seldom representative of the individuals who actually watch the programming. Gerbner (1972) describes TV as promoting cultural values and norms and as presenting relationships among groups in society, whereas Clark (1972) proposed that groups gain recognition and respect by their portrayal on TV. Society recognizes social groups when they are visible on TV, while groups that lack representation experience non-recognition. The media gives respect to social groups when representations are positive and considerate. The disrespect of social groups results from stereotypical or negative depictions.

The elderly are frequently underrepresented and are often depicted according to negative stereotypes on TV and in other forms of media. Several research studies support these findings. For example, Vasil

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**Television Commercials: The Depiction and Portrayal of African-American Elderly Adults**

This study used content analysis to examine the depictions and portrayals of African-American elderly in television commercials aired during the fall of 2001. Findings supported the hypothesis that African-American elderly adults were under-represented in television commercials. African-American elderly characters were not often cast as the central figures in the commercials and were primarily used to advertise health, food and household products. However, African-American elderly adults were often portrayed as healthy and physically active.

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Wass (1993) examined media portrayals of the elderly by compiling the findings of several studies that investigated the portrayals of the elderly in the mass media. The studies indicated that the elderly were significantly underrepresented in the TV population in proportion to the actual numbers of the elderly in the United States. The elderly were primarily portrayed negatively in five of the nine studies examining the quality of elderly depictions on TV. Female characterizations were also typically negative in comparison to male characterizations. Additionally, Kovaric (1993) summarized the literature examining the portrayal of older adults in prime-time TV and the overall findings indicated that the elderly were significantly underrepresented as compared to their prevalence in the population. According to Clark (1972), the lack of representation of the elderly indicates that this group is neither respected nor recognized by the media.

Robinson and Skill (1995) conducted a study that focused on portrayals and depictions of the elderly on prime time TV. They examined the quality and quantity of images of the elderly by analyzing the elderly characters' appearance, the depiction of the elderly characters' living arrangements, and the roles of the elderly characters. The results indicated that the number of elderly characters 65 years and older on prime-time TV had not increased from 1975 to 1990. Neither female representation nor the number of elderly characters in leading roles had increased, thus portrayals of the elderly had no overall improvement from the mid-1970s.

A macro-level analysis of elderly depictions on TV stimulates a micro-level analysis of the central focus of this research: TV commercials. The overall stereotypical and demeaning portrayals in TV programs carry over into commercial advertisements. Although there is little research about TV commercials and depictions of the elderly, the available research indicates that the elderly are negatively portrayed in commercials.

Harris and Feinberg (1977) examined the images of the elderly in commercials and other media forms in order to determine the impact of these images. The researchers analyzed age, gender, romantic involvement, physical activity, authority as well as health and products advertised in commercials. The major findings of the study indicated that elderly characters were rarely shown as physically active and were shown having more physical ailments as age increased. Males were better represented than females and had more authority in old age. The investigation demonstrated that elderly images were both stereotypical and negative.

The findings of another study paralleled the findings of Harris and Feinberg (1977). Hiemstra, Goodman, Middlemiss, Vosco, and Ziegler (1983) examined TV commercials and their treatment of the elderly in order to ascertain whether the commercial advertisements stereotypically and/or negatively depicted the elderly. Several areas were examined such as the extent of elderly representation in TV commercials, the extent of female portrayals, the realism of elderly portrayals, the extent of familial relationships in connection with the elderly, the type of products the elderly advertise and the general tone of the commercials. The major findings were consistent with previous research: the elderly were significantly underrepresented and elderly females were unrealistically portrayed in commercials. The elderly were shown as disconnected from familial relationships and primarily advertised health, food, consumer and household products.

Following the Civil Rights movement and the strong integration efforts of Black leaders in the 1960s, depictions of African-Americans on TV increased (US Commission on Civil Rights, 1977 as cited in Huston et al., 1992b). African-Americans were seen in both leading and secondary roles more frequently, but they were only seen in certain types of programming, such as comedies. The characters played by African-Americans were also stereotypical; most were likely to be young and/or obese. Then in the 1980s the overall representation of African-Americans decreased. Kovaric (1993) cited the results of a study that showed that this decline in the representation of African-Americans still existed in the early 1990s.

When specifically looking at elderly representation and African-Americans on TV and in commercials, one significant finding from the research of Signorielli (1983) was that of the elderly characters present on prime-time TV programs, the majority were Caucasians. Greenberg, Simmons, Hogan, and Atkin (1980) found that the majority of elderly characters on TV in the 1970s were Caucasian and African-American elderly characters were systematically underrepresented in fictional TV series. Furthermore Hiemstra et al. (1983) reported that African-American elderly portrayals were both lacking and unrealistic in TV commercials. According to Huston et al. (1992b) the non-recognition and lack of respect for minority social groups can have two possible consequences: (a) the preservation of negative attitudes towards minority groups and (b) the internalization of negative self-perceptions of minority group members.

There is no current research literature on the representation of African-American elderly in TV
commercials. The current study makes a contribution to this end. The goal of this study was to investigate the depiction of African-American elderly in TV commercials. This topic is an important issue because it addresses whether portrayals and depictions of African-American elderly adults are positive, negative, and/or stereotypical, which may compel more researchers to consider the impact of these images. Since the depictions and representations of African-American elderly adults in TV commercials have not been studied extensively, the collection of data in this area will assist researchers in examining the self-images and attitudes of African-American elderly adults. By revealing the portrayal of African-American elderly adults, researchers can use the data to further assess whether these depictions shape the attitudes of aging African-Americans.

Four hypotheses were generated. First, it was hypothesized that African-American elderly adults would be significantly underrepresented in TV commercials. This prediction was based on the research of Hiemstra et al. (1983), Harris and Feinberg (1977), Kovaric (1993), Signorielli (1983) and Greenberg et al. (1980) that found that elderly adults in general are underrepresented in TV programming.

Second, the researchers proposed that African-American elderly adults would not be cast as central figures in commercials, but as secondary characters. This expectation was based on the research of Harris and Feinberg (1977) that found elderly portrayals to be both stereotypical and negative.

Third, it was also hypothesized that African-American elderly adults would mostly appear in advertisements for health, food and household products. Hiemstra et al. (1983) found this to be true of their elderly sample.

The final hypothesis was that African-American elderly adults would be shown as physically inactive and having physical ailments. This prediction was based on the research by Harris and Feinberg (1977).

Method

Sample
In order to examine the depictions and portrayals of African-American elderly in the media, TV commercials were content analyzed during the fall of 2001 from September 26, 2001 to October 8, 2001. Three major networks were analyzed: Lifetime, Turner Broadcasting System (TBS) and the National Broadcasting Company (NBC). The commercials were videotaped every-other-day from 12 p.m. to 2 p.m. Eastern Standard Time (EST) and from 8 p.m. to 10 p.m. (EST) for two weeks.

Coding Procedure

TV commercials were content analyzed by two reviewers (interrater reliability was 97.8%) to provide information on a variety of characteristics. Data were collected on age, gender, ethnicity, role, portrayal of role, type of product advertised, health status and physical condition of characters.

Character age was coded using a two-category scheme: young adults and elderly adults. Young adults were characters identified or perceived as being between 20 and 49 years of age. Elderly adults were characters perceived to be 50 years old and above.

Two elderly adult groups were formed: elderly characters were divided into the 50 to 79 year old cohort or the 80 years old and above cohort.

Characters’ ethnicity was coded as either Caucasian or African-American. A category labeled “Other” was used to classify non-Caucasian and non-African-American characters.

Role was coded in terms of whether characters were central or secondary figures. A central figure was defined as the character who was the main focus of the commercial or the character that spoke the most. A secondary figure was defined as a character who spoke little or not at all.

The portrayal of the roles of elderly characters was also coded. These portrayals included mother-wife, husband-father, student, grandparent, worker, lawyer, seller, consumer and other.

The type of advertised products was coded as well. The categories of products included health, food, household (defined as cleaning items for the home, furniture or appliances), recreation, automobile, cosmetics, clothing, consumer (defined as office supplies or electronics) and attorney services.

Lastly, health and physical condition were coded. Health status was coded in terms of the perceived number of health problems of elderly characters, and physical condition was coded in terms of the mobility (low, moderate or high) of the elderly characters.

Repeated commercials were omitted. Only those characters with completely visible faces were coded.

Results
The sample consisted of 168 commercials from the three networks. In these commercials, there were a total of 494 identified characters (417 young adults, 66 elderly adults and 11 characters who were considered “other” because they were either children or infants). Of the 66 elderly adults, 65.2% were males and 34.8% were females, whereas of the 417 young adults,
40% were males and 60% were females. Overall, 63 elderly adults were thought to be between the ages of 50 and 79 years old, while only three elderly adults were considered to be 80 years old or above. Of the total characters shown in commercials, 15.8% were elderly adults.

First, the representation of African-American elderly in TV commercials was examined. Two Chi-square tests were conducted in order to determine whether there was a difference between African-American and Caucasian elderly adults, as well as African-American elderly adults and the total number of characters represented in commercials within the sample. The results indicated that there was a statistically significant difference between African-American elderly adults and Caucasian elderly adults represented in TV commercials ($\chi^2(4) = 65.40, p<.001$). Of the total elderly adults presented in commercials, only 15.1% were African-American. Furthermore, the results from the second Chi-square test indicated that there was a statistically significant difference between African-American elderly adults and the total number of characters represented in commercials ($\chi^2(9) = 22.84, p < .05$). Only two percent of the total characters in commercials were African-American elderly adults, whereas the proportion of African-Americans 65 years of age and older in the United States is 7.9% (Famighetti, 2000). These findings support our hypothesis that African-American elderly are significantly underrepresented in TV commercials.

Since the sample size of African-American elderly consisted of only ten adults (three females and seven males), no further statistical tests were conducted and only percentages were calculated. All ten of the characters were categorized as being between 50 and 79 years of age.

One of the predictions was that African-American elderly adults would not be cast as central figures, but as secondary figures. The majority of the African-American elderly adults (60%) were cast as secondary figures (five males and one female), whereas the remaining elderly adults (40%) were cast as central figures (two females and two males). This provided some support for our hypothesis that African-American elderly adults would be cast as secondary figures.

Further examination of the portrayal of roles revealed no significant pattern. Three characters were cast as consumers and another three as sellers. The remaining four characters were cast as a neighbor, swimmer, athlete and cancer survivor.

As for the types of products the characters advertised, four African-American elderly characters advertised health products, while the other six advertised the following: food, clothing, truck driving classes and volunteer work as well as consumer and automobile products. This also provided some support for our hypothesis that characters would advertise mainly health, food and household products because five of the ten (50%) African-American elderly characters were used to advertise health and food related products.

Regarding health and physical activity, nine of the ten characters were depicted in very good health and physically active. Only one character (a female) was portrayed as exhibiting poor health and low physical activity. This finding did not support our hypothesis that African-American elderly adults would be shown as physically inactive and having physical ailments.

**Discussion**

The results revealed that African-American elderly adults were underrepresented in TV commercials in comparison to their actual prevalence in the population, which is consistent with the television programming findings of Signorielli (1983) and Greenberg et al. (1980) as well as the commercial findings of Hiemstra et al. (1983). The extremely small sample of African-American elderly adults obtained from the relatively large collection of commercials was particularly striking.

The sample size itself indicates the magnitude of the lack of representation and recognition of African-American elderly in the media. Only ten characters were available to assess whether African-American elderly adults were cast as secondary figures and to examine the types of products and roles that they presented. Although these conclusions are not useful for generalizing to the population, some interesting information can be extracted from this sample. The majority of the African-American elderly characters were cast as secondary figures, which indicates that the roles of African-American elderly adults are still minor in significance. The placement of African-American elderly adults in secondary positions also promotes the idea of inferiority and exemplifies the notion of non-recognition and the lack of respect for this particular population of elderly adults as indicated by Clark (1972).

In reference to the types of products that African-American elderly adults were used to advertise, African-American elderly adults marketed products consistent with those that Hiemstra et al. (1983) indicated elderly adults typically promoted: health, food, consumer and household products. Utilizing African-American elderly to endorse these products further simplifies their positions and reaffirms the stigma that older adulthood leads to a reduction in capabilities from professional responsibilities to domestic tasks. The role portrayal of African-American elderly adults did
not reflect a greater percentage of one role over the others; however, it was evident that the roles of consumer and sales persons were more readily used in commercials. In addition, the elderly did not portray roles involving any familial relationships, which parallels the findings of Hiemstra et al. that older adults are primarily depicted as disconnected from familial kinship.

Findings indicated that the majority of elderly adults represented in commercials were healthy and physically active, which contradicts the results of Harris and Feinberg (1977) that elderly adults are rarely shown as physically active. This favorable depiction of older adults as agile, vital and lively debunks the stereotypical images normally perpetuated by the media and replaces them with more accurate and positive portrayals, which according to Clark (1972) is a respectful representation. This finding also makes sense because it is in advertisers' best interest to pair a positive image with the product they are selling or promoting.

The current research, however, leaves room for improvement. First, only 12 hours of commercials focused primarily on afternoon and evening commercials were coded. This amount of taping could be increased to 24 hours and extended to covering morning, afternoon and evening commercials. Another constructive change would be to examine commercials on more networks, such as United Paramount Network (UPN), Warner Brothers (WB) and the Central Broadcasting Station (CBS).

Although several aspects of this research could be enhanced, addressing these areas enables researchers to refine approaches to studying the depictions of the elderly. An aspect strengthening this study is that no current research exists that has simultaneously investigated the portrayal of the roles in which African-American elderly adults are cast in commercials and whether or not they are cast as central or secondary figures. The types of products advertised by African-American elderly have not been examined in research studies. Thus, this research serves as a foundation of the development of many areas, including the effects of these depictions on the self-image of African-American elderly adults.

Few studies have systematically examined the portrayals and depictions of elderly adults in the mass media, particularly TV commercials. Thus, the research implications for this study are numerous. One primary implication is that the results allow for the analysis of advertising methods utilized to influence an elderly audience as well as the general population as a whole (Dail, 1988). Awareness of these strategies will enable people to critically think about the images presented and whether representations are accurate. In addition, this study will enable advertisers to better holistically represent African-American elderly in commercials.

This research also serves as a basis for the formation of novel theoretical frameworks and research methodology (Dail, 1988). These frameworks and research designs will supply the needed tools for studying the effects of depictions on African-American elderly adults' behaviors and attitudes (Dail). Lastly, this research raises the question of whether or not the presence of elderly adults in commercials advertise- ments positively or negatively influences the viewers' willingness to buy merchandise (Hiemstra et al., 1983).

Although the present study was one of the first to systematically analyze African-American elderly representations in TV commercials, extensive research on this topic needs more emphasis and consideration. Future studies should expand this research to include more ethnic minority groups. One specific research project could be a longitudinal study examining whether middle-aged African-Americans' attitudes toward aging changes in later life stages as a result of the media's depictions of the elderly population.

Social stratification is another aspect that needs further investigation. Elderly adults with more economic advantages and security may significantly differ from those with financial difficulties. Accessibility to informational sources may limit or enhance how the media influences these elders. Thus, researchers should examine whether TV depictions of aging adults affect upper-class elderly differently than lower-class elderly.

References


Gaertner and Dovidio’s (1986) program of research has shown that explicit forms of prejudice have given way to more subtle forms of expression. Individuals may express the unacknowledged negative feelings that they have towards blacks, for example, by expressing it in situations that have attributional ambiguity (i.e., racist behavior can be attributed to nonracist factors). That is, individuals may behave in a prejudiced manner in less obvious ways and therefore not be viewed as racist. Prejudicial beliefs and attitudes are thus behaviorally expressed in situations that provide attributional ambiguity. That is, because of the ambiguity in the situation, witnesses can attribute one’s prejudicially motivated behavior to nonprejudicial reasons.

Fried (1996) demonstrated an instance of the expression of prejudice in a situation of attributional ambiguity. Controversy arose from the rapper artist Ice T’s 1992 song “Cop Killer.” The public reacted vehemently against it because the content of the song glorified the act of killing a police officer. Fried questioned whether the public’s overwhelming negative reaction to the song was due to the lyrics themselves or to its music classification of rap, which is a category associated with African-American individuals.

This negative type of reception for rap music is not new (e.g., Ballard & Coates, 1995). In fact, rap music has been examined for both its negative and positive effects (e.g., Jackson, 1992). Some of its negative effects include its influence on mood (Ballard & Coates, 1995) and an increased tolerance and acceptance of violence among African-American adolescents (Johnson, Jackson, & Gatto, 1995). On the other hand, rap music has also been recognized for having positive effects such as raising awareness on social issues (Armoudian, 1994) and drawing attention to the plight and hardships of inner city living (Cummins, 1992; Jackson, 1992). Although rap music is criticized for its violent themes, Armstrong (1993) and Noe (1995) both report that these themes are common in other types of music (e.g., country music).

If rap songs have both positive and negative effects on listeners and its themes are similar to other kinds of songs, why then is there such controversy over these
songs? Fried (1996) had participants read a lyrical passage from a folk rock song (by the Kingston Trio) about a man who hunts down and kills a police officer. In one condition, the participants were informed that the song was a folk song by the Kingston Trio, the other condition was told that it was a country song by an artist named D.J. Jones, and the participants in the third condition were told that it was a rap song by D.J. Jones. The results indicated that perceivers reported the song to be more offensive, more dangerous to society, more objectionable, and should be regulated if the lyrics were identified as rap than if the same lyrics were labeled country or folk song. In the second study, Fried presented participants with the same lyrics but in one condition, the lyrics was accompanied with a photograph of a Black artist while the second condition received a picture of a White artist. The findings showed more negative reaction to the lyrics if it was presented with a photograph of a Black artist rather than a White artist.

Fried (1999) replicated these results and found that these perceptions of lyrics based on its music genre were more prevalent among individuals who were over the age of 40, married with children, and did not buy or had purchased a small number of music albums in a 6 month time frame. Thus, it seems that perceivers tend to report unfavorable perceptions of lyrics based on its categorical label rather than its content. Based on the results of her studies, Fried concluded that the public outcry of rap songs is an instance of aversive prejudice (Gaertner & Dovidio, 1986).

Present Study

Fried’s studies (1996, 1999) demonstrated subtle prejudice in terms of reactions to music lyrics. The present study attempted to investigate further these negative perceptions of lyrics based on label rather than content. There were three objectives for conducting the present study.

First, the music category of rap is only one of the many different types or genres of songs associated with a particular social group. There are numerous others such as Latin rap, Christian music, goth music, and country music just to name some instances. Each of these music categories may elicit attitudes, beliefs, or emotions in a listener depending on that perceivers’ preexisting notions of the associated group.

The location for this study was San Antonio, Texas. San Antonio provides the potential backdrop to examine perceptions of lyrics labeled as some other non-black minority music category. For example, one of the culturally diverse music styles in the San Antonio community is Latin rap. This style was chosen for the present study based on results of previous pilot studies. Thus, the first goal was to examine if perceptions of lyrics would be affected by the lyrics themselves or by some other attached minority music label (i.e., other than the Black rap label).

A second objective was to replicate Fried’s (1996, 1999) results concerning the perceptions of lyrics labeled as Black rap but from the perspective of a different group such as a Hispanic sample. San Antonio provided an opportunity to examine perceptions of lyrics labeled as black rap from this social group. Fried’s studies consisted of only Anglo participants, and this study evaluated whether similar results would be found from the responses of Hispanic perceivers as well.

A third goal was to expand on the dependent variables that Fried used to assess perceptions of lyrics labeled in different categories. Additional attitudinal dimensions were added in the dependent variable-measuring instrument such as the likelihood the listeners liked the song, whether they would purchase the album, and the degree they perceived its influence on children and teenagers. There were also items that assessed perceivers’ perceptions of the lyrics themselves (e.g., offensive, poetic) and perceptions about the character of the artist (e.g., talented, deviant).

This study investigated, then, the perceptions of lyrics as a function of the perceivers’ race (Hispanic or Anglo) and the music labels attached to the lyrics. Results from two previous pilot studies helped narrow the music categories to be used in this study. The music genres of Black rap, Latin rap, alternative music, and Christian music were used. Pilot study participants reported general unfamiliarity (i.e., did not or rarely listened to) with these music types and artists.

Hypotheses

There were two main predictions. The first hypothesis was a replication of Fried’s general findings. It was predicted that lyrics that were labeled as black rap would be perceived more negatively than if the same lyrics were labeled as Latin rap, alternative music, or Christian music. An extension of the first hypothesis was that reported perceptions would be more positive for lyrics labeled as Christian music than if they were described as rap or alternative. Again, the reason for this prediction is that the category labels provide a situational feature of attributional ambiguity such that prejudice can be expressed in subtle ways. The second prediction was that Anglos, more than Hispanics, would report unfavorable perceptions of lyrics that were labeled as Black rap than if the same lyrics were labeled with the other categories.

As stimulus lyrics for the study, the results of previous pilot studies indicated the highest level of unfamiliarity with the songs “Missing Person” by the
Christian music artist, Michael Smith, and “Speed of Pain” by the alternative music artist, Marilyn Manson. These two lyrics then served as counterbalancing stimuli for the study. Again, the participants were presented with one of these two lyrics labeled as either black rap, latin rap, Christian music, or alternative music. Their perceptions as a function of these manipulations were afterwards assessed.

**Method**

**Participants**

There were 275 participants in the study. Forty-seven from this group were dropped from the data set. Two participants recognized the lyrics, and the other 45 participants did not complete all the information, did not follow instructions, expressed knowing what the experiment was about, or were of the race category of “Other.” Data from 81 men and 147 women remained with a total sample size of 228. This sample consisted of 111 Anglo (44%) and 117 Hispanic (51% of the sample) participants. Eighty-two percent of the sample was between the ages of 18 to 20 years old. Participation in the study fulfilled a course requirement.

**Materials**

Individual sheets of paper contained either the Manson or the Smith lyrics. At the bottom of each sheet was the following statement: “The song that contains these lyrics is a mid-1990s recording of black rap music” (or latin rap music, alternative music, or Christian music). The lyrics were approximately 9 to 11 lines long (see Appendix). These songs were pretested earlier as the most unrecognized songs by participants in the pilot study.

A self-report questionnaire was created to assess participants’ perceptions of the lyrics. Questions about demographic information included the participants’ sex, age, and race. The other items in the questionnaire measured attitudinal dimensions, participants’ perceptions of the lyrics, and their perceptions of the artist. The Likert-type response format for these items ranged from 1 (not at all) to 10 (very much). The following were items assessing the respondents’ attitudes about the lyrics. Participants were asked the degree to which: (a) they liked the lyrics; (b) they would likely purchase the album that contained these lyrics; (c) they think that the lyrics deviated from traditional family values; (d) they think that the lyrics reflected problems in American society today; (e) they felt that the lyrics would influence children (aged 7 to 13 years), adolescents (aged 14 to 18 years), and adults (aged 19 to 30 years); (f) they believe that the album containing the lyrics should contain a warning label; and (g) the degree to which they perceive that parents would object to their son or daughter listening to the lyrics.

Respondents were also asked the degree to which they thought that the lyrics were positive, emotional, ambiguous in meaning, pleasing, poetic, bizarre, offensive, confusing, and sad. Items assessing their perceptions of the artist consisted of the degree to which they thought the artist was spiritual, extraverted, musically talented, deviant, honest, disciplined, strong in character, and neurotic.

**Procedure**

Students enrolled in introductory psychology classes signed up in experimental sheets posted on the psychology bulletin board. The possible influence of an experimenter’s race on the participants’ responses was controlled by having three experimenters of different races run as equal a number of experimental sessions as possible.

Each experimental session consisted of four to six participants. Each of the participants sat in a cubicle for privacy. After reading and signing an informed consent form, each participant was randomly assigned to one of the four conditions (i.e., black rap music, latin rap music, alternative music, or Christian music). They were given the sheet of paper that contained the manipulation and were told to read the lyrics. Afterwards, the participants were instructed to open a brown envelope that contained the questionnaire assessing the dependent variables and to take their time filling it out. They were informed that their responses were confidential and would be kept anonymous. Participants were allowed to look at the sheet that contained the lyrics while they filled out the questionnaire. Afterwards, the participants were told to return their completed questionnaire in the brown envelope to assure them of privacy and confidentiality. Finally, the participants were given a posttest survey that asked them of their music preferences, if they recognized the lyrics and the artist, and if they had an idea of what the study was about before they came to the experiment. The participants were also debriefed, thanked, and dismissed.

**Results**

The study was a 2 (participants’ race: Anglo, Hispanic) X 4 (music category: black rap, latin rap, alternative, and Christian music) between-subjects design. The Manson and Smith lyrics were used as counterbalancing stimuli. Descriptive analyses were initially conducted on all dependent variables and posttest questionnaire items. In addition, a multi-
A MANOVA was conducted on the data to assess the effects of the lyrics. First, there were no significant 2-way interaction effects between lyrics and participant race, and between lyrics and music category. There was no significant 3-way interaction effect between the variables either. Thus a 2 (participant race) X 3 (music category) MANOVA was conducted on the main data set (see the following paragraph).

Results from descriptive analysis indicated that there were no substantial violations of normality in all dependent variables. In addition, preliminary analysis indicated no experimenter effects.

**Lyrics**

A MANOVA was conducted on the data to assess the effects of the lyrics. First, there were no significant 2-way interaction effects between lyrics and participant race, and between lyrics and music category. There was no significant 3-way interaction effect between the variables either. Thus a 2 (participant race) X 3 (music category) MANOVA was conducted on the main data set (see the following paragraph).

Second, the results indicated a significant lyrics main effect (Wilks’ Lambda, $F[27, 198] = 4.31, p < .0001$). The univariate analysis showed a significant lyrics effect on the dependent variables of influence on children, $F(1,177) = 56.67, p < .0001$; the need of a warning label, $F(1,177) = 72.73, p < .0001$; and parents’ objection to their son or daughter listening to the lyrics, $F(1,177) = 150.71, p < .0001$. In addition, there was a lyrics effect on the items of poetic, $F(1,177) = 38.45, p < .0001$ and offensive, $F(1,177) = 22.73, p < .0001$. As for perception of the artist, a significant lyrics effect was evidenced for the dependent variables of talented, $F(1,177) = 28.20, p < .0001$ and disciplined, $F(1,177) = 40.81, p < .0001$. The means and standard deviation values are shown in Table 1. These results indicate that the Manson lyrics, more than the Smith lyrics, were reported to be offensive, likely to influence children, would need a warning label, and would be objected to by parents. In contrast, the Smith lyrics were perceived as poetic than the Manson lyrics. The Smith artist was also reported to be talented and more disciplined than the Manson artist.

**Main Analysis**

**Participants’ Race.** Results of the MANOVA indicated a significant effect for the participant race (Wilks’ Lambda, $F[27, 194] = 2.05, p < .005$). This variable was significant on the dependent variables of the items of poetic, $F(1,1220) = 9.65, p < .002$ and sad lyrics, $F(1,1220) = 7.50, p < .01$. Overall, Hispanic participants perceived the lyrics as more poetic ($M = 7.20; SD = 2.90$) than did the Anglo respondents ($M = 6.68; SD = 1.9$). However, Anglo participants reported the lyrics as more sad ($M = 7.47; SD = 1.9$) than did the Hispanic respondents ($M = 6.68; SD = 2.3$).

**Music Category.** There was a significant category effect (Wilks’ Lambda, $F[27, 194] = 1.34, p < .03$) for the following dependent variables: (a) degree the lyrics would influence children, $F(3,220) = 3.06, p < .03$; (b) poetic lyrics, $F(3,220) = 3.28, p < .02$; and (c) artist’s degree of spirituality, $F(3,220) = 4.81, p < .005$ (see Table 2).

As can be seen from the means reported in Table 2, the results indicated that participants reported that black rap would influence children more than alternative music. In addition, lyrics labeled as Christian music was rated as more poetic, and the artist of the Christian music label was seen as more spiritual than if the same lyrics were labeled black rap or was written by a black rap artist. Last, the artist associated with the lyrics labeled as latin rap was reported by participants to be less spiritual than if the same lyrics were written by a Christian music artist.
Participants’ Race and Music Category. The only significant interaction effect between the race of the participant and music category was on the dependent variable of the degree to which the lyrics would influence teenagers, \( F(3,220) = 5.66, p < .001 \). As indicated in Figure 1, Anglo participants, more than the Hispanic respondents, reported that the lyrics labeled as black rap (SD = 2.1) and Christian music (SD = 1.8) would influence teenagers. Hispanics, on the other hand, perceived lyrics labeled as alternative (SD = 1.5) to influence teenagers more than did the Anglo participants (SD = 2.5).

Discussion

The first hypothesis was that lyrics that were labeled as black rap would be perceived more negatively than if the same lyrics were labeled as latin rap, alternative music, or Christian music. The results showed that perceptions about lyrics presented as black rap were generally unfavorable compared to perceptions of these same lyrics labeled in the category of Christian music. An extension of the first hypothesis was that reported perceptions would be more positive for lyrics labeled as Christian music than if they were described as rap or alternative. The results indicated that the lyrics with the label of Christian music resulted in more positive perceptions than if the same lyrics were categorized as black rap or latin rap music. And even though the lyrics were the same for the different categories, the Christian music artist was rated as more spiritual than the latin rap artist. One can say that these different categories brought to mind specific beliefs about rap songs and rap singers, just as much as the category of Christian music brought about specific stereotypes about modern day religious songs and their artists. These beliefs or feelings influenced the resulting perceptions. Although Fried (1996, 1999) did not investigate the reaction to lyrics classified under these different specific music labels (e.g., Christian music), the results are consistent with the notion that the music categories provide an opportunity for stereotypes to influence perceptions. These music labels contributed to the attributional ambiguity of the situation.

One can argue that these results occurred because the perceivers were generally unfamiliar, did not, or rarely listened to these types of music. However, unfamiliarity with a social group is part of the foundation of stereotyping and prejudice (Stephan & Stephan, 1996). Stereotypes are relied on when perceivers have no prior experience (i.e., direct contact) with the attitude object. Because most of the participants reported listening to rock, country, or all types of songs, then their unfamiliarity with black rap or Christian music songs would provide the motivation to rely on stereotypic beliefs about these labeled lyrics.

The second hypothesis was that Anglos, more than Hispanics, would report unfavorable perceptions of lyrics that were labeled as black rap than if the same lyrics were labeled with the other categories. The results indicated that Anglo more than Hispanic respondents would react unfavorably to lyrics categorized as black rap but for one particular dependent variable only. Anglo participants perceived lyrics labeled as Christian music to influence teenagers, more so than reported by the Hispanic participants. An interesting speculation with this specific finding is the type of influence participants perceived black rap songs and Christian music songs would have on teenagers. One can assume that participants believed that black rap songs exert a negative influence on teenagers, whereas Christian music lyrics have a positive influence on teenagers. On the other hand, it is possible that black rap is perceived to have positive effects that would be consistent with Armondian’s (1994) and Cummins’ (1992) reported findings. Because this dependent-variable-item was asked in general terms and not in any specific terms (i.e., to what degree do the lyrics exert negative influence on teenagers?), these explanations are speculative. Future studies can be conducted in order to replicate this effect and examine the reasons for such an effect.
Hispanic respondents, on the other hand, were found to perceive lyrics labeled as alternative to influence teenagers, more so than the Anglo participants. Perhaps, alternative music is perceived as more popular than other kinds of music among the Hispanic participants. This reason is speculative, and this finding awaits replication.

There are some shortcomings to the present study. First, one can argue that the lyrics may be benign. It would have been ideal to have used lyrics that were blatantly crude, offensive, invective, or were descriptive of some taboo subject (e.g., lyrics similar to those about cop killings that Fried used in her studies). In fact, other lyrics tested in the pilot study included lyrics about domestic violence (e.g., Garth Brooks’ “Thunder Rolls”) and about the worship of guns (Pearl Jam’s “Glorified ‘G’”). However, participants correctly identified and were highly familiar with these lyrics and the artists (90% for Pearl Jam and 72% for Garth Brooks). Even lyrics from “gangster rap” music were debated as stimulus lyrics, but its heavy use of curse words prevented its use in the pilot study. Despite this problem, the lyrics that served as the stimulus lyrics for the present study were strong enough as an independent variable manipulation. The results still indicated biased perceptions of these lyrics labeled in different music categories. Future studies could involve using lyrics that are constructed rather than lyrics from existing songs. This step would enable one a higher level of independent variable control and lesser to no possibility of familiarity with the lyrics by participants.

Another aspect about the study that could have been improved involves some of the items in the questionnaire. In retrospect, some of the items were not specific enough and led to ambiguous results. For example, as mentioned before, questions about how influential the lyrics would be to children and teenagers could have been revised to ask the type of influence they would have on children and teenagers (e.g., positive or negative). In addition, more items assessing behaviors or behavioral tendencies could have been included in the questionnaire. An example would be similar to Fried’s (1999) item of asking participants how many CD albums they had bought of a certain music genre. Having this information would be informative to see how this behavioral tendency relates to reported perceptions of the labeled lyrics.

Despite these shortcomings, the present study contributes to the findings reported by Fried (1996, 1999). The methodology is similar to Fried’s, and the results supplement her findings. In addition, the present results extend to perceptions of lyrics labeled as different music categories other than black rap. Theoretically, these outcomes provide further evidence of subtle prejudice, the form of prejudice exhibited in today’s time (e.g., Gaertner & Dovidio, 1986).

There are some practical implications of these findings. If controversy arises again over the lyrics of a new song, one could question if the disagreement is based on the song’s theme or content or if the disagreement is a reaction to the song’s music label. Secondly, behavioral expressions of prejudice of lyrics based on its label could be manifested in a number of ways (and should still be further investigated in future studies). For instance, it is possible that any form of regulation of music albums containing the debatable lyrics could potentially be perceived as a situation providing the subtle expression of prejudice. Whether or not reactions to lyrics are founded on prejudice, there is evidence (e.g., Fried, 1996, 1999; Johnson et al., 1995) to indicate that songs may be another situation that allow the subtle expression of prejudice. Being aware of and monitoring such possibility can be a way of combating this modern day form of prejudice (Gaertner & Dovidio, 1986).

References
PERCEPTIONS OF LYRICS □ ZapateL and Garcia-Lopez


**APPENDIX A**

**Manson Lyrics**

when you want it, it goes away too fast
when you hate it, it always seems to last
but just remember when you think you're free
the crack inside your heart is me
I wish I could sleep
but I can't lay on my back
because there's a knife for everyday that I've known you
when you want it, it goes away too fast
when you hate it, it always seems to last.

**APPENDIX B**

**Smith Lyrics**

Another question in me
One for the powers that be
It's got me thrown, and so I put on my poker face
And try to figure this out, this undeniable doubt
A common occurrence, feeling so out of place
Guarded and cynical now
Can't keep wondering how
My heart evolved into a rock
Beating inside of me
So I reel such a stoic ordeal
Where's that feeling that I don't feel.

*Note.* The song that contains these lyrics is a mid-1990s recording of black rap music.

Resiliency is “the process of, the capacity for, or the outcome of successful adaptation despite challenging or threatening circumstances” (D’Imperio, Dubow, & Ippolito, 2000, p. 129). Adults who have successfully overcome a traumatic childhood have identified several external and internal factors they considered key in overcoming their adversity. These adults mentioned: supportive relationships outside of the family, belief in self and self-worth, belief in religion/spirituality, and a recognition of their own power (Garvin, Kalter, & Hansell, 1993). Barnard (1994) identified the external factors adults most commonly referred to as important in their childhood. The factors identified were: positive relationship between child and parents, maintenance of family rituals, and the absence of parent-child role reversals. Additionally, research has confirmed that when encountering high levels of stress, internal personality qualities are strongly associated with good adjustment outcomes (Garvin et al., 1993). It was these internal personality characteristics that were the focus of the current study.

The internal personality characteristics of the individual experiencing trauma that have been associated with positive outcomes include optimism, extraversion, and neuroticism. Indeed, definitions of optimism resemble descriptions of psychological and social adjustment (Costa & McCrae, 1980). Optimism is characterized by an internal locus of control, the hope that things will get better, and the ability to realize that responsibility for an event may not be one’s own (Klohnen, 1996). Those who are characteristically more optimistic are happier, better adjusted, higher in ego-strength, higher in self-esteem, and much more socially involved (Klohnen, 1996). In a study conducted by Costa and McCrae (1980), optimism was not identified as one of the Big Five personality characteristics through factor analysis; rather it was subsumed under the trait of extraversion. Extraversion, together with its component parts of sociability, tempo, and vigor, predisposes individuals toward positive

Relationships Between the Big Five Personality Factors, Resiliency Attitudes, and Life Satisfaction in Divorced Parents

This study investigated connections between the Big Five Personality Factors, resiliency attitudes, and life satisfaction in divorced parents. It was predicted that resiliency attitudes and life satisfaction would correlate positively with extraversion and negatively with neuroticism. Thirty-seven participants were administered the Resiliency Attitude Scale (RAS), the NEO-FFI, and the Satisfaction With Life Scale (SWLS). Pearson correlations indicated that the NEO-FFI did not correlate well with either the RAS or the SWLS. However, there were correlations between the NEO-FFI subscales and two RAS items. Specifically, more neurotic individuals tended to find new ways of looking at things and less extraverted individuals tended to avoid repeating unhealthy relationships. Discussions follow regarding reasons for the lack of relationships and directions for future research.

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affect, which, in turn, increases the likelihood of an optimistic outlook on life. Conversely, those who are high in neuroticism have been identified as persons high in emotionality, impulsivity, fear, and anger. These individuals are predisposed to negative affect and suffer more acutely from their misfortunes (Costa & McCrae, 1980).

While extraversion and neuroticism have not been specifically related to resiliency attitudes, they have been related to life satisfaction. Satisfaction with life refers to a cognitive, judgmental process that is dependent upon a comparison of one's circumstances to what is thought to be standard (Diener, Emmons, Larsen, & Griffin, 1985). Its measurement takes into account the fact that each individual places different values on certain elements of what may be considered key elements in life satisfaction, such as health, wealth, and relationships (Diener et al., 1985). Life satisfaction appears to be a stable personality characteristic, despite transitory effects of life events (Seidelitz, Wyer, & Diener, 1997). Those individuals who are high in extraversion are more likely to experience positive affect and thus increased life satisfaction. In addition to this, those who are high in neuroticism are more likely to experience negative affect and thus decreased life satisfaction (Costa & McCrae, 1980).

Research on resiliency in coping with trauma has tended to focus on traumatic events of the distant past, often in childhood rather than on current experiences of trauma (King, 2000). Due to the fact that there has been little research on adults in the process of encountering trauma or those who have encountered trauma only in adulthood, this study sought to examine factors relating to resiliency attitudes in a group of adults experiencing trauma: divorced parents. Marital dissolution is a stressful event for divorcing individuals (Ahrons, 1994), ranking lower in life trauma only to death of a loved one (King, 2000). Additionally, there are many social and psychological stressors connected to the process of divorce (Ahrons, 1994). Research has indicated that separated and divorced individuals are more likely than widowed, never married, and married individuals to be admitted into inpatient and outpatient psychiatric and alcoholism facilities, to be involved in motor vehicle accidents, to commit suicide, and to die from diseases (Frank, 1985). Thus, it was hypothesized that if there are relationships between resiliency attitudes, life satisfaction, and personality, it would seem that they might be evident in a divorced population.

The purpose of this study was to discover if personality, as measured by the Neuroticism-Extroversion-Openness Five Factor Inventory (NEO-FFI), correlates with resiliency attitudes and the related construct of life satisfaction in divorced parents. The hypotheses for this study were as follows: there would be (a) a positive correlation between extraversion and resiliency, (b) a negative correlation between neuroticism and resiliency, (c) a positive correlation between extraversion and life satisfaction, and (d) a negative correlation between neuroticism and life satisfaction. In addition to extraversion and neuroticism, the NEO-FFI measures openness, agreeableness, and conscientiousness. Thus, connections between these latter three and resiliency attitudes and life satisfaction were also examined.

Method

Participants
The 37 participants for this study were from two major cities in a midwestern state. All participants were going through or had been through the process of divorce or separation and were parents of children for whom they were the primary caretakers. The parents were solicited from two parent support groups, employees from a local college, and a group of individuals who were interested in the research. There were no partners from the same couples represented. All participants were above the age of 25.

Measures
Demographics Questionnaire. The demographics questionnaire was researcher designed for the purposes of this study. The questionnaire consisted of 11 questions and the items had varying response options. Respondents were asked to give their gender, occupation, the number of years since their most recent divorce, and age. Respondents were asked to indicate their level of educational attainment from choices that included: less than a high school diploma, high school diploma, some college, associate degree, technical school, bachelor’s degree, graduate degree, and professional school. They also were asked to give the number of years since their most recent divorce, the number of times they have been divorced, the number of children they have, and if they were currently dating. Participants were asked whether they had received additional support from an outside agency other than the support group from which they had been selected. If respondents had received support, they were asked to rate this support on a scale ranging from 1 (very little support) to 5 (very much support). Similarly, respondents were asked to rate the overall level of support (i.e., financial, childcare, and emotional support) they had received from their family in issues relating to the divorce.

Resiliency Attitude Scale. The Resiliency Attitude Scale (RAS, Biscoe & Harris, 1994) measures seven
types of resiliency in separate subscales: Insight, Independence, Relationships, Initiative, Creativity and Humor, Morality, and General Resiliency. Due to participant time constraints a shortened, researcher designed, form of the RAS was used for this study versus the original 72-item scale. In its shortened form, the Morality, Initiative, and Independence scales contained one item; the others included two items for a total of 11 items. A Cronbach’s Alpha was conducted to determine the reliability of the shortened scale and yielded an alpha of .81, suggesting good internal consistency. Validity information for this shortened measure was not collected. Like the original, each item on the shortened form corresponded to a specific skill or facet of resiliency (e.g., a General Resiliency item was, “No matter what happens, if I keep trying I will get through it.”) and these items were answered using the following choices: strongly disagree (1), disagree (2), undecided (3), agree (4), and strongly agree (5). For the subscales containing two items, subscale scores were obtained by summing the items corresponding to that specific subscale, after reverse coding appropriate items. For subscales containing one item, the response to that item constituted the subscale score. A total RAS score was computed by summing all items. On each subscale and the total scale, higher scores indicated higher resiliency attitudes.

NEO-FFI. Created by Costa and McCrae (1994), the NEO-FFI is a 60-item version of the NEO-PI-R that provides a brief, comprehensive measure of five domains of personality: Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C). The response scale for each item is as follows: strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). Subscale scores are attained by summing the items corresponding to the specific domain of personality after reverse coding appropriate items. Higher scores indicate a greater presence of the personality characteristic in the individual taking the measure.

Costa and McCrae (1992) designed the NEO-FFI to measure the same factors as the NEO-PI-R with the same validity. Item selection for the NEO-FFI used the items that most strongly loaded on the five validimax factors from the NEO-PI. When the NEO-FFI was correlated with the domain scales of the NEO-PI-R in the Augmented Baltimore Longitudinal Study of Aging sample, correlations were .92, .90, .91, .77, and .87 for the N, E, O, A and C domains, respectively (Costa & McCrae, 1992).

Satisfaction with Life Scale (SWLS). Diener et al. (1985) created the SWLS in an effort to measure global life satisfaction. This scale consists of five statements expressing general life satisfaction (e.g., “The conditions of my life are excellent”), and participants rate their agreement with each item on a 7-point scale from 1 (strongly disagree) to 7 (strongly agree). These five statements are then summed to obtain an overall life satisfaction score.

Diener et al. (1985) indicates that the scale has “favorable psychometric properties” (p. 74). For example, correlations between interviewer estimates of well-being and the SWLS were at adequate levels. Diener et al. (1985) also conducted correlations between the SWLS and the other measures of subjective well-being, such as the Fordyce (1978) single item measure of happiness and Cantril’s (1965) Self-Anchoring Ladder and the correlations were moderate to strong. Similarly, a correlation of .46 between the SWLS and the Life Satisfaction Index (Adams, 1969) was obtained in a study with older adults.

Procedures

Data were collected from four different groups: Parents without Partners, a church divorce support group, college employees and students, and a group of individuals interested in the research.

Group #1. Parents without Partners (PWP) is a not-for-profit agency headed by a group of single parents. The president of PWP granted permission for data collection to take place at one of the group’s social activities. At the group activity at which the data were collected, the purpose of the study was explained and an opportunity for questions to be asked and answered was given. Potential participants were made aware that they would be completing three measures and a demographics questionnaire that would take approximately 30 minutes, their name would not be used, and any participation was strictly voluntary.

A consent form was distributed to those who elected to participate following the verbal description. Participants were asked to read and sign the consent form if they agreed to participate, ten people chose not to participate in the study. The consent forms were collected and those 21 who signed were given packets. Participants were then given instructions on how to complete each of the four measures. This yielded 15 completed sets of measures out of a possible 21 potential participants.

Group #2. The same procedure was used for the divorce support group at a local church. Consent was obtained from the pastor of the church. Participants were solicited at their weekly meeting. Nine completed sets of measures were collected from this group.

Group #3 and Group #4. Employees at a local college and a group of interested individuals also were asked to participate in this study via e-mail. Individuals who were interested in participating responded to an
e-mail that was sent to ask for volunteers. Those who volunteered to take part in the study met with the researcher individually to get the consent forms and questionnaires. Participants were asked to return completed questionnaires to the researcher’s mailbox in the sealed envelope provided to them. Thirteen additional surveys were collected from the college employees, students, and the interested individuals.

Results

Demographics

A total of 37 respondents returned as completed the RAS, NEO-FFI, SWLS, and the demographics questionnaire. However, one person was excluded because she did not complete all the measures, yielding a total of 36 completed measures. Most of the respondents were female (N = 26 or 72%). Occupations were varied; some positions mentioned by respondents were registered nurse, machinist, and health information technologist. This varying range of occupations can be best understood in the context of the educational backgrounds that were reported: seven (19.4%) reported a high school diploma, seven (19.4%) some college, six (16.7%) associate degree, six (16.7%) technical school degree, five (13.9%) bachelor’s degree, four (11.1%) graduate or professional school, and one (2.8%) did not report his/her educational status.

Nearly all individuals in this study were experiencing their first divorce; only one reported experiencing his/her second. Fifty percent of the respondents reported dating. Refer to Table 1 for means and standard deviations of the following: age, number of years since divorce, and number of children.

All respondents reported receiving support from their family for divorce issues and general life support. However, the degree to which this support was given highly varied (M = 3.00, SD = 1.67), with 11 (30.6%) respondents reporting 1 (very little support) and nine (25%) reporting 5 (very much). Some of the respondents reported receiving support from outside agencies in addition to the support provided by their families and that provided by the group from which they were solicited. However, of the respondents solicited from the two support groups, 21 (86.1%) respondents reported receiving no additional support from outside agencies.

RAS, Extraversion, and Neuroticism

The first hypothesis of this study was that there would be a positive correlation between extraversion and resiliency, wherein higher extraversion scores would correspond to higher resiliency attitude scores. The second hypothesis was that there would be a negative correlation between neuroticism and resiliency attitudes; lower neuroticism scores would correspond to higher resiliency attitude scores in individuals who are experiencing or have experienced the trauma of divorce. A Pearson correlation between the total score on the RAS and the extraversion subscale score revealed no resiliency attitudes-extraversion connection, r(34) = -.19, p > .05. Similarly, the Pearson correlation calculated on the total score on the RAS and neuroticism subscale revealed no resiliency attitudes-neuroticism connection, r(34) = .22, p > .05. Refer to Table 2 to see the correlations between the Satisfaction with Life Scale, RAS total scores, and NEO-FFI subscale scores.

SWLS, Extraversion, and Neuroticism

In addition to the first two hypotheses, it was predicted that a higher degree of life satisfaction, as indicated by the SWLS, would relate to higher extraversion scores. It was also predicted that a higher degree of life satisfaction would correlate to lower neuroticism scores. A Pearson correlation calculated between the SWLS score and the extraversion score indicated no relationship, r(34) = -.11, p > .05. Also, a Pearson cor-

<table>
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<tr>
<th>TABLE 1</th>
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<tr>
<td><strong>Means and Standard Deviations of Demographics Questionnaire</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Sample Size</th>
<th>Mean</th>
<th>Deviation</th>
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<tr>
<td>Age</td>
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<td>10.69</td>
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<tr>
<td>#Yrs. divorced</td>
<td>36</td>
<td>7.52</td>
<td>6.97</td>
</tr>
<tr>
<td>No. of Children</td>
<td>36</td>
<td>2.33</td>
<td>.99</td>
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</table>

<table>
<thead>
<tr>
<th>TABLE 2</th>
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</thead>
<tbody>
<tr>
<td><strong>Pearson Correlations of RAS Scores, Satisfaction with Life Scale Scores, and NEO-FFI Subscale Scores</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NEO-FFI Subscale</th>
<th>N</th>
<th>E</th>
<th>O</th>
<th>A</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAS</td>
<td>.22</td>
<td>-.19</td>
<td>.03</td>
<td>.14</td>
<td>-.10</td>
</tr>
<tr>
<td>SWLS</td>
<td>.17</td>
<td>-.11</td>
<td>-.21</td>
<td>-.02</td>
<td>.02</td>
</tr>
</tbody>
</table>

Note. None of these correlations were statistically significant at p < .05.
relation was calculated examining the relationship between SWLS scores and neuroticism, but no correlation was found, \( r(34) = .15, p > .05 \).

**Secondary Analyses**

Although the four hypotheses were not supported, further analysis of the data set revealed other correlations relevant to the hypotheses. Because external support has been shown to relate to resiliency (Barnard, 1994; Garvin et al., 1993), it was thought that the reason for the lack of NEO-FFI-RAS and NEO-FFI-SWLS relationships might be due in part to variability in social support. So, correlations between RAS and NEO-FFI extraversion and neuroticism scores, as well as SWLS and NEO-FFI extraversion and neuroticism scores, were computed with support level partialled out. Controlling for social support did not affect the significance in the relationships, with RAS and neuroticism and RAS and extraversion remaining uncorrelated, \( r(34) = .15, p > .05 \) and \( r(34) = -.09, p > .05 \), respectively. The same was true for satisfaction with life, with SWLS and neuroticism and SWLS and extraversion remaining uncorrelated when support was partialled out \( r(34) = .15, p > .05 \) and \( r(34) = -.05, p > .05 \), respectively.

Pearson correlation coefficients were calculated to examine relationships between extraversion and neuroticism and facets of the subscales of the RAS. The facets of the subscales represent individual items under a subscale. These facets target specific skills related to each type of resiliency identified by the RAS. A positive correlation was found between the personality characteristic of neuroticism and the RAS facet of finding new ways to look at things from the subscale of Creativity, \( r(34) = .33, p < .05 \). This indicates that those higher in neuroticism tend to find new ways of looking at things in their lives. In addition to this, a negative relationship between extraversion and a facet of the Relationship Resiliency subscale, the tendency to avoid repeating unhealthy relationships, was found, \( r(34) = -.33, p < .05 \). This indicates that those lower in extraversion also tend to avoid repeating unhealthy relationships.

Recall that divorced individuals were chosen as the population which to study resiliency because divorce is traumatic enough that factors relevant to resiliency should show up in that population. However, because it seemed likely that those divorced for a shorter length of time would be experiencing trauma to a greater degree than those divorced for a longer length of time, it seemed important to compare the resiliency scores of the two groups. Thus, an independent samples \( t \) test was conducted to compare the RAS scores of individuals who were divorced for a length of time at/below the mean number of years (7.5 years) to those who were divorced for a length of time above the mean. No significant difference was found, \( t(34) = -.815, p > .05 \). The mean RAS score of those divorced for 7.5 years or less \( (M = 42.00, SD = 6.13) \) was not significantly different from those who were divorced more than 7.5 years \( (M = 43.77, SD = 6.48) \).

**Discussion**

While past research has indicated that personality does have an impact on the behaviors and attitudes people exhibit (Barnard, 1994, D’Imperio et al., 2000, & Garvin et al., 1993), this is one of the few studies focusing on connections between the specific variables of personality and resiliency attitudes. Additionally, this study represented an attempt to extend the earlier qualitative literature on resiliency (Barnard, 1994, Goertzel & Goertzel, 1962), by searching for quantitative indication for factors important in coping with trauma using the NEO-FFI and RAS.

It was predicted that extraversion on the NEO-FFI would positively correlate with resiliency attitudes on the RAS, and that neuroticism would negatively correlate with resiliency attitudes. However, the total Resiliency Attitude Scale (RAS) scores and extraversion scores on the NEO-FFI were not significantly correlated, nor were the total RAS scores and neuroticism scores. Second, it was hypothesized that higher scores on extraversion and lower scores on neuroticism would predict greater life satisfaction. However, persons who were more extraverted and lower in neuroticism did not tend to be more satisfied with life.

Despite this, there were correlations found between specific items of the RAS and the NEO-FFI. Specifically, there was a positive correlation between new ways of looking at things from the Creativity subscale and neuroticism. While it seems counterintuitive that individuals who score higher in neuroticism also would show greater resiliency according to the creativity item, a validity study comparing client and non-client groups indicated a similar pattern. Specifically, the client group, who likely is higher in neuroticism, scored lower on all resiliency attitude subscales than did the non-client group, with the exception of the Creativity subscale (Biscoe & Harris, 1994). This provides an indication of the validity of the direction of the neuroticism-creativity finding in this research.

In addition to the above correlation, surprisingly, a negative correlation was found between extraversion and the tendency to avoid unhealthy relationships from the Relationships subscale. Extraversion has been found to be associated with psychological and social adjustment (Costa & McCrae, 1980), which is why it was hypothesized that those scoring higher in extraversion...
sion would score higher on the RAS. However, the negative correlation may have been due to the possibility that because those high in extraversion seek out more relationships than do those lower in extraversion (Costa & McCrae, 1992), they tend to find a combination of both healthy relationships and unhealthy ones. That is, those high in extraversion do not seek unhealthy relationships nor do they avoid them.

Perhaps one of the more interesting findings was that the point in the divorce process did not relate to resiliency attitudes. The comparison between individuals who were divorced for 7.5 years or less (below the mean) and those divorced more than 7.5 years was made because it was possible that correlations between personality and resiliency attitudes may have been more easily detected a shorter time after the divorce. This is because those who have to recall back to the time of their divorce may not recall the exact attitudes they had then; rather their memories can be confounded by the attitudes that they have now, which may be more positive for the longer divorced group. Additionally, longer-divorced individuals may have achieved stability in their lives. However, an independent samples t test suggested that the varying points at which the individuals were in the divorce process may not have related to their resiliency attitudes.

While it is possible that personality does not relate to resiliency attitudes, the general lack of relationships between neuroticism, extraversion, and Resiliency Attitude Scale scores may have been due to small sample size. Similarly, small sample size probably was responsible for the finding of a lack of relationship between extraversion and life satisfaction, as past research has shown that extraversion relates to happiness (Costa & McCrae, 1980).

Another area of concern for this study was the validity of the shortened RAS scale. While validity has been determined for the original 72-item version of the RAS, the shortened version has not been tested for validity. With fewer items for participants to respond to, there was a smaller opportunity for variability among the participants’ answers. Without variability, a true relationship between the desired variables may have been hidden.

One limitation of the present study was that the population consisted of divorced single parents, a specific population at a specific point in their lives, going through a specific sort of trauma. This may highly reduce the generalizability of this study. A second limitation was the variability of the participants in terms of support. An attempt was made to partial out the degree of support out of personality and RAS, and satisfaction with life and RAS, with the variables remaining uncorrelated. Despite this, the importance of external support remains. Past research has indicated that external factors bear much weight in an individual’s ability to be resilient (Barnard, 1994; Garvin et al., 1993). It is possible that a more specific measure of support versus the global one used in the current study may be helpful in tapping into the role that external support plays in resiliency attitudes.

To correct these limitations, future research should be done with a much larger sample of divorced parents. Additionally, future research with personality and resiliency might measure resiliency differently. Perhaps the hypothesized correlations would have been found between personality and resiliency if resiliency behavior, rather than resiliency attitudes, had been measured or if the longer version of the RAS had been used.

Further research in this area remains important despite the lack of significant findings in this study as the study’s limitations may be at fault for the lack of correlations between personality and resiliency. Nonetheless, if there are significant findings in future research it may have implications for the way divorced individuals are taught to cope in marriage and family therapy, assuming that personality affects coping behaviors. For example, therapists might help divorced individuals bring out the personality characteristics that have that have been found to be key in resiliency, or at least learn the skills that those high in resiliency demonstrate. Thus, these individuals may be able to cope better and become more resilient in the face of trauma.

References


Now and Later: The Role of Personality and Cognition in Considering the Future

The first of the current studies examined relationships among Future Time Perspective, Consideration of Future Consequences, Desire for Control, Achievement Motivation, and Integrative Complexity. A mediational model was proposed, in which Consideration of Future Consequences would mediate the relationship between Future Time Perspective and Desire for Control. It was also expected that Integrative Complexity would moderate the relationship between Future Time Perspective and Consideration of Future Consequences. Although these hypotheses were not supported, the results suggested that Consideration of Future Consequences mediates the relationship between Future Time Perspective and Achievement Motivation. A second study replicated the unpredicted mediational relationship, suggesting that an open-ended time perspective relates to greater Achievement Motivation because of increases in Consideration of Future Consequences.

Each individual appears to vary in how important the future is to her or him. One individual can be completely consumed by the future that she or he wishes to have, whereas another individual focuses purely on the present and what has immediate payoffs. The purpose of the current study was to examine potential reasons why people differ in terms of how much they focus on the future. It could be that a differing view of future possibilities or length of the future determines how important the future is to an individual. Alternatively, personality traits could potentially explain the future focus of an individual. Finally, the thought processes of an individual may determine the importance of the future for that individual. The present study examined these specific potential explanations.

Future Perspectives

How an individual views his or her future has been defined in a number of ways by multiple researchers. Future Time Perspective (FTP) as a construct has been studied widely; however, no specific operational definition has been consistently used in research. Trommsdorff (1983) pointed this out in a review of some of the literature concerning FTP, noting that FTP has been previously viewed as having either solely cognitive (i.e., what an individual thinks may happen in the future), solely motivational (i.e., a focus on the future is the basis for all drive for activity), or solely affective (i.e., how a person views the future in terms of optimism versus pessimism) dimensions, as well as a combination of any or all of these definitions. For instance, Peetsma (2000) considered one’s FTP to be a complex construct composed of the individual’s concept of the future, as well as the affective experience of the future in multiple personal life areas. On the other hand, Husman and Lens (1999) viewed FTP as a much simpler notion. In that case, FTP was seen as how far a person’s future goals tend to extend, as a general rule, for that individual.

Socioemotional selectivity theory breaks FTP down into an even simpler construct. According to this theory, FTP is simply how long (in terms of time) an

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individual sees his or her life lasting or how much longer that individual thinks that she or he has left (Lang & Carstensen, 2002). If an individual perceives the period of time that she or he has remaining in life as short, then that individual is said to have a limited time perspective (because his or her time is limited). Alternatively, individuals who see their futures extending for a long period of time or as not being finite are considered to have an open-ended time perspective.

Socioemotional selectivity theory claims that time perspective determines the goals and priorities of the individual in an almost adaptive manner, meaning that individuals act in ways that best ensure their well-being for the length of their respective time perspectives (Lang & Carstensen, 2002). In other words, if an individual thinks that she or he will live for a long time, then that individual will focus on goals for the future, whereas an individual who thinks that she or he only has a short period to live would focus more on events that have present benefits. In particular, individuals with limited time perspectives tend to focus on emotionally fulfilling goals whereas individuals with open-ended time perspectives tend to focus on goals associated with gaining knowledge and establishing a career (Lang & Carstensen, 2002). Fortunately, the concept and measurement of FTP, as seen by socioemotional selectivity theory, is relatively new and has received little research focus. As such, the current study sought to examine the finer details of future perspective using this particular operational definition.

The concept of Consideration of Future Consequences is one that has often been included in the definition of FTP by researchers in this area. For example, according to Lens (1987), one half of a two-part definition of FTP is a propensity for taking future consequences into account in current behavior. However, Strathman, Gleicher, Boninger, and Edwards (1994) established Consideration of Future Consequences (CFC) as a stable personality trait in and of itself. As such, CFC is defined as the degree to which an individual takes possible future outcomes of present behaviors into account when deciding upon current actions. In other words, CFC is how much the future influences present behaviors. Individuals’ high in CFC consider future consequences heavily when deciding on present actions, whereas individuals’ low in CFC may completely disregard potential future consequences for the sake of immediate satisfaction.

In the present study, CFC differs from FTP in that CFC is concerned with the implementation of future concerns in present behavior, whereas FTP simply focuses on individuals’ perceptions of time. To illustrate, an individual scoring extremely high on the CFC scale is likely to weigh future consequences so much in present behaviors that she or he sacrifices current satisfaction for the sake of the future. However, an individual scoring extremely high in FTP would simply see the future as an extended or infinite period of time.

The Role of Personality in Future Perspectives

Given that there are differences in FTP, it seems plausible that personality may account for these differences. One likely candidate is the construct of control. In a review of control constructs, Skinner (1996) showed that past research has focused on both the perception of control and actual objective control over a situation, motivation for control, reactions to loss of control, the long term effects of one’s level of control, and so on. Burger and Cooper (1979) labeled the idea of a motivation for control over one’s life as a stable personality trait entitled Desire for (or Desireability of) Control (DC). In application, the more that a person wished to control his or her life and environment, the higher that individual’s DC would be.

DC is considered a motivational factor because a desire to control one’s environment influences the behaviors of the individual and this level of motivation appears to be somewhat stable within an individual (Burger & Cooper, 1979). Thus, it stands to reason that an individual who shows a high level of DC may behave in ways that gets her or him the control that is desired (such as being decisive). Whereas many control constructs (e.g., Locus of Control; Rotter, 1966) appear to be very popular for personality researchers, it seems that DC has not attracted comparable attention. As a result of the limited use of DC, the present study includes it as a variable in order to expand upon previous research.

Another personality variable that may potentially account for differences in FTP is Achievement Motivation (AM). Spence and Helmreich (1983) divided AM into three subcategories: a drive to work hard, a drive to master difficult tasks, and a drive to compete. According to this perspective of achievement motivation, individuals with a high level of AM in any of the three specific types have a great push to achieve in that manner (e.g., individuals high in Work AM feel a great need to work hard). As motivation is generally focused towards the future (Seijts, 1998), it seems reasonable to suggest that people with a higher level of AM may need a longer FTP in order to maintain motivation.

An exploration of the literature on FTP, CFC, DC, and AM suggest several relationships. Specifically, CFC tends to positively relate to academic and goal achieve-
ment (Joireman, 1999), whereas length of FTP tends to positively correlate with concern for future achievement (Husman & Lens, 1999) and academic achievement (Lessing, 1968). Similarly, mastery drive tends to positively relate to the value that one puts on his or her future (Husman & Lens, 1999) and DC appears to positively predict achievement (Burger, 1985, 1992). As previously mentioned, Seijts (1998) noted that motivation is generally focused towards the future. As such, it would logically follow that many motivational personality variables (e.g., DC, AM) may relate to FTP and CFC.

The Role of Cognition in Future Perspectives

In addition to examining what relationships exist among variables, it is also necessary to examine why the relationships exist. Thus, the present study attempted to explain why individuals with longer time perspectives tend to achieve more and to be concerned with more future oriented concepts as well as why some individuals are concerned with the future whereas others are not. According to Zimbardo and Boyd (1999), it is an individual’s thought process that determines his or her view of the future and from there, the actions of the present are determined. Following from this, it seems plausible to suggest that individual differences seen in concern for the future may be due to an individual’s ability to cognitively generate future possibilities.

Integrative Complexity (IC) can be considered as an individual’s thought processes. IC has been defined as a person’s level of differentiation and integration (Baker-Brown, Ballard, Bluck, de Vries, Suedfeld, & Tetlock, 1992). In simpler terms, this means that individuals with a higher level of IC are able to take a greater number of perspectives when examining an issue and these multiple perspectives have a greater number of conceptual links among them. According to Scott (1962), the structure of an individual’s thoughts is determined by the relationships among thoughts. Thus, IC is not concerned with the content of the individual’s thoughts, but rather the structure of his or her thoughts. It is reasonable to suggest, then, that individuals with a higher level of IC might be able to generate more future possibilities for themselves as a result of these multiple links and viewpoints.

Study 1

In essence, the purpose of the present study was to examine why future oriented people are concerned with the future. It was also hoped that a sparsely used construct might be brought more attention (specifically, FTP). Therefore, the current study examined individuals’ future perspective in terms of Lang and Carstensen’s (2002) definition of FTP (as length of expected future), and Strathman et al.’s (1994) construct of CFC as two separate variables. Additionally, the current study examined DC (Burger, 1979) and AM as defined by Spence and Helmreich (1983).

Based upon past research and theory, it was expected that FTP would positively relate with DC, and that CFC would mediate this relationship. In other words, it was suggested that the reason that individuals with a longer FTP will have a greater DC is because these individuals will have a higher level of CFC. It was also proposed that the relationship between FTP and CFC would be moderated by IC. If IC plays a moderating role in the relationship between FTP and CFC, then it means that the relationship between FTP and CFC changes dependent upon the level of complexity that the individual exhibits. Consider, for example, an individual who has an open-ended time perspective, a low level of complexity, and a low level of CFC. If IC is a moderating variable in this relationship and this individual had shown a high level of complexity, then she or he would also show a greater level of CFC.

Method

Participants

The sample consisted of 73 students (63 women and 10 men) from a medium sized liberal arts college in New York, who ranged in age from 18 to 36 (M = 20.6, SD = 2.8). All but two participants were Caucasian. Course credit was given in exchange for participation, and participants were also given candy for participating. Participants were contacted via direct classroom contact, and the investigator either made appointments for the volunteer to take part in the study at a later date or administered the materials at that time.

Materials

Preexisting measures were used to acquire data. The constructs assessed were Desire for Control (DC), Achievement Motivation (AM), Consideration of Future Consequences (CFC), Future Time Perspective (FTP), and Integrative Complexity (IC). Self-report measures were used for assessing DC, AM, FTP and CFC. A semi-projective measure was used to measure IC.

Burger and Cooper’s (1979) Desirability of Control Scale was used for determining DC. The scale quantifies the extent to which an individual seeks to be in control over her or his life and environment, and consists of 20 statements with which participants indicate their degree of agreement from 1 (disagree very much) to 7 (agree very much). Sample statements include, “I enjoy making my own decisions” and, “I try to avoid situations where someone else tells me what to do.”
Spence and Helmreich’s (1983) Achievement Motivation scale was used for assessing AM. The scale consists of 19 items with which participants indicate their level of agreement, from 1 (disagree very much) to 5 (agree very much). There are three subscales within the scale: work (e.g., “I like to work hard.”), mastery (e.g., “If I am not good at something, I would rather keep struggling to master it than move on to something I may be good at.”), and competitiveness (e.g., “It annoys me when people perform better than I do.”).

CFC was measured using Strathman et al.’s (1994) Consideration of Future Consequences scale. The scale assesses the degree to which an individual considers distant or immediate consequences when deciding to engage in a behavior. The CFC scale contains 12 items for which participants are asked to rate how characteristic the given statements are of themselves, from 1 (very uncharacteristic) to 5 (very characteristic). Examples of the statements include, “I only act to satisfy immediate concerns, figuring the future will take care of itself” and “I am willing to sacrifice my immediate happiness or well-being in order to achieve future outcomes.”

FTP was assessed using Carstensen and Lang’s (1996) Future Time Perspective Scale. The scale consists of 10 statements with which participants indicate their agreement with the statements from 1 (disagree very much) to 7 (agree very much). Total scores of less than 50 indicate a limited time perspective (e.g., “Most of my life lies ahead of me.”) whereas scores higher than 50 are considered an open-ended time perspective (e.g., “Most of my life lies ahead of me.”).

The Paragraph Completion Test (Schroder, Driver & Steufert, 1967) was used to assess IC. The PCT is a series of six stems (e.g., “Rules…” or “When others criticize me…”) that participants are asked to complete. Participants are generally given 120 seconds to complete each root; however, due to experimenter error, only 80 seconds was allotted for completion of each root. Paragraphs are scored from 1 (extremely low level of complexity) to 7 (extremely high level of complexity), depending on the level of differentiation and integration shown. Integrative Complexity scores were assigned by a trained scorer (see Baker-Brown et al., 1992).

### Results

#### Tests of hypotheses

In order to test the hypothesis that CFC would mediate the relationship between FTP and DC, mediational analyses were conducted using the Baron and Kenny (1986) method. To establish mediation, significant relationships must first be shown between each pair of variables in the model (i.e., A must predict B, B must predict C, and A must predict C). If all three of these conditions are met, then a multiple regression is computed. If the significant relationship remains between the mediator and response variable, but disappears between the predictor and response variable, then mediation is supported.

Bivariate regressions were computed to examine the mediational hypothesis. FTP was found to significantly predict CFC, \( b = .19, t(69) = 3.00, p < .05 \). Unfortunately, in the present case, DC failed to show a significant relationship with either FTP, \( b = -.13, t(69) = -1.10, p > .05 \), or CFC, \( b = .16, t(69) = 1.16, p > .05 \). Thus, because the first condition of mediation was not met, the hypothesized mediational relationship was not supported and further mediational analysis was not merited.

It was also predicted that IC would moderate the relationship between FTP and CFC (i.e., there would be an interaction among the variables). In order to test this hypothesis, scores on the PCT and FTP scales were centered before conducting a multiple regression with IC, FTP, and the interaction of these variables as predictors and CFC as the response variable. Again, analysis failed to show the predicted interaction, and moderation was not shown, \( \beta = -.05, t(76) = -.49, p > .05 \).

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**TABLE 1**

Zero-order Correlations Among Personality Variables, Future Related Variables, and Cognition

<table>
<thead>
<tr>
<th></th>
<th>DC</th>
<th>FTP</th>
<th>CFC</th>
<th>AM–W</th>
<th>AM–M</th>
<th>AM–C</th>
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<tbody>
<tr>
<td>FTP</td>
<td>.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>CFC</td>
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<td>.34**</td>
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<td></td>
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<tr>
<td>AM–W</td>
<td>.21</td>
<td>.24*</td>
<td>.46**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AM–M</td>
<td>.44**</td>
<td>.15</td>
<td>.39**</td>
<td>.40**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AM–C</td>
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<td>.01</td>
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<td>-.12</td>
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</tr>
<tr>
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<td>.07</td>
<td>-.08</td>
<td>.02</td>
<td>-.15</td>
<td>-.17</td>
</tr>
</tbody>
</table>

Note. *\( p < .05 \), **\( p < .01 \)

DC = Desire for Control, FTP = Future Time Perspective, CFC = Consideration of Future Consequences, AM–W = Achievement Motivation Work Subscale, AM–M = Achievement Motivation Master Subscale, AM–C = Achievement Motivation Competitiveness Subscale, IC = Integrative Complexity
**Additional analyses**

Correlational analyses were conducted to investigate the intercorrelations among the variables (see Table 1). Analysis yielded several significant relationships among variables. AM Mastery positively related to DC ($r = .44, p < .01$), as well as CFC ($r = .39, p < .01$).

Interestingly, additional bivariate regressions revealed an unexpected mediational relationship. Specifically, FTP was shown to positively predict CFC, $b = .19, \beta = .34, t(69) = 3.00, p < .01$, as well as Work AM, $b = .10, \beta = .24, t(69) = 2.05, p < .05$. CFC also positively predicted Work AM, $b = .33, \beta = .46, t(69) = 4.26, p < .01$. From this, the first three conditions of a mediational model were satisfied. For the final step in mediation, AM Work was regressed onto CFC and FTP. The results suggest that CFC still significantly predicted AM Work, $b = .31, \beta = .42, t(68) = 3.71, p < .01$, whereas FTP no longer significantly predicted AM Work, $b = .04, \beta = .10, t(68) = .84, p > .05$, thus showing support for the mediational model (see Figure 1).

**Discussion**

The first proposed hypothesis was that Consideration of Future Consequences would play a mediational role in the relationship between Future Time Perspective and Desire for Control. This hypothesis was not supported by the results of the current study. No significant relationship was found between DC and FTP or CFC, and therefore CFC did not play a mediating role between the two variables in the present study.

The second proposed hypothesis was also not supported. It was proposed that Integrative Complexity would moderate the relationship between FTP and CFC. Unfortunately, IC failed to show a relationship to any of the examined variables. It is difficult to draw...
conclusions from these results, however. Due to experiment error, it would appear that the participants might not have been allowed a sufficient period of time to complete the Paragraph Completion Test used to assess IC. Had the participants been given the typically allotted amount of time (i.e., 120s instead of 80s), the analysis may have yielded different results. Consistent with this notion, Coren and Seudfeld (1990) asserted that short time periods do not allow for the participants to suitably generate responses, and therefore do not accurately represent complexity levels. However, Gardiner and Schroder (1972) argued that giving the participants longer periods of time allows them to rationalize the answers, and thus reduces the validity of the test. It would be beneficial for future research to continue to examine the relationship between IC and CFC as a result of the ambiguity of the present results.

The results also showed that individuals high in DC show a high level of Achievement Motivation on the subscale of Mastery. One possibility is that individuals might see mastering a task as a way to gain a certain level of control over his or her environment. Thus, it would make sense that individuals with a greater DC have a greater desire to master tasks because it would be a way for those individuals to gain the control that they desire. Given the dearth of research examining DC, further research using the construct should be conducted.

Although unexpected, it was found that CFC mediates the relationship between FTP and AM on the work subscale. The mediational model suggests that it is how much individuals consider the future in determining daily behaviors that makes those individuals with open-ended time perspectives motivated to achieve. Of course, this mediational model was not hypothesized, and thus it was necessary to replicate the current study in order to substantiate this inference.

Study 2

The discovered mediational relationships shown in Study 1 were unexpected, and thus a second study was conducted to replicate the results. The second study examined the relationships among FTP, CFC, and AM.

Method

The sample consisted of 102 participants (77 female, 18 male). Due to a photocopying error, data from 7 participants were omitted. The same self-report measures were employed in the second study as in the first to assess AM, CFC and FTP. Data from additional measures was also collected for use at a later time.

Results

Initially, bivariate regressions were conducted to determine if the conditions of mediation were met (Baron & Kenny, 1986). This analysis showed that FTP positively predicted CFC, \( b = .11, \beta = .24, t(93) = 2.39, p < .05 \), as well as AM Work, \( b = .10, \beta = .26, t(93) = 2.61, p < .05 \). Additionally, analysis showed that CFC positively predicted AM Work, \( b = .29, \beta = .35, t(93) = 3.57, p < .01 \). Thus, the first three conditions of mediation were met. AM Work was then regressed onto CFC and FTP. Results suggest that CFC still significantly predicted AM Work, \( b = .25, \beta = .30, t(93) = 3.06, p < .01 \), whereas FTP no longer significantly predicted AM Work, \( b = .07, \beta = .19, t(93) = 1.91, p > .05 \). Thus, the mediational relationship uncovered in Study 1 was supported by the results of Study 2.1

General Discussion

Consistent with research by Joireman (1999), it appears that individuals who consider the possible future consequences of their actions tend to possess a greater AM Work. In addition, the current study showed, consistent with Husman and Lens (1999), that the longer an individual sees her or his life extending, the more AM Work and CFC that same individual exhibits. According to Socioemotional Selectivity Theory (Lang & Carstensen, 2002), individuals with longer FTPs are more concerned with events that gain them knowledge and possibly a career, and thus it is possible that AM could be one way that these concerns could manifest themselves in an individual with an open-ended FTP.

One potential reason that FTP relates to AM is because of how much that individual takes future consequences into account when acting in the present. In other words, it may be that an indefinite FTP leads to a greater CFC (in present behaviors) and that it may be this concern for the future and not the actual time perspective that leads to a greater level of AM. This suggests that how long one thinks he or she has may be less important than how important the future is when one is acting. If an individual thinks that she or he has quite a bit of time left but does not really care about what happens, then that individual probably would not be motivated to achieve.

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1In both Study 1 and Study 2, the sample consisted of many more women participants than men. Thus, to ensure that the small number of men included in the sample were not skewing the data, the bivariate and multiple regressions reported were also conducted using only the data from the women participants. Analysis yielded the same mediational relationship when the data from the male participants was omitted. Thus, it was decided that the data from the male participants would remain in the analysis, since there was not a significant difference when the male participants were removed.
Past research examining FTP has pointed out that older individuals tend to have a shorter FTP (Kastenbaum, 1961; Lang & Carstensen, 2002). The present study was conducted using primarily college students of a fairly young age. As a result, it is difficult to generalize the findings involving FTP to the general population or to an older population. It would be interesting to conduct future research examining the same relationships as the current studies, but using older adults to see if the found relationships are robust.

The current results have potential implications in educational settings. If it is indeed the case that one’s FTP leads to one’s level of CFC which in turn determines AM, then if we can manipulate or enhance a student’s FTP and/or CFC in as much as we are able to (Boninger, Gleicher, & Strathman, 1994), then we may be able to help to increase the AM of that student. Future research attempting to show just this outcome may be warranted. Additionally, such research may help to further explain why some children are not as motivated as others.

Research examining the roles of poverty and child maltreatment in motivation and scholastic performance suggest that both factors have a detrimental effect on the achievement and motivation of the child (Barnett, Vondra & Shonk, 1996). It might then be reasonable to apply the current research when trying to motivate such at-risk children. It seems plausible that the child who lives in a volatile and/or poverty-stricken environment needs to pay attention to the here and now and to surviving in the present. Such a child might not see the future as extending and thus may not place emphasis on achieving. Thus, if we can find a way to show these children a potential future beyond the dangerous situation that they are familiar with, then perhaps they might be more motivated to work hard and achieve.

References


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Psi Chi annually sponsors national undergraduate and graduate research award competitions, as well as research awards for members submitting the best research for the regional and national paper/poster sessions. In addition, Psi Chi also sponsors grant programs to fund student and faculty research. Psi Chi’s award and grant programs now provide up to $225,000 to members annually. Descriptions of the award/grant competitions follow. Further information and submission forms may be obtained from the Psi Chi website (www.psichi.org).

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 are $1,000 for first place, $650 for second place, and $350 for third place. In addition, all winners and their faculty research advisors receive award certificates. 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*. The deadline for this award is May 1 (postmark).

Allyn & Bacon Awards
The Psi Chi/Allyn & Bacon Psychology Awards, sponsored by Allyn & Bacon Publishers, are open to all undergraduate 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. In addition, all winners and their faculty research advisors receive award certificates. 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*. The deadline for this award is May 1 (postmark).

Erlbaum Awards
The Psi Chi/Erlbaum Awards in Cognitive Science, 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 studies in the area of cognitive science. The awards are $500 for the first-place graduate student and $500 for the first-place undergraduate student. In addition, the winners and their faculty research advisors receive award certificates. The abstracts of the winning papers, as well as photographs and brief biographies of the top two winners, are published in *Eye on Psi Chi*. The deadline for this award is May 1.

Newman Graduate 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 subscription to an APA journal of the winner’s choice, and (3) two engraved plaques, 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, is published in *Eye on Psi Chi*. This award is presented during the prestigious APA/APF Awards ceremony at the APA/Psi Chi National Convention in August. The deadline for this award is February 1 (postmark).

Bandura Graduate Award
All psychology graduate students who are Psi Chi members and graduate student affiliates of the American Psychological Society (APS) are eligible to submit their research for the Psi Chi/APS Albert Bandura Graduate Research Award. The winner receives the following: (1) travel expenses to attend the APS National Convention to receive the award, (2) a three-year membership in APS, including subscriptions to all APS journals, and (3) two engraved plaques, one for the winner and one for the winner’s psychology department as a permanent honor to the winner. This award is presented during the APS opening ceremony at the APS National Convention. The deadline for this award is February 1 (postmark).

Regional Research Awards
All Psi Chi members (undergraduate and graduate) are eligible to submit their 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 2003–04 year. Award monies are distributed at the conventions following the presentations. The Psi Chi regional vice-presidents each send a Call for Papers and a letter to the Psi Chi chapters in their respective regions during the fall. These letters include information about the Regional Research Awards, the regional conventions, and submission deadlines for Psi Chi programs. Deadlines for submissions vary according to region; check your fall regional mailing or the Psi Chi website (www.psichi.org) 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 each are presented to students submitting the best research for Psi Chi sessions at the APA and APS national conventions. Up to eight awards are given: four for the APA Convention and four for the APS Convention. Award monies are distributed at the conventions following the presentations. A Call for Proposals is mailed to all chapters in the fall and is also available from the Psi Chi National Office and website (www.psichi.org). The deadline for submissions to the Psi Chi student sessions at both the APA and APS conventions is December 1 (postmark).

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. The deadline for this grant program is October 1 (postmark).

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 this program is to provide funds for members to conduct summer research at nationally recognized research institutions. During the 2003–04 year, Psi Chi will award 10 grants of $3,500 (a stipend of $2,500 to the Psi Chi student plus $1,000 to the sponsoring faculty member at the research institution). The deadline for this grant program is March 30 (postmark).

NSF/REU Grants

All undergraduate Psi Chi members are eligible to apply for these summer research grants, which are offered by Psi Chi in conjunction with the Research Experiences for Undergraduates (REU) program sponsored by the National Science Foundation (NSF). The purpose of this program is to provide funds for members to conduct summer research at nationally recognized research institutions that have been identified by NSF as REU sites. This research must be conducted while still an undergraduate, not after graduation. Psi Chi will award a total of six grants to fund Psi Chi members who qualify for an NSF/REU grant during the 2003–04 year. A total of $30,000 has been allotted for this grant program. The deadline for this grant program is spring 2004 (check Psi Chi website for further details—www.psichi.org).

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 direct 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. The deadline for this grant program is June 1 (postmark).

Hunt Research Grants

All Psi Chi student and faculty members are eligible to apply for a Thelma Hunt Research Grant. Up to three grants of up to $3,000 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. The deadline for this grant program is October 1 (postmark).

Undergraduate Psychology Research Conference Grants

The purpose of this program is to provide funds 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. Funding is not available for conferences intended for students from a single school. If a single school organizes the conference (and invites other schools), the school submitting an application must have a Psi Chi chapter. If a consortium of schools organizes the conference, at least one member of the consortium must have a Psi Chi chapter in order to be eligible to apply. The maximum grant for each conference is $1,000. The deadline for this grant program is October 1 (postmark).

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 annual 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®. The deadline for this grant program is October 1 (postmark).
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