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About Psi Chi
Psi Chi is the National Honor Society in Psychology, founded in 1929 for the purposes of encouraging, stimulating, and maintaining excellence in scholarship, and advancing the science of psychology. Membership is open to graduate and undergraduate men and women who are making the study of psychology one of their major interests and who meet the minimum qualifications. Psi Chi is a member of the Association of College Honor Societies (ACHS) and is an affiliate of the American Psychological Association (APA) and the American Psychological Society (APS). Psi Chi's sister honor society is Psi Beta, the national honor society in psychology for community and junior colleges.

Psi Chi functions as a federation of chapters located at over 1,000 senior colleges and universities in the U.S. and Canada. The Psi Chi National Office is located in Chattanooga, Tennessee. A National Council, composed of psychologists who are Psi Chi members and who are elected by the chapters, guides the affairs of the organization and sets policy with the approval of the chapters.

Psi Chi serves two major goals—one immediate and visibly rewarding to the individual member, the other slower and more difficult to accomplish, but offering greater rewards in the long run. The first of these is the Society's obligation to provide academic recognition to its inductees by the mere fact of membership. The second goal is the obligation of each of the Society's local chapters to nurture the spark of that accomplishment by offering a climate congenial to its creative development. For example, the chapters make active attempts to nourish and stimulate professional growth through programs designed to augment and enhance the regular curriculum and to provide practical experience and fellowship through affiliation with the chapter. In addition, the national organization provides programs to help achieve these goals, including national and regional conventions held annually in conjunction with the psychological associations, research award and grant competitions, certificate recognition programs, national and regional chapter awards, and national service projects.

For more information about Psi Chi, contact the Psi Chi National Office, P.O. Box 709, Chattanooga, TN 37401-0709; telephone (423) 756-2044; www.psichi.org.

Journal Purpose Statement
The twofold purpose of the Psi Chi Journal of Undergraduate Research is to foster and reward the scholarly efforts of undergraduate psychology students as well as to provide them with a valuable learning experience. The articles published in this journal represent primarily the work of the undergraduate student(s). Faculty supervisors, who deserve recognition, are identified by an asterisk next to their name or on a separate byline.

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 someone with an undergraduate level of competence and experience.

Instructions for Contributors
The Psi Chi Journal of Undergraduate Research encourages undergraduate students to submit manuscripts for consideration. Submissions are accepted for review on an ongoing basis. Although manuscripts are limited to empirical research, they may cover any topical area in the psychological sciences.

1. The primary author of a submitted manuscript must be an undergraduate student who is a member of Psi Chi. Manuscripts from graduate students will be accepted only if the work was completed as an undergraduate student. Additional authors other than the primary author may include non-Psi Chi students as well as the faculty mentor or supervisor. Membership verification information (member ID number) for the primary author must be included.

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. A Microsoft® Word electronic copy of the complete manuscript with figures, tables, and charts generated in either Word or Excel. Any scanned images or illustrations must be at least 600 dpi resolution.

   b. An email address so that receipt of your manuscript can be acknowledged.

   c. A sponsoring statement from the faculty supervisor who attests: (1) that the research adhered to APA ethical standards; (2) that the supervisor has read and critiqued the manuscript on content, method, APA style, grammar, and overall presentation; and (3) that the planning, execution, and writing of the manuscript represent primarily the work of the undergraduate student.

Submit all electronic files to:
Dr. Christopher Koch, Editor
journal@psichi.org

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Statements of fact or opinion are the responsibility of the authors alone and do not imply an opinion on the part of the officers or members of Psi Chi. Psi Chi does not accept paid advertising for its publications. Psi Chi Journal of Undergraduate Research (ISSN 1089-4136) is published quarterly in one volume per year by Psi Chi, Inc., The National Honor Society in Psychology, P.O. Box 709, Chattanooga, TN 37401-0709. Subscriptions are available on a calendar-year basis only (Spring–Winter). U.S. rates are as follows (four issues): Individual $20; Institution $40. For international rates or other information contact: Psi Chi National Office, P.O. Box 709, Chattanooga, TN 37401-0709; telephone (423) 756-2044; fax (toll-free) 1-877-774-2443; e-mail journal@psichi.org. Printed in the USA. Periodicals postage paid at Chattanooga, TN, and additional mailing offices.

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The Psi Chi Journal of Undergraduate Research was first published in 1996 as a national, fully reviewed, quarterly journal dedicated to the publication of undergraduate student research. Consistent with Psi Chi’s purpose to “encourage, stimulate, and maintain excellence in scholarship of the individual members”, the journal was conceived for the purpose of fostering and rewarding the scholarly efforts of undergraduate psychology students. Articles published in the journal primarily represent the work of undergraduate students although faculty supervisors deserving recognition can be co-authors. However, the Psi Chi Journal was also intended to provide members with a valuable learning experience in the publication process with the hope of further developing the skills required for the next generation of psychologists to lead the discipline through their scientific contributions to the field. Although this was an ambitious goal, Stephen F. Davis, the first editor of the Psi Chi Journal for Undergraduate Research, observed that the journal “has succeeded in achieving its goal” and that through it “student professional development is enhanced” (Psi Chi, n.d.).

If the Psi Chi Journal has achieved its goal, then it is largely due to the foundational work of Stephen F. Davis and the continued efforts of Warren Jones, the second editor of the Psi Chi Journal. Both editors embraced the purpose of the Psi Chi Journal and developed an impressive list of consulting editors who have provided positive and constructive feedback to student authors, encouraging their research endeavors while maintaining a high standard for scholarly work. Members of Psi Chi are indebted to the dedicated service of Dr. Davis and Dr. Jones.

Due to the purpose and quality of the Psi Chi Journal, the journal itself can be used in a variety of ways. First, the Psi Chi Journal is obviously used as an outlet for undergraduate research. However, the research articles from the journal can also be used in research methods classes, for example, as a source of ideas. The articles can also serve as models of undergraduate research projects. In this issue, a new feature has been added to the Psi Chi Journal that is both informative about research and a unique source of material for the classroom. The new feature is an interview with a key figure in psychological research, Elizabeth Loftus in this case. The goal of the interview is to let readers know more about a key figure in the discipline, that individual’s development as student, and his or her opinions about the future of psychological research. The hope is that these interviews will not only be interesting and inspiring to our readers but eventually become useful for teachers of the history of psychology. Furthermore, the goal is to have the interviews conducted and contributed by student members. Read the interview for ideas on how you might conduct an interview and read the corresponding article in the Spring issue of Eye on Psi Chi for sample interview questions. In addition to this new feature, Psi Chi is continuing to pursue the inclusion of the Psi Chi Journal in a number of online databases to make the articles more accessible to interested readers.

The past has brought us two excellent editors that have helped develop an excellent undergraduate research journal for psychology. The future of the Psi Chi Journal, in part, depends on your continued contributions as research authors, interview authors, and as faculty reviewers. I look forward to working with you as the new editor of the Psi Chi Journal in expanding the utility of the journal, increasing its impact on student research, and maintaining an excellent publication of undergraduate research.

Reference
An Interview With Elizabeth Loftus

Christopher Koch
George Fox University

Elizabeth Loftus is Distinguished Professor at the University of California, Irvine. She holds positions in the Departments of Psychology & Social Behavior and Criminology, Law & Society. She received her PhD in Psychology from Stanford University. Since then, she has published 20 books and over 400 scientific articles. Loftus’s research of the last 20 years has focused on human memory, eyewitness testimony and also on courtroom procedure. Her work had been funded by the National Institute of Mental Health and the National Science Foundation. Loftus has received numerous awards and honors for her research. She received the Distinguished Contributions to Forensic Psychology Award from the American Academy of Forensic Psychology, the American Association of Applied and Preventive Psychology Award for Distinguished Contribution to Basic and Applied Scientific Psychology, the James McKeen Cattell Fellow (applied research) and William James Fellow (basic research) from the Association of Psychological Science, and five honorary degrees. Loftus was also the recipient of the inaugural Henry & Bryna David Lectureship from the National Academy of Sciences, the APA Distinguished Scientific Award for Applications of Psychology, the Grawemeyer Prize in Psychology, and the Lauds and Laurels Faculty Achievement Award from UCI for “a faculty member who has achieved great professional prominence in their field for their contributions to research, teaching, and public service.” In a review of “The 100 Most Eminent Psychologists of the 20th Century,” Haggblom et al (2002) ranked Loftus 58th which made her the top ranked woman on the list. “The False Memory Diet,” based on research by Loftus in collaboration with Cara Laney, Erin Morris, and Dan Bernstein, was listed in the New York Times Magazine’s most noteworthy ideas of 2005 and in Discover Magazine’s 100 top science stories of 2005. Loftus is a frequent speaker at Psi Chi programs and is a Distinguished Member of Psi Chi.

How did you become interested in psychology?
I began as a math major as an undergraduate at the University of California, Los Angeles (UCLA). I loved algebra and geometry, but was decidedly less excited about calculus. Nonetheless, I wasn’t giving up. While plowing through integrals and derivatives, I needed some elective courses, and turned to psychology. I took introductory psychology from Allen Parducci and got hooked. Nearly every elective course I took thereafter was in psychology, and, when all was said
and done, I had enough credits for a double major. When I heard about a field called “mathematical psychology”, I thought: “This sounds perfect for me” and I chose to go to graduate school at Stanford University, known to excel in that field.

**Who was your mentor?**
My master’s thesis was supervised by Richard Atkinson. My doctoral thesis was supervised by Patrick Suppes. I consider Gordon Bower and Jonathan Freedman, both faculty when I was a graduate student, to be especially important mentors.

**What did your mentor do that was particularly meaningful for your development as a psychologist?**
Freedman taught me that I could carry out experiments from start to finish. Bower continued to support my career, through highs and lows, over the next many decades. Suppes and Atkinson are just downright inspirational (even if they seemed to be quite busy during my graduate school days).

**How much of your academic lineage or "family tree" do you know?**
Suppes got his Ph.D. from Ernest Nagel, the philosopher. I believe he may trace back to William James.

**Do you have any advice for maximizing one's graduate school experience?**
Try to hook up with one or more research projects with faculty who love what they do, publish frequently, and include students as authors.

**What is your source or inspiration for research ideas?**
They come from everywhere. Many come from legal cases that I’m involved in or that are in the news. One recent idea came from dating an economics professor - it led us to put economic dependent measures into our experimental design.

**Do you have any tips for developing a successful research program?**
It’s fine to work on more than one topic if they both fascinate you. But it is also important to stick with a topic at least for a period of time so that a series of studies can be done that answer a set of questions about some phenomenon. In my case, I was interested in memory distortion. After doing initial studies that established that complex memories could be altered by post-event information, I went on to delve more deeply and to answer other questions, such as "Who is more susceptible to memory contamination?" and "Do people genuinely believe in their false reports?"

**What is psychology's biggest problem today?**
The public doesn’t understand what psychology really is. Consider the scenario wherein your airplane seatmate asks "What do you do?" and you reply "I’m a psychologist." When the seatmates next question is "Oh, what kind of experiments do you do?" rather than "I bet you’re analyzing me,” we’ll know we’ve gained ground.

**Where is psychology as field headed?**
In the next few years there the explosion of interest in brain-behavior relationships will continue. I hope it doesn’t completely overshadow the important work that needs to be done understanding behavior in its own right.

**What is the biggest area(s) of application for the psychology?**
Psychology relates to so many real world problems. We’ll continue to see applications to education, employment, and the legal system. A newly emerging interest is applications to our military and intelligence enterprise. Since National Security is much on the minds of many Americans, can we marshal our knowledge so that we anticipate what others might do to harm us, and avoid surprises.

**Are there any social issues that psychology should address?**
Psychology has so much left to contribute. That’s a good thing, as we don’t want ourselves and our students to be without meaningful employment. Whether you work on helping devise ways of enhancing student learning, or making our justice system fairer, or reducing prejudice, it’s a pretty good life when you feel your work is making a difference.
Factors Affecting Psi Chi Members’ Satisfaction With Research Opportunities

The present data (similar to those in previous studies) indicated lower satisfaction ratings for research in Psi Chi as compared to other chapter activities. Student involvement in research was lower than might be expected for members (57.1% currently involved). Participation was particularly low for Psi Chi-sponsored research (9.8% of the same) and those students reported lower satisfaction with research than students involved in general research activities. The majority of non-involved students reported lack of participation in research activities because they were “too busy” with work or family obligations (65.1%) and did not know how to get involved (39.4%). Self-reported competence, opportunities for being mentored, knowledge about funding opportunities, and faculty advisor leadership characteristics were all significantly correlated with student satisfaction ratings. Recommendations were offered for improving research involvement and satisfaction.

Kristina McDougal
Melanie M. Domenech Rodríguez
Utah State University

Participation in undergraduate research is important to develop skills and understanding of the research process (Richmond, 1998). Students learn many skills from undergraduate research such as time management, the importance of communication and dependability, and the hard work that goes into the research process (Purdy, 2005). Research transforms the undergraduate student from passive to active learner (Purdy, 2005). Conducting research during their undergraduate career also provides students the opportunity to work closely with a professor, thus increasing the potential of obtaining a strong recommendation letter (Collins, 2001). Research skills and the benefits one gains from participating in research are important for a strong graduate school application (Collins, 2001).

One way for students to obtain meaningful research experience is through their participation in Psi Chi. The National Honor Society in Psychology was established in 1929 to “encourage, stimulate, and maintain excellence in scholarship of the individual members in all fields, particularly in psychology, and to advance the science of psychology” (Psi Chi, 2005, p.1). Psi Chi as an organization has these stated goals and, presumably, organizational success is dependent upon achieving them via effective leadership (Hogan & Kaiser, 2005) within the organization thereby assisting student members in engaging and reaching these goals. Effective leadership has been conceptualized using six main characteristics: background and expertise, task-oriented skills, interpersonal skills, communication skills, liaison skills, and personal characteristics (Bachiochi, Rogelberg, O’Conner, & Elder, 2000). Studies have shown that leaders who have these characteristics are more likely found in successful organizations (Anderson & Tolson, 1991; Foels, Driskell, Mullen & Salas., 2000; Hoyt, Murphy, Halverson, & Watson, 2003; Sagie, 1996).

Previous research (Bailey & Domenech Rodríguez, 2006) examined Psi Chi advisors’ leadership characteristic and their role in the success of the Psi Chi organization by way of member satisfaction. Psi Chi faculty advisors were studied because of their central role in providing research opportunities to members.

Author note. This research was funded by a Thelma Hunt grant to the first author. Kristina McDougal completed her work as an undergraduate student at Utah State University. She is currently a graduate student at the University of Colorado, School of Social Work. Melanie M. Domenech Rodríguez is an Associate Professor at Utah State University. Please address all correspondence to the second author at: 2810 Old Main Hill, Logan UT 84322-2810 or via e-mail: melanie.domenech@usu.edu
role in Psi Chi. Advisors are responsible for overseeing the long-term development of chapters as well as training and providing information to members of their local chapter (Pchi, 2005). Bailey and Domenech Rodríguez found that Psi Chi members were not strongly satisfied with the research opportunities available through Psi Chi. This is of concern, given that excellence in scholarship is central to the mission of Psi Chi. The current study sought to uncover specific contributors to student satisfaction with research opportunities available through local Psi Chi chapters at the local, regional, and national levels. Faculty leadership characteristics were included as potential contributors because advisors have the greatest proximity to student members and, because of their institutional affiliation, faculty advisors provide continuity for chapters over time and can be critical leaders within Psi Chi.

Research Questions
Psi Chi membership provides many opportunities. Many of these focus on research involvement (e.g., grants, awards, and conferences). Since there is generous financial support for research and ample information about that support is available through the Psi Chi National Office, questions remain about the reasons for students’ relative dissatisfaction with research activities through Psi Chi (Bailey & Domenech Rodríguez, 2006). We asked students to report their specific research experiences, whether through or outside of Psi Chi. We inquired about barriers to participation for those not involved in research. Finally, we examined student members’ satisfaction with research activities and the relationships with (a) students’ self-reported competence in research tasks (b) perceived opportunities for mentorship, (c) knowledge about funding and presentation opportunities, (d) faculty advisor leadership characteristics, and (e) Psi Chi chapter activity. Before addressing these questions, student satisfaction ratings with Psi Chi activities was examined as was the relationship between satisfaction and faculty advisor leadership characteristics to confirm the findings of Bailey and Domenech Rodríguez (2006).

Method
Participants
A total of 650 student members participated in this survey. The vast majority were female (86.2%), White American (82.5%) and single (80.3%). The majority were employed (N = 468, 72.0%). Most participants were currently enrolled in school (N = 622, 95.7%), between the third and fourth year of college (80.8%), and majoring in psychology (N = 616, 95.1%). Consistent with what might be expected of honor students, the overwhelming majority (94.2%) reported plans to pursue graduate studies. More than half of the participants (57.1%) were currently involved in research activities.

Procedures
Through the Psi Chi National Office, an IRB-approved e-mail was sent to all Psi Chi faculty advisors in the United States asking them to forward an e-mail to at least five student members each. Participants completed the survey by following a link to SurveyMonkey.com. Students were entered into a raffle for a $25 gift certificate to Amazon.com.

Measures
The survey included demographic questions, a questionnaire assessing students’ involvement in research, qualities of their Psi Chi Advisor, interaction with Psi Chi advisor, as well as overall satisfaction with Psi Chi.

Student Satisfaction. Student satisfaction was assessed through questions concerning the number of Psi Chi activities held each year, the amount of communication with Psi Chi members, and the amount of chapter involvement in Psi Chi on a regional and national level.

Leadership Scale. The Leadership Scale (Bailey & Domenech Rodríguez, 2006) measured advisor’s leadership qualities in six major areas described by Bachiochi, et al. (2000), and used a scale of 1 (strongly agree) to 4 (strongly disagree). The six scales were 1) background and expertise (α = .89 for the present sample); 2) task-oriented skills (α = .91); 3) interpersonal skills (α = .95); 4) communication skills (α = .92); 5) liaison skills (α = .86) and 6) personal characteristics (α = .93). According to Bailey and Domenech Rodriguez (2006), scale reliabilities ranged from .85 to .94, and the total scale reliability was .97. In this sample the total scale alpha was .98.

Involvement in Research and Self-Reported Competence. For involvement in research, students were asked if they were involved in independent research and the types of research activities in which they engaged. The list of research-related activities was developed in consultation with various faculty members who supervise students in research activities. Eight items—data entry, data collection (e.g., administering surveys, conducting interviews), participant recruitment, data analysis, coding (e.g., video, transcripts), scoring of tests (e.g., IQ tests, personality tests), literature review or library searchers, and writing of manuscripts, reports—were included on the list. An open ended item was included for students...
to report other activities in which they might be involved. Additionally students were asked to rate the extent to which they could competently do the following for each of these activities on a four point scale that ranged from 1 (very competently) to 4 (not at all competently).

Non-involvement in research. A list of seven items (see Table 4) was developed from informal queries to local undergraduate students to generate a list of commonly experienced barriers to research participation. An open ended response option was also included for respondents to include additional reasons for non-involvement.

Opportunities for receiving mentorship. Students were asked four questions about opportunities for receiving mentorship. These questions were: I would feel comfortable approaching my Psi Chi advisor with questions about research, I would feel comfortable approaching other professors with questions about research, I know of opportunities to participate with research through my local Psi Chi Chapter, I know of opportunities to participate with professors in their research. Students responded using the following categories: yes, maybe, and no.

Knowledge about funding and publishing opportunities. Six questions (see Table 7) addressed students’ knowledge of grant mechanisms, research awards, regional conferences, and professors’ research.

Chapter activity. Participants were asked to report their chapter activity in four broad areas: social, service, academic, and fundraising. These areas are consistent with the Psi Chi National Office descriptions of appropriate chapter activities. Specific questions asked participants how many Psi Chi activities were held each quarter/semester, how many members were involved in research, and how many members attended Psi Chi regional and national conferences.

Results
Psi Chi members responded to a number of item (see Table 1). Of interest were the relatively lower student participation (n = 64) and satisfaction ratings (M = 2.10, SD = .80) for students involved in Psi Chi-sponsored research as opposed to research outside of Psi Chi (n = 366, M = 1.67, SD = .63).

Replication of leadership findings. In order to examine whether prior findings regarding the relationship between satisfaction with Psi Chi and faculty advisor leadership characteristics replicated in a different sample, the data were analyzed asking the same question. The findings replicated across the board, demonstrating that faculty advisor leadership characteristics are significantly related to students’ satisfaction with Psi Chi, see Table 2.

RQ1: What research experiences are undergraduates involved in?

Of the students who were currently or have been involved with research, over two thirds of the sample reported experiences with data collection (n = 486,
### TABLE 2

**Reported Satisfaction Ratings**

<table>
<thead>
<tr>
<th></th>
<th>Bailey &amp; Domenech Rodríguez, 2006</th>
<th>Current study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average satisfaction rating</td>
<td>$M = 2.28^a$ SD = 0.62</td>
<td>$M = 2.23$ SD = 0.59</td>
</tr>
</tbody>
</table>

Correlations between student satisfaction and faculty advisor:

<table>
<thead>
<tr>
<th></th>
<th>$r$ (285) = 0.40*</th>
<th>$r$ (503) = 0.46**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task-oriented skills</td>
<td>$r$ (285) = 0.37**</td>
<td>$r$ (457) = 0.36**</td>
</tr>
<tr>
<td>Interpersonal skills</td>
<td>$r$ (285) = 0.38**</td>
<td>$r$ (507) = 0.35**</td>
</tr>
<tr>
<td>Communication skills</td>
<td>$r$ (285) = 0.41**</td>
<td>$r$ (510) = 0.33**</td>
</tr>
<tr>
<td>Liaison skills</td>
<td>$r$ (285) = 0.39**</td>
<td>$r$ (509) = 0.40**</td>
</tr>
<tr>
<td>Personal characteristics</td>
<td>$r$ (285) = 0.39**</td>
<td>$r$ (513) = 0.30**</td>
</tr>
<tr>
<td>Overall leadership</td>
<td>$r$ (285) = 0.44**</td>
<td>$r$ (498) = 0.40**</td>
</tr>
</tbody>
</table>

*a means and scores are different from those reported in Bailey & Domenech Rodriguez (2006) because they have been reverse scored for the scales to be consistent across studies.

*p < .01, **p < .001

### TABLE 3

**Reported Research Involvement**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Ever involved in research</th>
<th>Currently involved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n = 650$</td>
<td>mean satisfaction</td>
</tr>
<tr>
<td>Data collection</td>
<td>486</td>
<td>1.86</td>
</tr>
<tr>
<td>literature review or library searches</td>
<td>480</td>
<td>2.12</td>
</tr>
<tr>
<td>Data entry</td>
<td>466</td>
<td>2.09</td>
</tr>
<tr>
<td>Data analysis</td>
<td>447</td>
<td>2.15</td>
</tr>
<tr>
<td>Writing of manuscripts or reports</td>
<td>431</td>
<td>2.10</td>
</tr>
<tr>
<td>participant recruitment</td>
<td>430</td>
<td>2.31</td>
</tr>
<tr>
<td>Scoring of tests</td>
<td>325</td>
<td>2.06</td>
</tr>
<tr>
<td>Coding</td>
<td>286</td>
<td>2.31</td>
</tr>
<tr>
<td>Independent research experiences</td>
<td>298</td>
<td>1.79</td>
</tr>
<tr>
<td>Assisting a professor with his/her research</td>
<td>293</td>
<td>1.79</td>
</tr>
<tr>
<td>Assisting a graduate student with his/her research</td>
<td>104</td>
<td>1.99</td>
</tr>
<tr>
<td>Assisting a undergraduate peer with his/her research</td>
<td>116</td>
<td>1.83</td>
</tr>
<tr>
<td>Assisting a staff a staff at a university counseling center with his/her research</td>
<td>71</td>
<td>1.80</td>
</tr>
<tr>
<td>Other</td>
<td>57</td>
<td>1.95</td>
</tr>
</tbody>
</table>
74.8%), literature review or library searches (n = 480, 73.8%), data entry (n = 466, 71.7%), and data analysis (n = 447, 68.8%). Slightly under two thirds reported experience with writing of manuscripts or reports (n = 447, 64.1%) and participant recruitment (n = 430, 66.2%). The least amount of experience—although still substantial—was reported for scoring of tests (n = 325, 50.0%) and coding (n = 286, 44.0%). Almost half of the respondents (46.5%) reported current or past involvement in independent research (see Table 3).

**TABLE 4**

Reported Barriers to Research Participation

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too busy with work</td>
<td>133</td>
<td>49.5%</td>
</tr>
<tr>
<td>Don’t know how to get involved</td>
<td>106</td>
<td>39.4%</td>
</tr>
<tr>
<td>Not interested in research</td>
<td>74</td>
<td>27.5%</td>
</tr>
<tr>
<td>Too busy with family</td>
<td>42</td>
<td>15.6%</td>
</tr>
<tr>
<td>No faculty whose work interests me</td>
<td>34</td>
<td>12.6%</td>
</tr>
<tr>
<td>Not comfortable approaching faculty</td>
<td>33</td>
<td>12.3%</td>
</tr>
<tr>
<td>Have conducted research and don’t like it</td>
<td>23</td>
<td>8.5%</td>
</tr>
<tr>
<td>Approached a faculty member and was discouraged</td>
<td>11</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

1 Percent of total respondents that perceived barriers to involvement in research (n = 269)

**RQ2: What are specific barriers to undergraduates’ involvement in research activities?**

Of the 278 students who reported no involvement in research, 269 answered the question about barriers to involvement (Table 4). The most commonly reported barriers were work involvement (49.5%), and lack of knowledge on how to become involved with research (39.4%). A sizeable number of students reported lack of interest (n = 74, 27.5%). A post hoc examination of the data reveal that the number of students reporting not being interested in research not being interested in research...
varies systematically by students’ future plans to attend graduate studies ($\chi^2(7) = 30.91, p < .001, N = 590$). Students who were interested in pursuing doctorates in psychology were the least likely to report a disinterest in research. Detailed data are presented in Table 5.

**RQ3: How are the following variables related to Psi Chi student members’ satisfaction with research activities?** (a) students’ self-reported competence, (b) opportunities for mentorship, (c) knowledge about funding and presentation opportunities, (d) faculty advisor leadership characteristics, and (e) Psi Chi chapter activity.

**Students’ self-reported competence.** The relationship between satisfaction in research and sense of competence in performing the activities was statistically significant for all tasks (see Table 6).

**Opportunities for Mentorship.** Students were asked about their satisfaction with research generally. When these satisfaction ratings were correlated with the four mentorship items, all correlations were significant. Satisfaction scores were positively correlated with students’ comfort in approaching their Psi Chi faculty advisor ($r = .20, p < .01, n = 305$) or another professor ($r = .23, p < .01, n = 305$). Satisfaction scores were also positively correlated with knowledge about opportunities to participate in research through the local Psi Chi chapter ($r = .24, p < .01, n = 306$) and knowledge of opportunities with other professors ($r = .29, p < .01, n = 305$). When asked specifically about their satisfaction with research through Psi Chi, respondents’ satisfaction scores were positively correlated with students’ comfort in approaching their Psi Chi faculty advisor ($r = .40, p < .01, n = 79$) or another professor ($r = .25, p < .01, n = 79$). Similarly, satisfaction with Psi Chi-sponsored research was strongly positively correlated with knowledge about opportunities to participate in research through the local Psi Chi chapter ($r = .44, p < .01, n = 79$) and knowledge of opportunities to participate in research with other professors ($r = .27, p < .01, n = 79$).

**Knowledge about funding and publishing opportunities.** All relationships between knowledge about funding and publishing opportunities and general research satisfaction were statistically significant and positive. We report findings for both Psi Chi-sponsored research and research generally. Particularly noteworthy were the moderate to strong correlations for those involved with Psi Chi research, knowledge of funding mechanisms, and awareness of upcoming regional conferences (see Table 7).

**Psi Chi faculty advisor leadership characteristics** and satisfaction with Psi Chi research experience. Given the interest in examining the experiences of students involved in Psi Chi sponsored research, the analyses in this section were limited to the students involved in research through Psi Chi. Overall leadership skills ratings for faculty advisors were significantly and positively correlated with research satisfaction ($r = .33, p < .01$). Correlations with specific leadership skills ranged from .22 (personal characteristics) to .37 ($p < .01$; background). Only personal background did not significantly correlate with student satisfaction in research activities. The other five leadership characteristics all were significantly correlated.

Psi Chi chapter activity. Chapter activity was found to have a significant relationship with research satisfaction whether general ($r = .23, p < .01$) or Psi Chi-sponsored research ($r = .59, p < .01$).

**Discussion**

In general, this research found that research opportunities and processes within Psi Chi chapters have many opportunities to be strengthened to improve students’ satisfaction. Previous research revealed that Psi Chi student members gave lower ratings for research satisfaction than other Psi Chi-related activities (Bailey & Domenech Rodríguez, 2006). Like the original study, the present data also reflect lower satisfaction ratings for research in Psi Chi as compared to other local chapter activities (see Table 1). As a point of engagement, it is important to examine involvement. The 57% of the sample that reported current involvement can be seen as a marker of success or failure, depending on the perspective. Research suggests that student involvement in research is linked to college students’ success (e.g., Elmes, 2002; Hunter, Laursen, & Seymour, 2007). As the national honor society for undergraduates in psychology, we would argue that 57% is not an opti-
mal level of involvement for the students that represent the highest achieving students within the major.

Becoming involved in research and getting to know a faculty advisor are primarily the responsibility of the student. However, there are a few ways that a faculty advisor as well as chapter officers can facilitate prospective and new members' networking. Given that over a third of our sample reported not knowing how to get involved, it seems critical to be proactive in publicizing the opportunities that are available and how to pursue them. For Psi Chi faculty advisors and chapter leaders this could take the form of passive (e.g., flyers or e-mails) or active (e.g., announcement in classes, formal activities) information sharing.

For those students that are not involved, realities of daily living such as work and family obligations interfere with research participation. It seems that participation can be encouraged by offering a wide variety of experiences for students as well as flexibility in method of participation. For example, Domenech Rodríguez and Nelson (2006) reported a pilot project to involve distance education students in research activities. Such web-based, flexible applications may serve to increase student participation in research activities and, potentially, satisfaction with research as well. Additionally, trying to engage students in research activities before they become overburdened with other responsibilities may be desirable. Psi Chi chapters could team up with Psychology club or have their more senior members work with incoming students to inform them of research opportunities. As incoming students see that upperclassmen are enjoying research they will realize that this is both fun and academically rewarding.

The finding regarding lower satisfaction in Psi Chi-sponsored research compared to general research gave us pause initially. However, it is possible that Psi Chi-sponsored research activities represent a poor fit for students. For example, in our local chapter, the authors conducted the present research and encouraged members’ participation, however, many students were not interested in the topic area. It might be difficult for a single faculty advisor (or even co-advisors) to provide opportunities that represent a good fit for student members. It might be helpful to engage student members in research by creating pools of faculty research sponsors so that students have greater flexibility in the research projects in which they can engage. In our local chapter, we have maximized opportunities by teaming up with the professor for the “capstone” course in Psychology; the course requires research participation and Psi Chi helps students become familiar with professors’ research by sponsoring faculty panels.

### TABLE 7

<table>
<thead>
<tr>
<th>Comparison of Satisfaction Between General and Psi Chi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfactory with research: General</td>
</tr>
<tr>
<td>There are funding mechanisms available for undergraduate research at my university</td>
</tr>
<tr>
<td>There are grants that I can apply for through Psi Chi national</td>
</tr>
<tr>
<td>There are research awards for undergraduates available through Psi Chi</td>
</tr>
<tr>
<td>I know of opportunities to participate with research through my local Psi Chi Chapter</td>
</tr>
<tr>
<td>I know of opportunities to participate with professors in their research</td>
</tr>
<tr>
<td>I am aware of upcoming regional conferences</td>
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</table>

**p < .01, * p < .05
Our findings suggested that increasing a sense of competence, awareness of opportunities for mentorship, and knowledge about funding opportunities could all help improve student satisfaction ratings. Again, chapter activities that engage in passive and active information sharing could address these areas specifically.

Finally, faculty advisors can examine their leadership characteristics and seek opportunities for growth and development in these areas. For example Ossoff (1998) wrote that professors have the advantage of social power and should take the opportunity to invite students to participate in research or simply to talk more about a topic studied in class; a Psi Chi faculty advisor could use personal contacts to motivate student participation in research.

References
Many research articles have been written about the symptoms, effects, and coping strategies of Attention Deficit Hyperactivity Disorder (ADHD). With a prevalence rate ranging from 3% to 5% of all children (Anderson, Williams, McGee, & Silva, 1987) it is not surprising that there has been a flux of information on the topic and this particular age group. Despite the fact that around 4.7% of adults have the disorder (Barkley, 2002; Biederman, Mick, & Faraone, 2000; Mick, Faraone, & Biederman, 2004; Weiss & Weiss, 2004), there has been less of a focus on adults and the ways they manifest ADHD. In the past, researchers and clinicians believed that children outgrew the disorder as they became older and that symptoms dissipated with time. However, we now know this to be false because longitudinal studies show that 66% to 85% of children continue to exhibit symptoms well into adulthood (Biederman et al., 2000). Typically, adults display two components of ADHD: inattentiveness and impulsivity (Wadsworth & Harper, 2007).

Similarly, the majority of the research studies and literature on ADHD has been centered on males. According to Arnold (1996), females with ADHD have been neglected in the research until recently. Even though more males are diagnosed with the disorder, Arnold estimates that 1% of females (approximately 1 million women) have the disorder as well. The ratio of ADHD for boys and girls is 5:1; however, there should be an even smaller gap in the numbers because females are typically less overt in their manifestations of the disorder (Arnold, 1996). Overall, females have less hyperactivity, fewer attention issues, and less externalizing behaviors when compared to their male counterparts. Therefore, they are seen as having less symptoms of ADHD (Arnold). Unlike males with ADHD who are mainly hyperactive and impulsive, females are usually characterized with the inattentive type of ADHD (Nadeau, 2002). The ratio of adult ADHD for males to females is 1:1 (Scudder, 2001).

Girls with ADHD often have been excluded from the research because they do not fit the typical example of the disorder. Instead of being hyperactive, they are instead more passive, introverted, and submissive. Rather than acting out or misbehaving like boys with ADHD, girls may internalize feelings of inadequacy, which leads to guilt and shame, a common denominator among women with ADHD (Solden, 1995). In females, ADHD symptoms may include forgetfulness, disorganization, low self-esteem, anxiety, hyper-talkativeness, or emotional reactivity (Quinn, 2005).

Comparing the Psychological and Physical Health of ADHD and Non-ADHD Female College Students

Attention Deficit Hyperactivity Disorder (ADHD) is a well-known phenomenon that affects many children and adults alike. Even though both groups are afflicted by this disorder, the majority of research on the subject is focused on children and more specifically males (Arnold, 1996). Although males are referred and diagnosed with the disorder at a higher rate than females, women are displaying symptoms of ADHD and comorbid disorders at comparable rates (Quinn, 2005). The purpose of this study is to assess the differences in the psychological and physical health of female college students with ADHD and without ADHD by testing self-reports of stress, role overload, fatigue, mental health, and optimism. Results indicated that women with ADHD report significantly greater fatigue and role overload than their non-ADHD counterparts.
According to Quinn, females with ADHD are said to “suffer in silence” and may suffer from low self-esteem, impaired social relationships, and a general demoralization. Due to their internalization of symptoms, these girls and women may become anxious, depressed, and socially withdrawn. As a result females with ADHD may be diagnosed with depression and/or anxiety as comorbid disorders (Quinn).

Previous research shows that females with ADHD often have been overlooked by researchers, physicians, and others. In a study conducted by Rucklidge and Kaplan (1997), the researchers found that women who were diagnosed with ADHD as adults reported having more stress, anxiety, depression, and low self-esteem. In another study done by Katz, Goldstein, and Geckle (1998), women had more psychological distress than males with ADHD. Women have also reported having a poorer self-concept than their male counterparts (Arcia & Conners, 1998).

In addition to females, college students have also been neglected in the research until recently. The majority of research and attention is still being given to children even though the prevalence rate for college students has been estimated to be between 2% to 11% (DuPaul et al., 2001; Heiligenstein, Conyers, Berns, Miller, & Smith, 1998; Weyandt, Linteman, & Rice, 1995). According to Heiligenstein, Guenther, Levy, Savino, and Fulwiler (1999), scholars have not focused on the issues and needs of college students in regards to ADHD. Murphy and Barkley (1996) have suggested that college students are not included in samples because most ADHD studies are done at mental health or ADHD specialty clinics. The symptoms of ADHD in college students are manifested differently and they may include being easily distracted, restless, and impulsive. As a result, students’ academic performance and abilities, while in school, can be negatively impacted (Richards, Rosén, & Ramirez, 1999). However, Dooling-Litfin and Rosén (1997), emphasize the importance of studying college students with ADHD because their attendance of college demonstrates that they can be successful in relation to education.

A growing body of research shows that there are many differences between the sexes in the diagnosis, manifestation, and psychological impact of ADHD. In the current study we assess the differences between female college students with ADHD and those without ADHD looking specifically at stress, role overload, fatigue, mental health, and optimism. ADHD can have a severe impact on the behavior and social life of individuals with the disorder compared to controls that do not have ADHD. In addition, some research has shown that there may be differences in the physical and emotional health of children with ADHD. In a European study conducted by Nøvik, Hervas, Ralston, Dalsgaard, Pereira, Lorenzo, and the ADORE study group (2006), the authors reported that boys and girls were similar in the main symptoms of the disorder but that girls rated themselves as higher on somatic issues compared to boys in the study. Also, these girls tended to internalize their problems more than boys. The authors concluded that these girls had more emotional symptoms than the boys. For both genders, there were reports of anxiety and depression as well as physical problems including headaches, loss of appetite, and abdominal pain (Nøvik et al.).

Another issue that affects individuals with ADHD is stress. In 2002, Gonzalez and Sellers conducted a study to determine the amount of stress in children with ADHD and the coping skills these children used. They found that children with ADHD had a higher level of stress than their peers and that this problem needed to be researched. In addition, they concluded that these children with ADHD had lower self-esteem and poorer self-concept and as a result their coping skills needed to be evaluated. The ineffective and unproductive coping skills these children were using led to the need for a stress-management program (Gonzalez & Sellers, 2002). Based on the findings presented, we hypothesize that individuals with ADHD are at a greater risk of psychological and physical health problems including increased stress, increased role overload, increased fatigue, decreased mental health, and decreased optimism.

Method

Participants

All 880 students at a private liberal arts college for women in the Southeast were asked to complete an on-line survey. One hundred and ninety-two undergraduate college women chose to complete the survey assessing ADHD. The average age was 20.72 years (SD = 2.99). In this sample of participants, 140 students were Caucasian, 31 students were African American, 9 students were Hispanic, 4 students were Asian, 2 students were American Indians, and 5 students were multiracial. One student did report her race. Eighty-four of the participants considered themselves to have ADHD and 108 participants classified themselves as non-ADHD. In the group of students who reported they had ADHD, 32 had received a medical diagnosis by a licensed professional and 52 reported they had never received a medical diagnosis.

Materials

All participants were administered an electronic survey that asked students to self-report if they had
ADHD or not. In addition, demographic information including ethnicity, age, class year, major area of study, and grade point average were collected in the survey. Students were also asked to list any disabilities they may have been diagnosed with in the past.

The rest of the survey included scales assessing stress level and coping skills, role overload, mental health, and fatigue. There were also questions regarding childhood experiences with ADHD and internal restlessness.

**Fatigue.** The survey included a section assessing general fatigue. The Fatigue Assessment Scale (FAS) by Michielsen, De Vries, Van Heck, Van de Vijver, and Sijtsma (2004) consists of 10 statements such as “I am bothered by fatigue” and “Mentally, I feel exhausted.” Answers were coded on a 5-point Likert scale ranging from 1 to 5, with 1 being never and 5 being always. Higher scores indicate greater fatigue. Michielsen et al. reported that their factor analysis indicated that the ten items measured one factor, explaining 48% of the variance, which establishes content validity. They also obtained an alpha coefficient of .87. For this study, Cronbach’s alpha was measured and was found to be .85.

**Mental health.** In addition, the survey contained a short version of the General Health Questionnaire (GHQ-12: Goldberg, 1972) to evaluate mental health. The questionnaire consisted of 12 questions such as “I am unhappy and depressed?” Answers to these questions were rated from 1 to 5, where 1 meant not at all and 5 meant much more than usual. Higher scores show better mental health. Hardy, Shapiro, Haynes, and Rick (1999) obtained an alpha coefficient of .89 for this questionnaire and also found convergent and discriminant validity for the GHQ by finding strong correlations with this measure and other measures of mental and physical health. To assess the reliability of this scale for the current study, a Cronbach’s alpha was computed.

**Optimism.** The Life Orientation Test (LOT, Scheier & Carver, 1985) was used to assess optimism. The LOT contains 12 items with 4 being filler items. An example item includes “In uncertain times, I usually expect the best.” Each statement was rated on a scale of 1 to 5, with 1 being not at all true and 5 absolutely true. Higher scores on the scale represent higher optimism. The LOT has shown adequate internal consistency (Cronbach’s alpha = .76) and 4-week retest reliability (.79; Scheier & Carver). LOT scores also correlated positively with self-esteem and negatively with measures of hopelessness, depression, perceived stress, alienation, social anxiety, and symptoms of physical illness (Scheier & Carver) providing evidence for convergent and discriminant validity. A Cronbach’s alpha coefficient of .88 was found for the current study.

**Role overload.** For the evaluation of role overload, the survey included a five-item scale developed by Duxbury, Higgins, and Lee (1994). According to the authors, role overload is “when the total demands on time and energy associated with the prescribed activities of multiple roles are too great to perform the roles adequately or comfortably (p. 450).” An example item from the scale is “I feel I have more than I can comfortably handle.” Each statement was rated on a scale of 1 to 5, with 1 being strongly disagree and 5 being strongly agree. Higher scores on these statements signify higher role overload. Duxbury et al. found that role overload correlated with work to family conflict and family to work conflict, which establishes evidence for the construct validity of the scale. The authors performed an alpha coefficient and got .85 for their role overload scale. A Cronbach’s alpha coefficient was conducted and resulted in .87 for the current study.

**Stress.** In order to assess the level of stress, each participant completed the Perceived Stress Scale (PSS), which was created by Cohen, Kamarck, and Mermelstein (1983). The scale includes 14 questions that evaluate stress for the past month, for example, “In the last month, how often have you felt that you were unable to control the important things in your life?” Each question was rated using a Likert scale from 1 to 5, where 1 indicated never and 5 indicated very often. Higher scores on the scale signify higher stress as perceived by the participant. Cohen et al. (1983) compared the PSS to the Center for Epidemiologic Studies Depressive Scale (CES-D; Radloff, 1977), which measures depressive symptomatology and found that the PSS measured a different and independent predictive construct. Cohen et al. (1983) conducted three samples and obtained coefficient alphas of .84 to .86. In order to test reliability, a Cronbach’s alpha was computed for this study and it was found to be .79.

**Design and Procedure**

Researchers sent an electronic version of the survey through an email to all students at a private liberal-arts college in the Southeast. Before completing the survey, each participant read an informed consent explaining the purposes of the study. In addition, students in the introductory psychology classes were given research credit for participating in the study.

**Results**

For all statistical analyses, each ADHD student was matched with a non-ADHD student based on race, class year, and age resulting in 42 matched pairs. It
was hypothesized that students with ADHD would report higher stress than their non-ADHD counterparts. To test this hypothesis, a dependent samples t-test was calculated to compare the total stress of college women with ADHD and college women without ADHD. The results indicated that there was no significant difference between the two groups, $t(39) = 1.17, p > .05$ for perceived stress.

Additionally, it was hypothesized that there would be a difference between the amount of role overload reported by women with ADHD and those without ADHD. To assess this, a dependent samples t-test was conducted to compare the role overload scores reported by both groups. A significant difference was found, $t(39) = 2.28, p < .05$. The mean for women with ADHD was 19.08 ($SD = 4.14$), and the mean for women without ADHD was 17.15 ($SD = 4.18$) indicating that the women with ADHD felt greater role overload.

Our next hypothesis was that women with ADHD would report worse mental health than their non-ADHD peers. To test this hypothesis, another dependent samples t-test was calculated. Results showed that there was no significant difference between the two groups for mental health, $t(41) = .97, p > .05$.

We also hypothesized that women with ADHD would report greater fatigue than women without ADHD. Using a dependent t-test, a significant difference between women with ADHD and women without ADHD was obtained, $t(39) = 2.52, p < .05$. The mean for women with ADHD was 30.98 ($SD = 7.12$), and the mean for women without ADHD was 27.58 ($SD = 5.85$) indicating that the women with ADHD felt greater fatigue.

The final hypothesis was that there would be a difference in overall optimism between the two groups with women without ADHD reporting higher optimism than women with ADHD. Using a dependent t-test, a significant difference between the two groups was not found, $t(39) = -1.97, p > .05$.

**Discussion**

The purpose of this research was to explore the differences between female college students with ADHD and without ADHD on reported stress, mental health, fatigue, role overload, and optimism. The school work and lifestyle of college students may be challenging in general; however, female college students with ADHD report greater fatigue and role overload than female college students without ADHD. Aside from the pressure of attending college, women with this disorder have the added pressure that comes with this diagnosis because they may find it difficult to concentrate, organize, and have high self-esteem.

According to Scudder (2001), the number of adults with ADHD is similar across genders. Despite this fact, the majority of research is conducted on males. Similarly, Selden (1995) reports that instead of showing externalizing behavior like boys these girls with ADHD may instead internalize their feelings of insufficiency and this could lead to negative feelings about themselves. As a result, females may have difficulty with organization, self-esteem or confidence, and anxiety (Quinn, 2005). Keeping these facts in mind, the study of female college students with ADHD was a practical direction to go in. Studying this population and the challenges they experience on a daily basis allows researchers to suggest ways of helping this group. Based on the current study, it would be beneficial to create support systems for these women through counseling, peer groups, and college administrations. Discussing their issues with a professional counselor through either the on-campus counseling center or a private off-campus counselor could decrease negative symptoms for these women. Similarly, discussing the symptoms with other ADHD students could provide additional support. Both of these resources could have a positive affect on the fatigue and role overload of these women. Another way of helping these students is by proposing policies to administrators that guarantees these women adequate accommodations for their disability.

One limitation of this study was that the sample size was fairly small. This study should be replicated at a larger, public university. Because this study was conducted at a small private college, all students tended to report similar levels of stress, which is possibly due to the intensity of classes and academic rigor. A further limitation of this study is that the variables studied were based on self-reports. Similarly, the categorization of students on the basis of ADHD was based on self-reports also. The results would have been more reliable if the students who reported ADHD had shown proof of their diagnosis.

This study had several benefits. First, both females as well as college students have previously received little attention from researchers. The majority of the research on ADHD has been centered on males as well as children. Therefore, a study on the needs and issues faced by female college students was vital. By bringing attention to this demographic, these students’ difficulties are acknowledged and suggestions for coping can be brought forth. Another benefit of this study was the attention given to stress and health of college students. In general, there have been very few studies about the psychological and physical health of people with ADHD and even fewer studies using college students with this disorder.
ADHD AND NON-ADHD FEMALE COLLEGE STUDENTS

As stated above, in the future, research on this topic should include a larger sample size of students. By increasing the sample size, researchers could investigate the differences between races or ethnicities. Students who are members of minority groups may be at an even greater disadvantage when diagnosed with ADHD because they often resist seeking medical help or counseling (Davidson, Yakushka, & Sanford-Martens, 2004). As a result, there may be differences with the stress and health of these groups so larger and more diverse samples are needed to identify these issues.

In addition, a larger sample size would allow researchers to determine the differences between different age groups. Even within a college sample, older women with ADHD (upper-class women and return-to-college students) may be at higher stress than younger students with ADHD (under-class women). The transition to college can be difficult for any student but students with disabilities and more specifically ADHD are likely to find this time to be even harder than their peers. Also, upper-class students are more accustomed to the services offered in college for students with disabilities or health issues. They may be more likely to take advantage of these accommodations. For these reasons, the differences in health and stress between age groups should be studied.

Finally, future research studies should focus on the differences between students who have been officially diagnosed with ADHD and those students who have not been officially diagnosed. Furthermore, students who report an official diagnosis of ADHD should be prompted to provide proof of their diagnosis from a medical professional. Individuals who are diagnosed as ADHD may differ in their coping, level of stress, and health because they are often receiving professional help for this disorder. In addition, they may be using medication and other techniques to handle their ADHD and the problems that come with it. In contrast, students who have not been officially diagnosed are most likely unable to take medication to control their ADHD symptoms. As a result, they may have difficulty coping with the responsibilities of college and the changes that come with this new time in their lives.

References


**APPENDIX**

1. Have you ever been diagnosed by a medical doctor, psychiatrist or psychologist with ADHD or ADD?
   • Yes
   • No

2. Have you been diagnosed by someone other than a doctor (e.g., teacher, parent, or school counselor)?
   • Yes
   • No

3. If so, how old were you when you received this diagnosis?

4. If yes, how do you feel you are coping?
   • Quite Well
   • Satisfactorily
   • Neutral
   • Unsatisfactorily
   • Quite Poorly

5. Have you been officially or unofficially diagnosed with other types of learning disabilities? If so, please name them here.
The Latino population in the United States has grown exponentially in the last several decades; however, their growing political power has remained untapped. As of 2000, the United States had approximately 21.6 million Latinos of voting age, but only 34 percent were registered to vote and only 27 percent actually reported having voted (Moore, 2003). At this point, neither major political party has a solid stronghold on the Latino voting bloc, but both have notably stepped up their efforts to gain that allegiance through increased advertising and community outreach. Moreover, both Republicans and Democrats have participated in forums that primarily discuss issues that are perceived to affect Latinos the most.

Instead of appealing to Latinos through forums directed solely at them, there has been a recent micro targeted approach similar to that of other groups within the electorate (e.g. African Americans, women, rural voters, etc.). The Voting Rights Act of 1965 made it mandatory to provide ballots in the native language of the voters and since then, there has been an effort to communicate with Latinos in their native language. According to data gathered from television stations and network profiles, the 2004 election spent in the upwards of $8.7 million dollars on Spanish-language television ads (Segal, 2004). The New Democratic Network, a moderate Democratic political action committee, launched a $2 million dollar advertising strategy geared specifically towards Latinos in the 2004 presidential election. The cost of paid media spending on general elections has skyrocketed and therefore a cost-benefit analysis is necessary to determine the benefits of advertising to Hispanics in Spanish. However, research does indicate that Spanish-language advertising is more effective for Hispanics/Latinos, ages 18-49, despite fluency in English (Roslow & Nicholls, 1996).

According to Fullerton and Kendrick (2000), there are two conflicting forces that affect Latino preference: (1) the desire to fit into the mainstream and (2) the drive to reaffirm or maintain their ethnic identity. The desire to fit into the mainstream, which in this case is the dominant use of English, may explain how other researchers have found preference for the use of English language advertisements (Fullerton & Kendrick, 2000). Other research suggests that using Spanish language advertisements is more effective in conveying a message to bilingual Spanish-English speakers because those who identify themselves more strongly to their ethnicity are more frequent users of Spanish-only media (Deshpande, Hover, & Donthu, 1986). In addition to the increased persuasiveness of Spanish language ads, it can be inferred that it would take more airtime, and money, to reach as many Hispanic voters using English ads via mainstream media avenues.

Faculty supervisor: Dr. Corrinne Lim-Kessler
While Spanish-language commercials appear to be more effective in delivering a message (via language), the second part of the ad concerns persuading a voter to choose the sponsoring candidate. In trying to persuade Latino voters, studies suggest that people favor those candidates they perceive as being similar to themselves (Koslow, Shamdasani, & Touchstone, 1994). Subsequently, the purpose of the commercial is to influence voters by assisting them in identifying the similarities between themselves and the candidate. The basic methods of persuasion tactics used in political commercials were devised by Connaughton and Jarvis (2004) and based on the Burkean theory of fostering social affiliation. Burke argues that, “You persuade a man only insofar as you can talk his language by speech, gesture, tonality, order, image, attitude, idea and identifying your ways with his” (Connaughton & Jarvis, 2004, p. 467). Highlighting these similarities would persuade a voter that a candidate has similar economic, social and political interests. At the time of this study, no previous studies had been conducted on the persuasiveness of commercials that use explicit, antithesis or implicit methods espoused by Connaughton and Jarvis (2004) theory as the most common means of fostering a common ground with the candidate.

Commercials that use the antithesis method often use very perceptible tactics. A large misconception about memorable political commercials is that they are the negative ads that attack the opposing candidate’s personal or voting record. Negative ads use an out-group method such as “they” and “them” in reference to the opposing candidate and/or political party, which serves as a means of uniting individuals against a common identity. Antithesis use dark imagery, louder and foreboding music with an underlying ominous tone. However, not only are campaign commercials supposed to foster identification between the voters and the candidate, they are also used to ensure voter turnout, which is imperative to a successful political campaign. A key concern of campaign strategists is to make certain that negative ads will not keep turnout low by turning people off from the political process which can be deemed as dirty and not something in which they would like to participate. Nevertheless, this apprehension is not enough to prevent campaigns from using them, but rather encourage caution. Many political scientists argue that increased use of negative ads in modern political campaigns directly correlates to their efficacy, but research on their persuasiveness suggests otherwise. Thorson, Christ, and Caywood (1991) found that ads that highlight the positive message of the sponsoring candidate, rather than attack the opponent, have a more positive impact on viewers’ attitudes toward the candidate, although they are no less persuasive.

The explicit method uses as an in-group approach in which both visual and aural cues such as traditional Latino clothing and folk music and reference to “us” and “we” tries to make a connection with the voters. Furthermore, they directly use the term “American Dream” in conjunction with the aforementioned cultural cues because it reinforces the other cues that suggest the sponsoring candidate understands and values the importance of the Latino culture. In terms of message, the commercial highlights issues such as immigration, welfare reform, social security and the minimum wage, as they are perceived to be of high importance in the Latino community.

On the other hand, commercials that use the implicit method are somewhat more subtle in their appeal since they do not approach Latinos as a subgroup, but as though they have been fully integrated into the mainstream. The ads are similar to positive English-language ads in that they use a variety of diverse people it suggests that they are not seen as part of the out group. The ads also discuss the notion of the ideas behind the “American Dream” (e.g. education, upward mobility, shared values and morals, etc.) without directly referencing the phrase. The use of those words is a key distinction between the implicit and explicit reference to the ideas about the American Dream.

The lack of empirical support for the use of various tactics with the Latino population provided the basic purpose of the present study of determining whether the methods of persuasion will influence the overall likelihood of voting for the candidate it is designed to promote. The design of the empirical study intends to address several questions, including the best way to disseminate political information to Latino voters and how Latinos perceive commercials that target them as an out group (e.g. being Latinos). The hypothesis states that commercials that use the implicit means of identification will result in a higher rate of persuasion, in terms of reported intended behavior of voting for the sponsoring candidate, regardless of proficiency in Spanish. This is based on the idea that implicit identification will resonate among viewers because it emphasizes issues that are important to the entire electorate, which suggests that they [Latinos] have been accepted as a part of the American society.

Method

Participants

The 41 participants in this study included native Spanish speaking students (n = 15) bilingual with fluency in both Spanish and English and native English-speaking students (n = 26) who, though fluent in
Spanish, were enrolled in upper level Spanish classes. They were recruited from two small, Midwestern colleges. All participants were between the ages of 19 and 27 (M = 22.63). The gender disparity between females (n = 36) and males (n = 5) somewhat accurately reflected the male to female ratios of the colleges. Attempts to recruit students via campus message boards and email were initially effective, but the sample size remained too small and other means were subsequently employed to increase the sample. Spanish departments at both schools, following proof of Human Subjects Review Board (HSRB) approval, consented to conduct the study during class time.

Two Spanish professors volunteered class time to conduct the study. One sample was taken at the beginning of class while the other sample was taken during the remaining twenty minutes of class time. Before collecting data, the researcher explained the purpose of the study to the students. Each student received an informed consent form and was notified that their participation in the study was not required for the class. Neither professor, in either class, provided extra credit to their respective students for participating in the study. A third sample was taken in which participants showed up voluntarily at their convenience outside of class time.

It is noted that the class in which the data was collected in the latter time frame of the class resulted in two students not completing the survey in its entirety as a result of time constraints. Only one of the surveys was not used in the descriptive and inferential statistical analysis because the incomplete data did not reflect having participated in the entire study. However, the other participant watched all nine commercials and answered six of the corresponding questions fully. Subsequently, the ratings from this participant were still used in the statistical analysis because the study was completed and the results are still indicative of the participant’s level of persuasion based on the commercials.

**Apparatus**

The University of Oklahoma Political Communication Center (OU-PCC) provided the Spanish-language political commercials from races between 2000 and 2006 that were used in the study. All of the commercials available were from American presidential, congressional, or gubernatorial races. Three major presidential candidates from 2000 and 2004 sponsored three of the nine commercials, including George W. Bush, John Kerry, and Al Gore.

There were fees associated with the compilation of the tape, and due to limited resources, the population had to be narrowed. By reducing the number of 124 Spanish language ads that the OU-PCC had available to a population of such ads corresponding to political races between 2000 and 2006, the population decreased to only 55 commercials from which to obtain the sample. Again, limited financial resources required that only 40 of the 55 ads were purchased using a random process.

OU-PCC has a strict lending policy in which they do not allow researchers to have more than five commercials per candidate, which was therefore taken into consideration when choosing the 40 commercials. To ensure random selection, each of the 55 ads was assigned a number to determine whether it would be in the final selection. Candidates who had more than five ads available were withheld from the number assignment because they were randomized independently within themselves. A table of random numbers was generated to determine which 40 ads were chosen without breaking OU-PCC loan terms. An identical process was used in determining which five ads from each candidate would be chosen from among the candidates who had more than five ads.

A general rubric with criteria for how they would be categorized was created prior to viewing the ads for the first time. Upon viewing them the first time (without categorizing them), the rubric was adjusted with other visible or aural cues such as music, pitch and tone, were added to each category to assist in categorizing the commercials (see Appendix A for more). Using this checklist, ads were classified as having employed either the implicit, explicit or antithesis method of persuasion. Within each of these categories, the best three of each were chosen as the most representative, thus nine ads were shown to participants. The best were identified as having used a majority of the criteria for one method. Additionally, block randomization was used to control for sequence effects in the administration of the present study.

Lastly, the ads, which were initially on recorded VHS tape, were transferred to a digital version on a DVD to assist in smooth viewing procedures. This controlled for the time allotted to answering the questions before moving on to the next commercial and overall reduced the time needed to conduct the study by cutting out time to rewind and forward in search of the ads in the specifically randomized order. The commercials were put on the DVD in the predetermined randomized order.

**Procedure**

This study used a 2 x 3 mixed factorial design. There were two independent variables: fluency in Spanish (native bilingual Spanish/English and SSL -
native English-Spanish as a second language) and the type of commercial (implicit, explicit, and antithesis). The efficacy of the ads was determined by a self-rating on a Likert Scale of 1-5 in which participants rated the likelihood of voting for the candidate based on the commercial (1 = very unlikely; 5 = very likely).

Upon signing the informed consent, participants filled out the demographic portion of the survey, both of which were provided in English (see Appendix B for survey questions). Participants were assigned to their respective groups based on self-report of their native fluency in Spanish, but only when quantifying the data. Otherwise, both bilingual and native English speakers participated in all conditions for a mixed between and within subjects design. The researcher informed the participants that they could answer questions while viewing the commercial and that they would also have time following each commercial to complete the corresponding questions.

As the order of the commercials was predetermined, the names of the ads were printed next to each set of corresponding scales and questions. To ensure that the participants completed the questions corresponding to specific ads, the researcher stated the name of the commercial prior to showing each ad. Following each commercial, participants had one minute to complete the questions before the next ad would automatically begin. The efficacy of each ad was determined using a five-point Likert scale and all nine commercials were rated in this manner. Upon viewing all of the ads and completing the corresponding questions, participants answered a final question in which they were asked which commercial was the most memorable and why.

**Results**

Each participant viewed three commercials that corresponded to each category and the ratings for each of these three scores was averaged for each participant. The mean ratings across participants are presented in Table 1.

An ANOVA statistical analysis revealed no main effect of language proficiency on perception and persuasiveness of the commercials, $F(2, 119) = .29$. Regardless of level of fluency among native Spanish bilinguals ($M = 4.4$) and SSL ($M = 3.52$), it is noted that both understood the overall message of the commercial and was persuaded one way or another. Although results indicated no statistical difference between language fluency and the use of the antithesis method, $F(2, 114) = .75$, $p > .05$, it is interesting to note that, compared to SSL participants ($M = 2.87$), the lower ratings of native bilingual Spanish speakers were for candidates who sponsored negative ads ($M = 2.61$; see Table 1).

There was a main effect in the mean persuasion levels between the three types of ads, $F(2, 119) = .02$, $p < .05$; see Table 1). A Tukey’s Post Hoc test showed no significant difference between the implicit and explicit strategies ($p = .29$), but there was a difference between both of those and the antithesis strategy ($p = .03$ and .01), respectively. These numbers indicate that using a negative strategy is not as effective as conventional campaign wisdom has dictated.

**Discussion**

With the increased use of negative ads and bickering among candidates, campaigns are finding it increasingly difficult to keep voters tuned into political campaigns. As previously mentioned, negative ads are continually used in political campaigns because they are deemed to be effective, although the statistical analysis in this study found that the likelihood of voting for the sponsoring candidate of a commercial significantly increased if it did not use the antithesis (negative) as the method of persuasion. The low persuasion levels of the antithesis ads, as compared to the explicit or implicit ads, may be a result of its own message and simply attacking the opposing candidate.

Although data does not indicate a significant difference between the language types, it does suggest that the persuasiveness of the ads is thus related to the method of persuasion, rather than the cultural and language cues that are directed at Latinos. Regardless of the fact that persuasion levels of commercials that use implicit identification are not statistically significant, the data suggests that campaigns are best off using implicit or explicit techniques in Spanish-language commercials because they result in higher likelihood of voting for the sponsoring can-

| TABLE 1 |
|---|---|---|
| Overall Persuasion Levels by Commercial Type and Language | Type of commercial | |
| | Explicit | Implicit | Antithesis |
| Bilingual | 3.09 | 3.09 | 2.61 |
| SSL | 3.13 | 3.19 | 2.87 |
| Total | 3.11 | 3.15 | 2.77 |

Bilingual—Native Spanish (fluent bilingual Spanish/English)  
SSL—Native English (Spanish as a second language)
dates than those that use negative means create a common ground. Overall, this insinuates that when appealing to Latino voters, it would behoove campaigns to refrain from using the antithesis approach because it might have the potential of not only turning them off from the sponsoring candidate, but also discourage them from voting all together.

Despite the obvious in-group/out-group distinction in explicit commercials, it is possible that their comparable persuasion is a result of the ability of the explicit commercial to get and maintain the viewer's attention through louder and more energetic music, brighter colors and more live footage. Furthermore, explicit commercials may be appealing because the sponsor of the ad makes an overt attempt to reach out to the Latino community, which supports the idea that Latinos are impressed by the fact that they feel they are an integral part of American politics and are pursued with some importance.

Likewise, the data of the more persuasive explicit and implicit methods supports Thorson, et al. (1991) in the theory that positive ads are more memorable than negative ads. In fact, participants noted that most memorable commercial showed the sponsoring candidate speaking Spanish throughout the entire commercial, addressing issues that affect the nation in its entirety and not just those that are perceived to be “Latino issue.” One participant noted, “[he] attempts communicating with the Spanish-speaking population,” while another said that the candidate appeared sincere. Similarly, an ad that used the explicit method was nearly as memorable, but could be a result of bright imagery and other visual cues because another participant noted that it was “appealing to the eye.”

An interesting follow up study could look at differences in persuasion levels among different age groups within the three methods of persuasion because cultural cues may be associated with the level of familiarity with the native country of origin that are specifically designed to elicit a response as an out-group (explicit) or use subtle imagery and language cues to emphasize mainstream issues (implicit). This would help identify another subgroup (age) within the Latino bloc because Hispanic heritage does not necessarily mean that they are familiar with the culture of the native country. Another factor that influences the likelihood of voting for a candidate is name recognition, as opposed to the ability of the commercial to persuade. Therefore, a follow up study to control for name recognition would benefit from using political commercials whose sponsors do not have such high name recognition. This would control for bias in favor of or against a candidate and their affiliated party.

Although this study looked at the efficacy of Spanish-language political commercials, the small sample of native Spanish-speaking participants makes it difficult to interpret the results as being entirely applicable to the Latino community. Interestingly, the majority of the participants were unable to identify correctly the correct candidate in two of three commercials that employed the antithesis; however, several participants commented that they identified with the positions that were criticized in the commercial, such as abortion, yet rated the likelihood of voting for the candidate as relatively low ($M = 2.25$). It is evident that commercials that use the antithesis do not sell their own candidate, but rather attempt to discredit the opponent. Unfortunately, this makes it difficult to gauge whether the ad is truly effective (e.g., whether people would or would not vote for the candidate being attacked) because they are measured differently than positive commercials (both implicit and explicit).

Ultimately, it appears that Spanish-language political ads are effective in persuading Latinos to turnout to vote. In his bid for reelection as Texas Governor in 1998, George W. Bush won about 35 percent of the Hispanic bloc after using Spanish-language commercials to convey his message, in addition to speaking Spanish at events with large Latino audiences (Moore, 2003). The win can be attributable to both his strong platform commitment to improve education (an issue that is important to Latinos, as well as other voters) and his effort to communicate his message in Spanish.

As the 2008 presidential race progresses, many of the top tier candidates have released Spanish-language ads in early primary states, as well as those with heavy concentrations of Latinos. Most recently, Democratic candidates Barack Obama and Hillary Clinton released Spanish-language ads using implicit and explicit methods, respectively (Berthume, 2008). Republicans Mitt Romney and Rudy Giuliani also released Spanish-language commercials in Florida during the 2008 election cycle (Ambinder, 2008). Regardless of party, candidates are all after the coveted Latino voting bloc that has yet to decide which way they will tip the scales.

Reaching out to Latinos in a specific and intentional manner will considerably increase awareness about candidates, party ideology, and further facilitate in their inclusion into mainstream society. The ability of Spanish-language commercials to persuade Latino voters towards a specific candidate or party is apt to lead towards long term party affiliation. Geographical concentrations in larger electoral states such as New York, California, Illinois, Arizona and Texas, as well as their growing numbers nationwide, could result in a major impact on presidential elec-
tions. Interestingly, Hispanic affairs expert Louis DiSipio contends that Obama’s support among Latinos trails Clinton because he has failed to specifically tailor his message, whereas Clinton “speaks about issues, like the economy and education, that are critical in Latino communities” (Bustamante, 2008). Seemingly, this emphasizes the point that a political commercial has to have a strong message, as opposed to empty rhetoric, which is reinforced by a positive method of persuasion to resonate effectively with Latino voters.

The results of this study are certainly applicable to modern campaign strategy in a rapidly changing American demographic. Both Democrats and Republicans can benefit by increasing voter turnout among Latinos, which lags significantly behind the mainstream, but also in creating long-term party allegiance that they have thus far been unsuccessful. With voter turnout among Latinos at a mere 27.5 percent, this is the lowest percentage among other groups such as whites (60.4 percent) and African-Americans (54.1 percent) (Moore, 2003). If either Republicans or Democrats are able to nail down a strategy that both informs and persuades, they might be able to cement a hold on the bloc that can change electoral politics in the long term because of the growing number of eligible Latino voters. Ultimately, if increased turnout is not evident within the next few election cycles, the increased attention on Latino significance might begin to foster a long term feeling of inclusion into American politics will be the beginning of increased civic participation and political socialization.

References

APPENDIX A:
Criteria for Ad Content

Implicit—discrete attempts as establishing a common ground
Testimonials
American Dream issues
–Education
–Values / Morals
–Shared values
Inclusion to American mainstream
Diversity of actors (because there is no difference)

Antithesis—unites individuals against a common enemy
Use of out-group bias (with reference to opponent candidate/party)
–“They”
–“Them”
Attack on character or specific issue(s)
Dark music in the background

Explicit—overt attempts to establish a common ground
Very detailed description of what is negative
Promotes stereotypical “Latino issues”
–Immigration
–Welfare reform
–Social security
–Minimum wage
–Jobs
In group
–“Us”
–“We”
Attempts to make Latinos “see themselves” in the ad
–Latino actors
–Traditional Latino/Hispanic music
–Traditional Latino/Hispanic clothing
Direct use of “American Dream”
APPENDIX B:

Survey Questions

*I understand that all information is confidential and my identity will not be revealed.*

Gender (circle one): M F

Date of birth (Month/Date/Year): / /19

Year in school (circle one): FR SO JR SR

Are you interested in politics? (circle one)

1 Not at all 2 Somewhat 3 Very much so

Party affiliation (circle one): Democrat Independent Republican Other

Spanish fluency (circle one): Bilingual (Spanish-English) Native English (Spanish as a second language)

Please rate your proficiency in Spanish:

1 Poor 2 Moderate 3 Very good

*Using the scale provided, rate each commercial independently.*

"Valores Familiares"

Who is the candidate? _____________

What political party is the candidate they affiliated with?

Democrats Independent Republicans Other

Would you vote for this candidate based on the commercial?

1 Very unlikely 2 Not sure 3 Very likely

What about the commercial persuaded you this way? Issue(s) Character trait(s) Other _____________

Was the commercial informative?

1 Not at all 2 Somewhat 3 Very much so

How does the commercial make you feel?

____________________________________________________________________________________________

____________________________________________________________________________________________

"Secretaria"

Who is the candidate? _____________

What political party is the candidate they affiliated with?

Democrats Independent Republicans Other

Would you vote for this candidate based on the commercial?

1 Very unlikely 2 Not sure 3 Very likely

What about the commercial persuaded you this way? Issue(s) Character trait(s) Other _____________

Was the commercial informative?

1 Not at all 2 Somewhat 3 Very much so

How does the commercial make you feel?

____________________________________________________________________________________________

____________________________________________________________________________________________
“America the Beautiful”

Who is the candidate? ______________

What political party is the candidate they affiliated with?
Democrat  Independent  Republican  Other

Would you vote for this candidate based on the commercial?
1  2  3  4  5
Very unlikely  Not sure  Very likely

What about the commercial persuaded you this way? Issue(s) Character trait(s) Other ____________

Was the commercial informative?
1  2  3  4  5
Not at all  Somewhat  Very much so

How does the commercial make you feel?
____________________________________________________________________________________________
____________________________________________________________________________________________

“Libertad”

Who is the candidate? ______________

What political party is the candidate they affiliated with?
Democrat  Independent  Republican  Other

Would you vote for this candidate based on the commercial?
1  2  3  4  5
Very unlikely  Not sure  Very likely

What about the commercial persuaded you this way? Issue(s) Character trait(s) Other ____________

Was the commercial informative?
1  2  3  4  5
Not at all  Somewhat  Very much so

How does the commercial make you feel?
____________________________________________________________________________________________
____________________________________________________________________________________________

“CHT 101 Places”

Who is the candidate? ______________

What political party is the candidate they affiliated with?
Democrat  Independent  Republican  Other

Would you vote for this candidate based on the commercial?
1  2  3  4  5
Very unlikely  Not sure  Very likely

What about the commercial persuaded you this way? Issue(s) Character trait(s) Other ____________

Was the commercial informative?
1  2  3  4  5
Not at all  Somewhat  Very much so

How does the commercial make you feel?
____________________________________________________________________________________________
____________________________________________________________________________________________
“Families”

Who is the candidate? _____________
What political party is the candidate they affiliated with?
Democrat Independent Republican Other
Would you vote for this candidate based on the commercial?
1  2  3  4  5
Very unlikely Not sure Very likely
What about the commercial persuaded you this way? Issue(s) Character trait(s) Other ____________
Was the commercial informative?
1  2  3  4  5
Not at all Somewhat Very much so
How does the commercial make you feel?
____________________________________________________________________________________________
____________________________________________________________________________________________

“No somos”

Who is the candidate? _____________
What political party is the candidate they affiliated with?
Democrat Independent Republican Other
Would you vote for this candidate based on the commercial?
1  2  3  4  5
Very unlikely Not sure Very likely
What about the commercial persuaded you this way? Issue(s) Character trait(s) Other ____________
Was the commercial informative?
1  2  3  4  5
Not at all Somewhat Very much so
How does the commercial make you feel?
____________________________________________________________________________________________
____________________________________________________________________________________________

“Nuestra Comunidad”

Who is the candidate? _____________
What political party is the candidate they affiliated with?
Democrat Independent Republican Other
Would you vote for this candidate based on the commercial?
1  2  3  4  5
Very unlikely Not sure Very likely
What about the commercial persuaded you this way? Issue(s) Character trait(s) Other ____________
Was the commercial informative?
1  2  3  4  5
Not at all Somewhat Very much so
How does the commercial make you feel?
____________________________________________________________________________________________
**“Temas Importantes”**

Who is the candidate? ________________

What political party is the candidate they affiliated with?
Democrat  Independent  Republican  Other

Would you vote for this candidate based on the commercial?
Very unlikely  Not sure  Very likely

What about the commercial persuaded you this way? Issue(s)  Character trait(s)  Other ____________

Was the commercial informative?
Not at all  Somewhat  Very much so

How does the commercial make you feel?
____________________________________________________________________________________________
____________________________________________________________________________________________
The number of stepfamilies is increasing, as sources indicate that one out of every three Americans is a member of a stepfamily (Larson, 1992). Although stepfamilies have been the focus of many psychology studies for a number of years, as stepfamilies have been more frequently created through divorce and remarriage, research interest in stepfamilies has increased (Coleman & Ganong, 1990). Despite the increasing prevalence of stepparents, however, differences remain in perceptions of stepparents versus biological parents (e.g., Stewart, 2005). This suggests that there might be differences between biological families and stepfamilies.

One of the differences between biological families and stepfamilies might be differences in expectations. It may be assumed that everyone has expectations in regards to certain duties that parents should perform. For example, most people would probably agree that parents should be responsible for protecting their children from harm and providing them with the tools to lead healthy lives. However, are stepparents expected to be responsible in the same way as biological parents? The negative connotations associated with stepparents (e.g., the evil stepmother from Cinderella) imply that stepparents are viewed differently than biological parents. This might mean that the expectations of stepparents are lower than those of biological parents. It is likely that there exists variability in the expectations that children have of stepparents in comparison to biological parents. If differences exist between stepfamilies and non-stepfamilies, is it possible that differences exist within stepfamilies? If so, what are these differences? Some people may have high expectations of stepparents whereas some may have low expectations. In order to understand these concepts it would also be useful to examine what factors may be associated with expectations of stepparents.

The current study deals with expectations that stepchildren have of their stepparents. The goal of this study is to examine two possible factors. First, if a stepparent enters the child’s life when the child is young, the expectations of the stepparent may be high. Second, the friendliness of the child-stepparent friendly relationship may interact with age, such that the child whose stepparent entered his or her life at a young age and who has a friendly relationship with the stepparent might have especially high expectations of the stepparent. The current study tested these possibilities using data from an online study. It was found that the age at which a stepparent enters a child’s life is negatively associated with the expectations that the child has of the stepparent. However, it was also found that the type of relationship that the child has with the stepparent does not act as a moderator, but rather as a mediator, of expectations.
and friendliness of the relationship are associated with the expectations of stepparents.

**Perceptions of Stepparents**

Are there differences in expectations for step-parenting and non-step-parenting? In a 1984 study by Sims-Giles, parental roles in stepfamilies were examined. This study examined the roles of stepparents, the actual practices of parents within the family, and any sanctions that a parent may face for not performing the parental tasks regarding the stepchild (this was described as what a husband or wife would think of a spouse who did not take responsibility for a stepchild). Interviews were conducted with 99 families in which either one or both of the parents had a child from a previous marriage. The participants were asked questions relating to the perceptions of their own families. The results showed that 95.5% of participants expected both the husband and the wife to share equally in raising the children from the present marriage (i.e., non-stepchildren). However, 59% expected equal duty in raising children from the wife’s previous marriage (i.e., stepparents), and 52.1% expected equal duty in raising children from the husband’s previous marriage (i.e. stepchildren). These findings show that expectations for parenting a child from another marriage are lower than those for parenting a child that is biologically related to both parents. The researchers found that actual enactment of these expectations was even lower than what was expected for both non-stepchildren and stepchildren, meaning that husbands and wives did not share the responsibilities of the family as equally as was expected. This research lends support to the idea that expectations of parents and stepparents differ. However, the specific expectations of stepparents are still not clear. These findings suggest that there may be a lack of consensus about the roles and expectations of stepparents.

Therefore, what is the role of the stepparent? Are stepparents expected to discipline their stepchildren? How much of a role should the stepparent play in parenting? Research indicates that the answers to these questions are unclear. In a study by Schwebel, Fine and Renner (1991), perceptions of the stepparent role were examined. The goal of this study was to examine if there is a general consensus about the role of stepparents. They investigated whether there was a consensus on how stepparents should react in parenting situations by surveying undergraduate students. The students were presented with a series of vignettes that described situations that would require a parent or a stepparent to provide some sort of support to the child. For example, some of the vignettes described scenarios in which the parent or stepparent would be asked to provide money for college tuition or the parent or stepparent would be asked to tend to a sick child. Their hypothesis was that there would be no clearly defined social consensus with respect to whether stepparents should fulfill them. The results of this study supported the hypotheses. There was great variance in how participants thought that stepparents should react to the situations they were presented with in the vignettes. Also, results showed that the participants felt stepparents were less likely and less obligated to participate in some of the parenting roles that biological parents are involved with. This research shows that perhaps it is not simply that stepparents are viewed negatively and as having little parental responsibility. Some may view stepparents negatively and do not expect them to play the same roles that biological parents do, but some may see the stepparent role as more similar to the biological parent role. Given this variability, what helps predict it? What factors are associated with high versus low expectations of stepparents?

**Age and Expectations**

Since previous research has suggested that there is no defined role for stepparents, this implies that the expectations of stepparents are unclear as well. Some people have high expectations and others have low expectations. What factors may predict whose expectations are high and whose are low? The age of the child may be an important predictor of expectations. There exists research that suggests that children have different support needs at different times in their lives. Some of the research suggests that children have different needs depending on their ages. For instance, in a 1992 study, Furman and Buhrmester examined how children perceived family members and friends in terms of support at different ages. The results of this study suggest that the younger children rated their parents as the most frequent providers of support, but the older children named friends and romantic partners as taking over this role. Results also indicate that the rating of parents as providers of support declined during pre-adolescence and adolescence. This research suggests that there are different parental support needs and expectations for children of different ages. Given this, the behavior of someone in the child’s life may differ depending on the age of the child. For example, stepparents’ behavior may differ depending on the child’s age when they became the stepparent. Specifically, people who become a stepparent of a young child may provide more support to the child, while people who become a stepparent of an older child may provide less support to the child. Thus, the child may have specific perceptions of support

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and this may be associated with expectations of the stepparent.

Other research supports the idea that children’s support needs and support sources might differ with their age. For instance, previous research suggests that children will seek different types of social support from different members of their social groups (Furman & Buhrmester, 1985). Fifth and sixth graders were asked to apply relationship qualities such as affection and companionship to different family members, friends, and teachers. It was found that children tended to rate mothers and fathers highest on providing support such as “affection, reliable alliance, enhancement of worth, and instrumental aid” (Furman & Buhrmester, 1985, p. 1021). Different types of support were sought from different members of social groups such as friends, extended family members and teachers. This information, coupled with the suggestion that parents are rated as most important providers of support when children are younger helps to show that children perceive their parents as having specific roles, especially when the children are younger. Therefore, it may be reasonable to argue that if a stepparent enters a child’s life when the child is younger, the child may expect the stepparent to play a role similar to the roles described here for parents.

Previous research, which has directly examined the stepparent’s perception of the parenting role in relation to the age of the child, supports this idea. In a 1992 study by Marsiglio, the roles of stepparents and perceived relationship quality were examined. Stepfathers were asked how old their stepchildren were when they entered the children’s lives, and then were asked to rate their relationship with the stepchildren. Results showed that the stepfathers were more likely to perceive themselves as “father-like” when they entered the children’s lives when the children were young.

If stepfathers are more likely to view themselves as “father-like” if they enter the child’s life when the child is young, then it might be that the child also would view the stepfather as more “father-like.” Thus, this might be associated with the expectations of the stepfather. In other words, as was found with stepfathers, children might be more likely to view the stepparents as more “parent-like” if their stepparent entered their life at a younger age. With all of this in mind, it is expected that if the child is young when the stepparent enters the child’s life then the expectations of the stepparent will be higher than if the stepparent enters the child’s life when the child is older.

**Type of Relationship**

It seems possible that age might play a role in the expectations that stepchildren have of their stepparents. More specifically, if the stepparent enters the child’s life when the child is young the expectations of the stepparent might be higher than if the stepparent enters the child’s life when the child is not young. However, it might be possible for other factors to interact with the age of the child when the stepparent enters the child’s life. What might interact with age? The answer might be based on the type of relationship that the child has with the stepparent. There might be variability in terms of the children’s relationship with their stepparent, as not all children will be equally close to their stepparents. Some children might be very close to their stepparents and trust their stepparents. These children might expect more from their stepparents than children who are not as close to their stepparents, especially if their stepparents also entered their lives at younger ages.

Previous research suggests that children do, in fact, view themselves as having a close relationship with other people than their parents. For instance, a study by Kurdek and Fine (1993) examined whether children perceive that they received both warmth and supervision from family members who are not their parents. The results of this study indicated that adolescents not only perceive their parents as providers of warmth and supervision, but other family members are viewed in this way as well. If it is possible to view other family members as providers of warmth and supervision, which are suggested to be important provisions of the parental role, then perhaps it is possible to view a stepparent in such a way. This may be recognized as a positive relationship and thus expectations of the stepparent might be associated with the type of relationship.

Part of feeling positive about a stepparent or close to a stepparent might include feeling understood by a stepparent. For instance, in a 1999 study by Martin, Anderson and Mottet, the stepparent-stepchild relationship was examined. The researchers in this study chose to examine if there is a relationship between how much a stepchild felt understood by a stepparent, and how much the stepchild disclosed to the stepparent. Results of this study indicate that the more the child felt that he or she was understood by the stepparent, the more he or she disclosed. This study is significant because it demonstrates an important characteristic of the stepchild-stepparent relationship. It suggests that self disclosure and understanding describe a more positive relationship. Perhaps people who feel that their stepparent understands them and thereby discloses more information might have greater expectations of a stepparent than people who do not feel understood by a stepparent.
If closeness and disclosure are associated with children’s relationships with their stepparents, what sorts of features are related to close relationships? One way to address this question is to turn to research conducted in the context of other types of relationships. Factors that are associated with feelings of closeness in other relationships are also likely to be associated with the closeness in the stepparent-stepchild relationship.

For instance, in a study conducted in 2004, Fehr investigated intimacy in friendships. She looked at whether there exists a pattern of factors that people recognize as being associated with intimacy in a friendship and if some factors are considered to be more important than others. The results of this study may be summarized by stating that people possess sophisticated, intricate knowledge of the many ways of relating that are likely to produce a sense of intimacy in a same-sex friendship. Expectations of intimacy are created when people experience responsive self-disclosure, when they can count on a friend for comfort and cheering up (emotional support), when a friend helps them achieve important personal goals, and so on (p. 279).

Self-disclosure patterns and social—particularly emotional—support were deemed the most influential in creating intimacy. Also, it was found that people saw intimacy patterns as most important in measuring friendships in terms of friendship maintenance, meaning that people tend to base this intimacy on established friendships as opposed to new or deteriorating ones. This research helps define social patterns that are associated with intimacy. If stepchildren and stepparents are able to categorize their relationships as possessing such qualities, then it might be likely that their relationships are friendlier. If this is the case, then the expectations that the stepchildren have of the stepparents might be different from those of the stepchildren who do not experience such a relationship with their stepparents.

Overview of Current Study

The goal of the present study was to investigate two factors that may be associated with the expectations of stepparents. It was hypothesized that the age a child is when a stepparent enters his or her life will be associated with the stepchild’s expectations and that this association will be moderated by the stepchild/stepparent relationship. More specifically, it was hypothesized that, the younger a child is when a stepparent enters his or her life, the more the child will view the stepparent as a parental figure and the child’s expectations will reflect this. I predict that this will be especially true if the stepchild and stepparent have a strong relationship based in friendship.

Method

Participants

In order to test this hypothesis an online questionnaire was developed. The requirements for being included in this study were that the participants had to have at least one stepparent and that the participants needed to be at least 18 years old. Participants were recruited through a number of ways. Flyers were distributed in psychology classes and in residence halls at C.W. Post campus. Also, links to the survey were added to a number of online websites such as www.socialpsychology.org, www.w-lab.de/lab-united/experiments.php, www.stepfamily.asn.au, and www.thestepfamilylife.com. Links were also added to search engines such as Yahoo! and Google.

In order to guard against duplicate participant submissions, IP addresses and dates were checked. There was one duplicate submission and the duplicate response was deleted. As a result of this, the sample for this study consisted of 60 participants. Sixteen (27%) participants were male and 40 (67%) participants were female. Four participants (7%) did not provide their age. The age of the remaining participants ranged from 19 to 56 years old and the mean age was 27.18 with a standard deviation of 7.43. A majority of the participants (82%) resided in the United States. Four of the participants (7%) did not report their country. Five participants (8%) were from Australia and two (3%) were from Canada. Three participants (5%) did not report whether or not they currently reside with their stepparents. A majority of the participants, 43 (72%), were not currently residing with their stepparents while 14 (23%) reported that they did currently reside with their stepparents. Of those participants who reported that they did not currently reside with their stepparents, 79% did reside with their stepparents at one point. When presented with a scale ranging from 1 (meaning never) to 5 (meaning every day), in order to measure how much contact participants had with their stepparents every week, the average response was 2.26 with a standard deviation of 1.25. When presented with a scale ranging from 1 (meaning never) and 5 (meaning every day), in order to measure how much contact the participants had with their stepparents every year, the average response was 3.25 with a standard deviation of 1.00. Four participants (7%) did not report how often they contacted their stepparents. Five participants (8%) did not report whether or not they had stepsiblings.
Fourty-five (75%) reported having stepsiblings and ten (17%) reported having no stepsiblings. The mean age of the child when the stepparent became the child’s stepparent was 11.79 with a standard deviation of 6.28. Ages ranged from 2 to 32 years old.

**Measures**

Expectations of stepparents. In order to measure the variable of expectations of stepparents a revised version of The Family Roles Questionnaire (Schwebel, Fine, & Renner, 1991) was used. This measure contained questions that provided scenarios that children might encounter. An example of a scenario is:

> “Imagine that you are a serious, 19 year old student who is doing well at a state university. You work for a mathematics professor to earn extra money. After learning that your tuition, room, and board will be raised substantially in the fall, you call your stepparent to ask for a $1,500 loan.”

Following each scenario were two questions, which were revised from the original Family Roles Questionnaire to address the stepparent rather than the biological parent. One question addressed how likely participants felt it was for their stepparent to perform the action described in the scenario. Participants responded to this question on a Likert-scale, from 1-7. A rating of 1 indicated that the stepparent was not likely at all to perform the action. A rating of 7 indicated that the stepparent was extremely likely to perform the action. The second question addressed how much participants felt that their stepparents should perform the action described in the scenario. Participants responded to this question on a Likert-scale, ranging from 1-7. A rating of 1 indicated that the participant thought that the stepparent definitely should not perform the action and a rating of 7 indicated that the participant thought that the stepparent definitely should perform the action described in the scenario. The ratings from both how likely participants felt their stepparents would be to perform the action and how much the participants felt that their stepparent should perform the action were summed following the procedures of Schwebel, Fine and Renner (1991). The scale score that was created could range from 24 to 168. A score of 24 indicated low expectations and a score of 168 indicated high expectations. This measure had a Cronbach’s alpha of .96.

**Type of Relationship**

Friendliness of relationship. In order to measure the type of relationship that the participant had with his or her stepparent a number of statements were created based on the results of a study conducted by Fehr (2004). In Fehr’s study participants were asked to list characteristics that implied intimacy between friends. A list of these statements was compiled. For the current study, the ten statements that were mentioned the most frequently were selected to measure friendliness of the relationship between children and stepparents. These included statements such as, “If I need to talk my stepparent will listen” and “If I am lonely my stepparent will provide companionship”.

Participants were asked to rate these statements on a scale from 1 to 7 with respect to how likely they were to be true. A rating of 1 indicated that the statement was very not likely and a rating of 7 indicated that the statement was very likely. A scale score was created for this measure as well. The scores could range from 10 to 70, with a score of 10 indicating low friendliness and a score of 70 indicating high friendliness. This scale had high internal reliability, with an alpha of .96.

**Age.** Participants were asked to report the age at which their stepparent entered their life.

**Results**

**Age and Expectations**

It was hypothesized that the age of a child when a stepparent enters the child’s life would be associated with the expectations that the child has of the stepparent. More specifically, it was hypothesized that, the younger the child was when the stepparent entered the child’s life, the higher the expectations of the stepparent would be. In order to test whether this was the case, a correlation between the age of the child when the biological parent and stepparent married and the expectations of the stepparent was calculated. Results indicate that there was a significant negative correlation between the child’s age when the biological parent and stepparent married and the expectations of the stepparent (r = -.26, p < .05). Thus, these findings suggest that, in support of this hypothesis, the younger the child is when the stepparent enters the child’s life, the higher the expectations of the stepparent.

**Type of Relationship**

It was hypothesized that the association between age and expectations would be especially pronounced if the child and the stepparent had a positive, friendly relationship. That is, it was predicted that there would be an interaction between age of the child at the marriage of the biological parent and stepparent and friendliness of the relationship and that this interaction would be associated with expectations of the stepparent. In order to test the second hypothesis, a linear regression was used. The outcome variable was expectations and the predictor variables were age, friendliness, and the interaction of age and friendliness. The results show that there was no significant inter-
action ($\beta = -0.01$, $SE = 0.02$, $p = .96$). This suggests that, in contrast to the second hypothesis, the association between age and expectations is not especially pronounced among those with more friendly relationships with their stepparent.

However, it was also found from the results of the regression that, controlling for friendliness, the age at marriage was no longer significantly associated with expectations ($\beta = -0.09$, $SE = 0.33$, $p = .80$). At the same time, it was found that, controlling for age at marriage, friendliness was positively associated with the expectations of the stepparent, ($\beta = 1.15$, $SE = 0.15$, $p < .01$).

These results suggest that, rather than friendliness being a moderator of age and expectations, friendliness may be a mediator. That is, friendliness does not appear to explain when age and expectations are related; instead, friendliness may explain why age and expectations are related. In order to test for mediation, there are four steps that must be completed, as was suggested by Baron and Kenny (1986). The first step is that the predictor variable, in this case age of the child when the stepparent enters his or her life, must be related to the outcome variable, which in this case was the expectations of the stepparent. This relationship was found in the first correlation that was conducted. The second step is that the predictor variable (age) must be related to the mediator, which in this case is friendliness. A correlation between friendliness and age was conducted, and these two variables were found to be significantly associated ($r = -0.29$, $p < .05$).

The third step is that the mediator (level of friendliness) must be related to the outcome variable (level of expectations). The correlation between friendliness and expectations was found to be positive and significant ($r = .80$, $p < .001$). The fourth step is that the relationship between the predictor variable (age) and the outcome variable (expectations) must disappear when including the mediator (friendliness). This was found with the linear regression reported above. Thus, these results suggest that friendliness may explain why the age of a child when a stepparent enters his or her life is associated with the expectations of a stepparent. People whose stepparent enters their life at a younger age may have a friendlier relationship with their stepparent. This friendliness, in turn, appears to be associated with higher expectations of stepparents.

Discussion

Summary of Results

It was hypothesized that a relationship would exist between the age of children at which stepparents enter their lives and the expectations steppchildren have of their steppparents. More specifically, it was hypothesized that if a stepparent entered a child’s life when the child was young then the child would have higher expectations of the stepparent. It was further hypothesized that this would be especially true if the child and the stepparent had a positive, friendly relationship. The results of this study suggest that an association does exist between the age of a child when a stepparent enters his or her life and the expectations of the stepparent. The younger the child was when the stepparent entered his or her life, the higher the expectations were of the stepparent. The first hypothesis was supported. This finding suggests that some of the variability in relationships between stepparents and stepchildren and in expectations of stepparents (e.g., Sims-Giles, 1984; Schwebel, Fine and Renner, 1991) may be explained, in part, through when the stepparent entered the stepchild’s life. However, these results also suggest that the friendliness of the relationship between the stepparent and the child was not significant in predicting when expectations of the stepparent would be high. Rather, it seems that friendliness of the relationship is significant in explaining why age is associated to expectations. It seems that if a stepparent enters the child’s life when the child is young, it is likely that the child and the stepparent have more time to develop a friendly relationship than if the stepparent enters the child’s life when the child is older. Thus, the second hypothesis was not supported, but these results suggest that children whose stepparents enter their lives when they are younger are more likely to develop friendlier relationships, and have higher expectations of stepparents.

Strengths and Limitations

There were a number of strengths of this study. One of these strengths was that the survey was anonymous. This allowed participants to answer honestly without fear of their answers being recognized and ruled out any social desirability issues that may have influenced answers thus providing a more accurate response. Another strength of the current study was that there was a wide range of participants, with participants from three different countries and a wide range of ages. This variability in demographic characteristics of participants suggests that the results of the current study may generalize to many types of people. In addition to these strengths, the current study’s measures showed high internal reliability. This is important because sometimes there exists a reluctance to conduct surveys over the Internet as there is a fear that participants will not take the surveys seriously. However, in this case the high reliability among the questions in the measures supports the idea that participants did answer seriously. In other words, given
the high internal reliability of the scales, it is unlikely that participants simply answered each question in a haphazard manner. The fact that the measures had high internal reliability also suggests that the concept of friendliness of the relationship was generalizable to stepparents. That measure was created from a measure originally used to assess intimacy within friendships. However, the high level of internal reliability found in the current study suggests that people do have a general concept of the level of intimacy and emotional closeness they have with their stepparent, just as the results of Fehr’s (2004) study suggests that they have with respect to their friends.

There were also some limitations to this study as well. One of the most significant limitations was that the survey questions designed to examine expectations of stepparents were hypothetical scenarios. Participants had to imagine themselves in the situations described in the scenarios and speculate as to how their stepparent would respond and how they would expect their stepparent to respond. When hypothetical scenarios are used to measure variables there always remains the possibility that participants would respond or feel differently when presented with the actual scenario. Furthermore, given the age of the participants, many participants may have been basing their answers to questions about expectations of a stepparent on their memories of growing up with their stepparent, rather than on their current relationship with their stepparent. Finally, this study defined the relationship of the stepparent and child in terms of emotional intimacy. It may be possible to define the relationship in other ways, including self-disclosure, time spent together in activity, and warmth. Therefore, this study was limited to examining just one aspect of the sort of relationship that participants had with their stepparent.

**Directions for Future Research**

The results of this study suggest that friendship might explain why there exists an association between age and expectations of the stepparent. In order to examine these concepts further, future research should examine other factors that might predict when there is a particularly strong relationship between age and expectations. In other words, other factors that might moderate the association between age and expectations might also want to be explored, since the results of the current study suggest that friendship acts as a mediator, and not a moderator. For example, the relationship that the child has with the biological parent might be taken into account. It might be that if a child is young when the stepparent enters his or her life that the child will have higher expectations of the stepparent, especially if they have a good relationship with the biological parent. The child might have more trust in the biological parent if the relationship is good and therefore might trust in the parent to make better decisions and thus the stepparent might be accepted more easily and expectations might be higher (see e.g., Heider, 1958). However, this could also go in the opposite direction. If the child has a good relationship with the biological parent and then a new person who is not part of the family enters the situation and in the child’s eyes threatens the bond between himself or herself and the parent, then the child might be less accepting of the stepparent and thus have lower expectations.

Another factor that may want to be taken into consideration is the child’s view of the divorce between the biological parents. If the new stepparent enters the child’s life when the child is young, and the divorce between the biological parents was amicable, the child might be more likely to be accepting of a new stepparent and have higher expectations because the child might not suffer as much from the divorce and thus be able to better understand the situation (see e.g., Grych & Fincham, 1990). It is also possible though, that the child will maintain an extremely positive view of both parents and the parents’ marriage and therefore not be as understanding as to why the parents got divorced in the first place. As a result of this the child might be less accepting of a new stepparent and have lower expectations.

An additional direction for future research would be to investigate other factors that might be associated with the expectations of stepparents. For example, researchers might want to examine the association between previous stepparent/child relationships and current stepparent/child relationships. It is becoming increasingly common for children to have more than one stepparent over time (see Coleman & Ganong, 1990). If a child has had more than one stepparent and the child did not have high expectations of the previous stepparents then perhaps the child would not have high expectations of the new stepparent. This might provide a better perspective on what factors help predict the expectations that children have of stepparents.

**Conclusion**

The current study offers some interesting findings about the expectations that children have of stepparents. Specifically, this study suggests that the age of the child when a stepparent enters his or her life is negatively associated with the expectations of the stepparent. This study also suggests that the friendliness of the relationship between the child and the
steparent might explain why age is associated with expectations. Thus, this study helps to answer the question as to why differences exist among stepfamilies and what factors help to predict these differences. In the future, more studies should be designed to examine what other factors help to address these questions.

References

Most Americans go out to eat on occasion and 98% of them voluntarily leave their servers a tip (Lynn, 2006). Past research has concluded that in a restaurant setting, the tipping behavior of consumers is affected by various factors that are unrelated to the quality of service, the waitperson’s efforts, the waitperson’s gender, the restaurant’s atmosphere, and the restaurant’s food (Lynn & Latané, 1984). If Americans do not base their tips on the service they receive or on their overall dining experience, what factors are associated with tipping behavior?

Tipping in America

Before investigating the different aspects of tipping behavior, it should be established that voluntary tipping is fairly unique to American culture. In France and many other European countries, restaurants automatically include the gratuity with the bill (Speer, 1997). In Australia, China, Denmark, Japan, and Iceland, restaurant tipping is not used at all (Conlin, Lynn, & O’Donoghue, 2003).

The tipping “norm” in the United States is traditionally 15% (Speer, 1997). More recently, the tipping range is commonly between 15% and 20%, but this range varies in different regions of America (Lynn, 2006).

Reasons for Tipping

According to Speer (1997), there are several reasons people give as to why they leave tips. In 1996, a nationwide telephone survey was conducted on tipping behavior, and Speer used the results to summarize the views of an “average American.” Average Americans maintain that the quality of service is the most important factor in leaving a tip. Helping those in the service industry to make a living is the second biggest reason Americans leave tips. A smaller group of Americans claim that they tip because they feel it is expected of them. Lastly, Americans tip because they feel that they will get better service the next time they dine at that particular establishment. In addition to those reasons, Conlin, Lynn, and O’Donoghue (2003) asserted that people leave tips simply because it is the norm in the United States.

Factors Influencing Tipping Behavior in a Restaurant

Ninety-seven patrons were observed in a restaurant in southeast Tennessee. Before dropping off the check, a waitress acting as a confederate was instructed to either administer a light touch to the shoulder of the patron or to refrain from any physical contact. In addition to age, race, gender, and alcohol consumption, the effects of interpersonal touch on tipping behavior were examined. A statistically significant finding was that young diners tipped an average of 6% more than middle-aged diners. Also statistically significant, White diners tipped an average of 7% more than Black diners. There were no statistically significant differences in the tipping behavior of men and women, of patrons who drank and those who did not drink alcohol, and of those who sat in either the non-smoking or smoking sections of the restaurant. Diners who received the interpersonal touch tipped an average of 2% more than diners who were not touched, but this finding was not of statistical significance. The results of this experiment suggest that age and race were the greatest predictors of tipping behavior.
**Demographics and Gender Attitudes**

Several studies have helped identify additional factors related to tipping behavior. A national telephone survey revealed that knowledge about the tipping norm of 15% is greatest for White Americans in their 40’s to 60’s who are highly educated, wealthy, living in metropolitan areas, and living in the northeast (Lynn, 2006).

In addition to demographic differences, distinct gender attitudes seem to play a role in tipping behavior. Men and women have different views on tipping. Almost all men and women leave tips for food servers, but men are more likely to say that they will tip for reasons that will personally benefit them. They are also more likely to say that they will not tip because they believe that the bill should include the cost of service. Women are more altruistic in their tipping behavior and are likely to tip based on the effect it has on others, such as helping the food server to earn a living (Speer, 1997). Furthermore, Lynn (2006) discovered that women have a greater knowledge of the tipping norm, but that men generally tip more.

**Interpersonal Touch**

Smith, Gier, and Willis (1982) found that interpersonal touch is linked to compliance and positive reactions. They conducted a study in a supermarket and discovered that touch increased a consumer’s probability of both trying a food sample and buying the product. More recent research evaluated interpersonal touch in a staged situation in which either a man or a woman pretended to not have enough money for a bus fare. When the woman briefly touched the bus driver on the arm, he was more inclined to accept her request to ride without fare. However, when the man briefly touched the bus driver on the arm, it had no such effect (Guéguen & Fischer-Lokou, 2003).

Because interpersonal touch can induce compliance, physical contact may also affect tipping behavior. In one study, waitresses briefly touched consumers on either the shoulder or on the hand when returning change. Compared to the diners who were not touched, those who received a brief touch tipped more (Crusco & Wetzel, 1984). Stephen and Zweigenhaft (1986) conducted another study in which the participants were male and female companion diners. They found that when a waitress lightly touched the female diner on the shoulder, her tip percentage was 2% higher compared to the tip percentage when she touched the male diner. Moreover, her tip percentage was 4% higher compared to the tipping rate of those who received no physical touch (Stephen & Zweigenhaft, 1986).

Recently, Guéguen and Jacob (2005) found that when a waitress lightly touched a male patron on the forearm when taking his drink order in a French bar, her tip percentage increased, despite the fact that tipping is not customary in France.

**Other Factors Affecting Tipping Behavior**

Server posture may also affect tipping behavior. Lynn and Mynier (1993) found that when a server squatted at the table instead of standing while taking the diner’s order, his or her tip percentage increased. Another study found that writing ‘thank you’ on the back of the check increased tip percentage (Rind & Bordia, 1995). Also, Rind and Bordia (1996) discovered that when a female server drew a smiley face on the back of the check, her tip percentage increased, but when a male server drew a smiley face on the back of the check, his tip percentage decreased because his behavior was viewed as gender-inappropriate. Furthermore, Strohmetz, Rind, Fisher, and Lynn (2002) discovered that presenting candy with the check caused diners to tip more. In another study, Guéguen (2002) found that presenting a consumer with a joke card at the time of bill delivery increased tip percentage. He concluded that the joke card activated a positive mood, which in turn increased tipping behavior.

Concerning factors outside of the waitperson’s control, Rind (1996) asserted that sunshine and good weather are related to compliance and tipping. He found that tip percentages increased linearly from the worst to the best weather conditions. An early study (Lynn & Latané, 1984) suggested that bill size is sometimes related to tip percentage (also Lynn and Grassman, 1990). Speer (1997) later stressed that bill size is one of the largest predictors of tip size. However, a more recent survey found that tip percentage actually decreased as bill size increased (Conlin, Lynn, and O’Donoghue, 2003).

The effect of alcohol on tipping behavior is unclear. In 1990, Lynn and Grassman found that tipping behavior is not related to alcohol consumption. However, Conlin, Lynn, and O’Donoghue (2003) found that alcohol consumption does affect tipping behavior.

**Quality of Service**

Lynn and Latané (1984) have claimed that quality of service had little to do with tip size (also Speer, 1997). On the contrary, Lynn and Grassman (1990) found that service ratings were related to tipping, and a 2003 survey found that tip percentage increased with quality of service, but that “quality of service” was defined as server friendliness and speed more than efficiency (Conlin, Lynn, & O’Donoghue, 2003).
Evaluation of Findings

From the reviewed literature, it can be concluded that tipping behavior is affected considerably by demographic factors, but that tip percentage may be increased by creating a positive mood in the consumer. Additionally, it seems that there are other factors, such as weather, bill size, and alcohol consumption, that may be accountable for tipping behavior. Quality of service could also be a factor.

Unfortunately, there were several contradictory findings in the literature regarding bill size, alcohol consumption, and quality of service. Several of the studies claimed that bill size was the main predictor of tip size, but others found that it was not linked or that as bill size increased, tip size decreased. Two different studies produced conflicting results on whether or not alcohol consumption affected tipping behavior. Additionally, while most of the studies found that quality of service did not affect tipping behavior, two studies did find a positive relationship.

Overall, the research literature was limited because studies have still not found whether or not tipping behavior is associated with bill size, alcohol consumption, quality of service, or an entirely unrelated dynamic. The studies that focused on tipping and interpersonal touch were dated and failed to explore additional variables and demographics, signifying a need for more research in this area.

Another limitation of the literature was that most of the studies on tipping behavior were conducted in moderately priced or upscale restaurants, avoiding the less expensive, family-oriented restaurants. Diners who seek bargain-priced food may have different attitudes about tipping and could also have different responses to interpersonal touch or to other factors controlled by the server.

Because past research has been inconclusive, this topic requires more investigation. While many factors could potentially affect tipping behavior, this study focused on age, race, gender, alcohol consumption, and the presence or absence of interpersonal touch. This study also explored the tipping behavior of diners who sat in the non-smoking section versus diners who sat in the smoking section. The purpose of this study was to examine which of several selected factors influenced the tipping behavior of consumers in a family-oriented restaurant.

Specifically, this study investigated the differences in tipping behavior among the young, the middle-aged, and the elderly. This study also explored whether or not race is related to tipping behavior. Additionally, tipping differences between men and women were examined. Furthermore, this study explored whether or not consuming alcohol with a meal affected tip percent-

Definition of Terms

In this study, tipping behavior refers to the tip percentage left in comparison to the amount of the bill total after tax. Age was defined as young (29 years or younger), middle-aged (30 to 59 years), or elderly (60 years or older) and these categories were estimated according to the experimenter’s judgment and if necessary, the confederate’s judgment. Race was defined as White or Black and was observed by the experimenter, as was gender. Alcohol consumption referred to whether or not the patron drank one or more alcoholic beverages. Interpersonal touch was defined as a brief touch to the shoulder of the patron when the waitress dropped off the check, the credit card slip, or the change.

Research Hypotheses

There were five research hypotheses guiding this study. The first was that middle-aged diners would tip more than young diners or than elderly diners. Secondly, white diners would tip more than Black diners. Thirdly, men would tip more than women. Next, it was hypothesized that those who consumed alcohol would tip more than those who did not. The last hypothesis was that interpersonal touch would increase tip percentages. Each of these hypotheses was tested in its null form.

Method

Participants

The participants in this study were 97 patrons who were served at a barbeque restaurant in southeast Tennessee. Additionally, three young waitresses acted as confederates. All participants were treated in accordance with the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 2002).

Materials

The only materials used in this study were a pen and a Recording Sheet on which the experimenter recorded the estimated age category, race, gender, alcohol consumption, physical touch condition, bill size, tip left, and tip percentage for each patron who was served. The experimenter also recorded the type of shift (lunch or dinner) and whether the waitress
was serving in the non-smoking section or the smoking section of the restaurant.

**Design and Procedure**

This was a quasi-experimental P x E factorial design. During a period of three weeks, the experimenter observed one of the three waitresses acting as confederates. Before observations began, the general manager was informed of the study and gave his permission for the research to take place in the establishment. Each of the waitresses read and signed an informed consent form and was given instructions regarding her involvement. The experimenter also demonstrated what constituted an “interpersonal touch.”

A total of 20 recording sessions took place during both lunch and dinner shifts throughout the week and on weekends. A typical shift lasted from between two to six hours. During the waitress’ shift, the experimenter recorded the subject variables of the patrons who were served at specified tables in the waitress’ section. The experimenter also recorded the presence or absence of alcohol consumption and the physical touch condition. Immediately after the patron left, the waitress showed the experimenter the credit card slip, or if the customer paid in cash, the receipt, and then reported her tip. The bill amount, the tip amount, and the tip percentage were recorded.

During each recording session, the experimenter sat at a nearby table or at the bar to monitor the waitress’ service and to be assured that all diners were treated equally at the specified tables, which were between one to three tables that the experimenter could clearly observe from where she was sitting. The experimenter used a coin toss to randomly assign patrons to the “touch” or “no touch” group. In order to keep the study blind, the waitress did not know which patrons were to be touched until it was time to drop off the check. Before the waitress dropped off the check at a specified table, she received an instruc-

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**TABLE 1**

<table>
<thead>
<tr>
<th>Restaurant Diner</th>
<th>Check Total</th>
<th>SD</th>
<th>Tip</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shift</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lunch</td>
<td>$21.18</td>
<td>11.39</td>
<td>$3.93</td>
<td>2.01</td>
</tr>
<tr>
<td>Dinner</td>
<td>$31.42</td>
<td>18.96</td>
<td>$5.35</td>
<td>3.33</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Young</td>
<td>$27.23</td>
<td>9.02</td>
<td>$5.89</td>
<td>2.27</td>
</tr>
<tr>
<td>Middle-aged</td>
<td>$28.38</td>
<td>17.93</td>
<td>$4.74</td>
<td>2.91</td>
</tr>
<tr>
<td>Elderly</td>
<td>$22.59</td>
<td>16.31</td>
<td>$3.98</td>
<td>2.93</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>$25.28</td>
<td>16.31</td>
<td>$4.63</td>
<td>2.88</td>
</tr>
<tr>
<td>Black</td>
<td>$42.11</td>
<td>12.44</td>
<td>$5.35</td>
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tion from the experimenter to either administer a light touch to shoulder of the patron or to refrain from any physical contact with the guest when dropping off the check, returning the credit card, or returning the change. The waitress administered the light touch whenever it felt the most natural to her, whether it be when she dropped off the check, dropped off the credit card slip, or handed the guest a carryout box, providing that the touch took place after the check was dropped and before the patron left a tip.

If by some chance the patron was not within the waitress’ reach and was intended to receive the brief touch, the experimenter did not add that data to the study and instead used the next patron. Additionally, if the diner was intended to receive the brief touch, but tipped the waitress in cash before she could administer the touch, the data was not used.

During six shifts, the experimenter, also a waitress at the restaurant, acted as a confederate. The experimenter kept track of the subject variables and of the alcohol consumption of the diners at her tables. In order to avoid experimenter bias, a coin toss was used not only to determine interpersonal touch condition, but to determine whether or not the data would be added to the study. The experimenter’s data was not statistically different from the confederates’ data.

Results

Although this study was conducted in the southeast where knowledge of tipping is purported to be lower than other regions (Lynn, 2006), the average tip left was 19%, which is at the high end of the traditional range. The average check total was $26.67 and the average tip left was $4.69. Table 1 summarizes all other check averages and tip means.

Lunch guests comprised 46% of the sample and dinner guests comprised 54% of the sample. The average tip left by lunch patrons (n = 45) was 20% (SD = 8.24) and the average tip left by dinner patrons (n = 52) was 18% (SD = 8.03).

Age

As portrayed in Table 2, the participants in this study (n = 97) consisted of 13 young diners with a 24% tip mean (SD = 13.96), 58 middle-aged diners with an 18% tip mean (SD = 7.38), and 26 elderly diners with an 18% tip mean (SD = 4.38). A one-way, between-groups ANOVA was used to test the null hypothesis that age does not affect tip percentage and a significant effect was further analyzed using Tukey’s HSD comparisons (p < .05). Age significantly affected tip percentage, F(2, 94) = 3.50, p = .03) and these findings are depicted in Figure 1. As summarized in Table

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2, young diners tipped more than middle-aged diners, but there was no significant difference between young diners and elderly diners or middle-aged diners and elderly diners.

Although the tip average for young diners was high, there was more variation in the range of tips left by young diners. In this group, both the smallest (10%) and one of the largest (54%) tip percentages was represented.

Race
White diners ($n = 89$) maintained a 20% tip mean ($SD = 8.18$) and Black diners ($n = 8$) maintained a 13% tip mean ($SD = 3.91$). An independent-samples $t$ test was used to test if there was a difference in tipping between White and Black patrons. A significant effect was found, $t(95) = 2.42, p = .02$ with Whites ($M = 19.64$) tipping more than Blacks ($M = 12.55$; Figure 1).

Gender
The average tip percentage of male diners ($n = 72$) was 19% ($SD = 8.93$) and the average tip percentage of female diners ($n = 25$) was 20% ($SD = 5.37$). There was no significant difference in the tipping behavior of men and women, $t(95) = -.46, p = .64$).

Alcohol Consumption

The tip mean for diners who consumed alcohol ($n = 27$) was 17% ($SD = 7.39$) and the tip mean for diners who did not consume alcohol ($n = 70$) was 20% ($SD = 8.31$). A significant effect was not found, $t(95) = -1.68, p = .10$.

Restaurant Section

Almost 90% of the sample dined in the non-smoking section of the restaurant and about 10% sat in the smoking section of the restaurant. The average tip percentage left by non-smokers ($n = 86$) was 19% ($SD = 7.91$) and the average tip percentage left by smokers ($n = 11$) was also 19% ($SD = 10.25$). There was no statistically significant difference between the tip averages, $t(95) = -.09, p = .93$.

Alcohol Consumption and Restaurant Section

As shown in Table 3, a significant interaction ($p = 0.03$) was found between alcohol consumption and restaurant section. Individuals who drank, but who sat in the non-smoking section tipped an average of 15% and individuals who drank, but who sat in the smoking section tipped an average of 22%. Conversely, individuals who did not drink, but who sat in the non-smoking section tipped an average of 20% and individuals who did not drink, but sat in the smoking section tipped an average of 16%.

It was an unexpected finding that smokers who drank tipped 6% more than smokers who did not drink and that non-smokers who drank tipped 5% less than non-smokers who did not drink. These findings are illustrated in Figure 5.

Interpersonal Touch

The tip mean for the diners in the interpersonal touch condition ($n = 43$) was 20% ($SD = 10.86$) and the tip mean for the diners who were not in the inter-
personal touch condition \((n = 54)\) was 18\% \((SD = 4.88)\). Although 2\% higher, the tip average of diners who received the interpersonal touch did not differ significantly from the average tip percentage of diners who did not receive the interpersonal touch, \(t(95) = 1.50, p = .14\).

An interesting finding was that the highest tip percentage of the interpersonal touch condition was 57\%, compared to 34\%, which was the highest tip percentage of the no touch condition. The next three highest tip percentages, 54\%, 48\%, and 44\%, were also left by diners who received the interpersonal touch, although the minimum tip percentage left for each condition differed from each other by only 1\%. A significant interaction was not found \((p = .09)\) between interpersonal touch and age. Young diners who were in the interpersonal touch condition left an average tip of 30\% and young diners who were not in the interpersonal touch condition left an average tip of 20\%. Table 4 summarizes the effects of interpersonal touch. Interestingly, elderly diners who were in the interpersonal touch condition left an average tip of 17\% and elderly diners who were not in the interpersonal touch condition left an average tip of 19\%. These findings are portrayed in Figure 2.

Interpersonal touch affected young diners more than middle-aged diners or elderly diners. Young diners who received a pat on the shoulder tipped 10\% more than young diners who were not touched. There was only a 3\% difference between the tip average of

### TABLE 3

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Note: Values enclosed in parentheses represent mean square errors.  
*p < .05.*
middle-aged diners who received the interpersonal touch and middle-aged diners who did not receive the interpersonal touch. Interestingly, the tip average for elderly diners who were touched was 2% lower than the tip average for elderly diners who were not touched.

A significant interaction was not found ($p = .32$) between interpersonal touch and race. These findings are depicted in Figure 3. When White and Black diners were compared by interpersonal touch condition, White diners who were touched tipped 3% more than White diners who were not touched, but Black diners who were touched tipped 3% less than Black diners who were not touched.

As portrayed in Table 4, both men and women tipped more when they were touched, but there was no significant interaction ($p = .77$) between interpersonal touch and gender. Also depicted in Table 4, a significant interaction was not found ($p = .85$) between interpersonal touch and alcohol consumption.

There was no significant interaction ($p = .30$) between interpersonal touch and smoking preference. Smokers who received the interpersonal touch tipped almost 8% more than smokers who did not receive the interpersonal touch. There was only a 2% difference between the tip averages of non-smokers who were touched and non-smokers who were not touched. These findings are illustrated in Figure 4.

Summary of Results

To summarize, it was found that young diners tipped significantly more than middle-aged diners and that White diners tipped significantly more than Black diners. Men and women exhibited similar tipping behavior. Additionally, alcohol consumption significantly increased tip percentages when the paying guest sat in the smoking section of the restaurant. Although not statistically significant, interpersonal touch seemed to increase tip percentages for young White diners and for White diners who sat in the smoking section of the restaurant.

A White middle-aged diner who did not drink, but who received the interpersonal touch, left the highest tip percentage. A Black middle-aged diner who drank, but who did not receive the interpersonal touch, left the lowest tip percentage.

Discussion

The purpose of this study was to determine which variables influenced how much patrons tipped their waitress in a restaurant setting. Three major findings resulted from this study.
FACTORS INFLUENCING TIPPING BEHAVIOR

Although small, there was a significant difference in tipping behavior among the age groups. It was hypothesized that middle-aged diners would tip more than both young diners and elderly diners, but the average tip percentage left by middle-aged diners was very similar to the average tip percentage left by elderly diners. In contrast, the average tip percentage left by young diners was high. As most of the employees at the restaurant where the research took place are young, it could be speculated that many young diners are employed in the service industry and therefore have a greater knowledge of the tipping norm. Additionally, the wide range of tip percentages left by young diners could be due to the fact that adolescents, teenagers, and individuals in their 20’s were all grouped together.

Race was by far the greatest predictor of tipping behavior. The tip average for Black diners was 7% lower than the tip average for White diners. The only Black guest to leave a tip larger than 15% was a woman who dined during the lunch shift. This statistically significant finding supports the research hypothesis that White diners tip more than Black diners. As the confederates in this study were all White, future studies could examine the tipping behavior of Black diners when waited on by White servers and when waited on by Black servers.

Although not statistically significant, diners who did not drink alcohol tipped 3% more than diners who drank alcohol, which conflicts with this study’s research hypothesis that alcohol creates a positive mood in individuals and induces them to leave larger tips.

The main hypothesis of this experiment that interpersonal touch would increase tip percentage was not supported, but there seemed to be a trend among certain patrons. Interpersonal touch increased tip percentages considerably with White guests under the age of 30 and with White guests who sat in the smoking section of the restaurant. It could be suggested that middle-aged diners and elderly diners regarded the touch as disrespectful. Also, it could be suggested that interpersonal touch is more acceptable in the bar area because it seems that bar guests come to enjoy the overall atmosphere in addition to eating a good meal.

It should be noted that there was a wide range of tip percentages recorded in this study, with the lowest being less than 10% and the highest exceeding 50%. Although in many research studies such extreme values would be considered outliers and consequently eliminated, the practice of tipping itself is characterized by diversity. It can be expected that both exceedingly small and large tips will be left by restaurant

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patrons in any setting, which is why the outlier values were not removed in this study.

There were several limitations and weaknesses in this study, the main limitation being that tipping behavior could be observed, but that underlying motives could only be speculated. A second limitation was that this research was conducted in the field and was therefore subject to extraneous variables that could have threatened the validity of the study. Examples include the paying guest’s mood, the waitress’ mood, restaurant temperature, and overall dining experience.

A weakness of the study was that interpersonal touch may have been affected by the waitress’ comfort level. Each confederate felt awkward about physical contact at the beginning of the experiment, as it was not always possible to casually touch the shoulder of the paying guest. It was not until the end of the experiment that the waitresses could unobtrusively pat the diner’s shoulder as she smiled and thanked him or her. Additionally, because the waitresses were under observation, it was possible that they gave their guests better service, which could have affected the study’s outcome. A third weakness was that some of the guests seemed to notice that they were being observed. As the experimenter had to sit close by in order to monitor the waitress and the guests, she was in sight of the diners, a few of whom tried to engage the experimenter in conversation. Guests who believed that they were being observed could have been induced to leave larger tips. Lastly, a lack of diversity in the sample was a weakness. The average paying guest was a White, middle-aged male. Black diners comprised only 8% of the participants and no other races were represented. In part, this was due to the dining population at the establishment where the data was collected, but had there been more recordings, the results would depict a more accurate portrayal of race, with more Black diners and guests of other races.

A difficulty that arose in this study was determining the best time to administer the interpersonal touch. If the waitress administered the touch when she dropped off the check to two or more guests, she could easily touch the wrong guest. If the waitress waited to administer the touch when she dropped off the credit card slip or change, the guest could have already left the tip on the table. This happened several times during each session and the data could not be used.

This study was a contribution in that it was conducted in a less pricey, family-orientated restaurant in southeast Tennessee. It contributed to knowledge about tipping behavior in an environment that had not previously been studied and it concentrated on several variables that had not previously been considered. The implications of these findings could be beneficial to those working in the service industry in this area, especially those employed at the restaurant where the research took place. Servers who wait tables in the smoking section, for example, could possibly make better tips by briefly patting young diners. Lastly, this study is important to the field of social psychology because it focused on human behavior in a public setting.

Further research is needed to determine the different views behind tipping behavior, especially the attitudes of White diners and Black diners. Future studies could be conducted in a qualitative manner to attain such information from individuals of different races.

Also, further research could reexamine interpersonal touch with a larger sample and in different establishments to perceive whether or not the findings resemble the results of this study or of past studies. From observation, guests responded positively to a light touch by looking up and smiling at the waitress, and none of the guests objected. To have more of an effect in future studies, interpersonal touch could be defined as various touches throughout the meal, such as a light touch to the shoulder whenever the waitress stops by her table to assure that the guest is content in addition to the light touch when dropping off the guest’s check, credit card slip, or change. Additionally, future research could focus on interpersonal touch within the groups it seemed to affect most: young diners, White diners, and diners who sat in the smoking section of the restaurant.

In conclusion, the major predictors of tipping behavior were age and race. It seems that during a typical shift there is little a server can do to increase
his or her tip percentage. Although restaurant patrons may be pleased by a light touch on the shoulder, the findings of this study suggest that it will most likely not cause them to leave an especially generous tip.

References


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