Juggling school and family

Michelle Denise McFadden

Iowa State University

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Juggling school and family

by

Michelle Denise McFadden

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Human Development and Family Studies

Program of Study Committee:

Sedahlia Jasper Crase (Major Professor)
Maurice MacDonald
Mack Shelley

Iowa State University

Ames, Iowa

2002
This is to certify that the master's thesis of

Michelle Denise McFadden

has met the thesis requirements of Iowa State University

Signatures have been redacted for privacy
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Abstract

This research examined the levels of perceived stress for independent students who are parents with a comparison group of independent students who are not parents. The programs and services offered to adult learners at Iowa State University were evaluated. Role conflicts, support systems, support detractions, sources of stress, and sources of stress relief were explored for both groups. Participants completed the Graduate Student Inventory-Revised (GSI-R), a background questionnaire, a service assessment, and open-ended questions. Using independent samples t-tests, no significant differences in perceived levels of stress were found between the primary sample and the comparison group.

Additional correlational analyses revealed that students who are parents are older, have higher monthly take home income, are married or single but cohabitating, and are enrolled in fewer credit hours. Females were more likely to experience monetary stress than males. As monetary stress increased, classroom attendance decreased. Students with more children had higher academic demands perceived stress. Single (unmarried, divorced, separated, or widowed) students had higher levels of environmental perceived stress. Working students and students receiving less help from ISU Orientation had greater levels of perceived stress trying to meet peers of their race/ethnicity on campus.

Independent students with children and the comparison group of independent students differed in their use and the importance of specific services for students at ISU. However, most of those differences were related to services designed specifically for students with children.

Students with children and the comparison group had both similar and different kinds of conflicts that arose amid their student role and other roles. The two groups identified
similar support systems. For both groups, many of the same support systems were also identified as detractions. The two groups identified both similar and different sources of stress and the two groups relieve their stress in different ways.

Significance of the study, limitations, and implications for future research are also presented.
Introduction

In addition to their student role, many adult students also have parenting responsibilities. Students who are juggling school, family, and possibly work have many demands on their time. This research examined the levels of perceived stress for independent students who are parents with a comparison group of independent students who are not parents.

This research examined the unique constraints placed on students' time as a result of the dimension of parenting added to an already demanding lifestyle. In addition, the programs and services offered to adult learners at Iowa State University were evaluated. The following literature review looks at stress and parenting, role conflict, and adult learners (including support systems and sources of stress).

In this study the following major null hypothesis was tested: there are no differences in perceived stress between independent students with dependent children and independent students without dependent children. In addition to the major hypothesis, stress was investigated in relation to age, gender, class attendance, miles traveled to campus, transportation, number of children, credit hours, income, citizenship, parent status, hours employed, class rank, partner status, employment, race/ethnicity, and ISU orientation helpfulness.

Specifically, the researcher explored the following research questions:

1. Do students with children and a comparison group without children differ in regards to their perceived levels of stress?

2. Is there a relationship between perceived levels of stress and age, gender, class attendance, miles traveled to campus, transportation, number of children, credit hours, income citizenship, parent status, hours employed, class rank, partner status, employment, race/ethnicity, and ISU orientation helpfulness?
3. Do students with children and a comparison group without children differ in regard to their use and perceived accessibility of specific services for students at ISU?

4. Do students with children and a comparison group without children differ in the conflict amid their student role and other roles?

5. Do students with children and a comparison group without children have different kinds of support systems and detractions?

6. Do students with children and a comparison group without children have different sources of stress and stress relief?
Literature Review

The following literature review will discuss stress and parenting, role conflict, and adult learners (including support systems and sources of stress). Stress and parenting will be explored first.

Stress and Parenting

Much of the research on stress and parenting comes from literature discussing work roles rather than student roles. Based on data from the 1990 U.S. Survey of Work, Family, and Well-Being, Bird (1997) found that “on average, parents report higher levels of psychological distress than those without children” (p. 814). Higher levels of stress are reported by mothers, particularly those with children under age 18. Bird did not find that children increased psychological distress. However, “children are associated with increased social and economic burdens” (p. 818).

Belsky’s (1984) process model of the determinants of parenting examines three domains: personal psychological resources of parents, characteristics of the child, and contextual sources of stress and support. For the purpose of this study of independent undergraduate students who are parents, I will focus on contextual sources of stress and support: marital relationship, social network, and employment.

Simons, Lorenz, Wu, and Conger (1993) used Belsky’s model to examine how parental behavior was influenced by marital and social network support. Data were collected through home visits with 451 two-parent families. The researchers found that parental behavior was influenced more by spouse support than by the social support network. Parenting behaviors were influenced indirectly by social network through its effect on parents’ emotional well-being.
Barnett (1994) conducted a study of 300 dual-earner couples in eastern Massachusetts. The researcher found that the relationship between job role quality and psychological distress is moderated by family role quality. Thus, there was little relationship between job experiences and distress when marital or parental experiences were positive.

The following research will outline hassles and their effect on an individual’s ability to parent. Hassles are the irritating, frustrating, annoying, and distressing demands that to some degree characterize everyday transactions with the environment. In examining the relationship of daily hassles, uplifts, and major life events to health status, DeLongis, Coyne, Dakof, Folkman, and Lazarus (1982) found that the degree of somatic illness was positively correlated with the frequency and intensity of hassles. Increases in both same-day and next-day physical symptoms and same-day mood disturbances were linked with a higher score for daily hassles (DeLongis, Folkman, & Lazarus, 1988).

The significance of daily hassles is unique for each individual. Gruen, Folkman, and Lazarus (1988) define central hassles as “those which reflect important ongoing themes or problems in the person’s life” (p. 743). Central hassles yielded more emotional distress as well as positive feelings when things worked out well. Additionally, the dimension of centrality plays an important function in the foresight of psychological symptoms. Examining the effects of daily stress on negative mood, Bolger, Delongis, Kessler, and Schilling (1989) found interpersonal conflicts to be the most upsetting. Conflicts with other persons are more distressing than those with family members.

Although the relations seem at least partially dependent upon the age of the child for both mothers and fathers, daily parenting hassles emerge as important determinants of parental well-being (Crnic & Booth, 1991). Mothers of preschool children who reported
more hassles were more likely to characterize their children as having more behavior problems. In addition, mothers with more hassles with their preschool children were also more likely to be depicted by lower reciprocity of supportive behaviors (Pett, Vaughan-Cole, & Warmpold, 1994). In a study of intact families rearing first-born sons, mothers experiencing more daily hassles expressed more negative affect toward their sons and were less sensitive to them (Belsky, Crnic, & Woodworth, 1995). Parenting hassles are linked to less satisfied parenting and less functional family status. In addition, hassles predict less responsive and more controlling child behavior during interactions with mothers (Crnic & Greenberg, 1990).

Studying the effects of work on family functioning, Kinnunen, Gerris, and Vermulst (1996) found that the job had spillover effects on family life. Each of the four domains of family (individual, father-child, marital, and child) was affected by this spillover effect.

Role Conflict

Students who are parents have multiple roles to manage. According to the theory of role balance, “individuals who maintain more balance across their entire system of roles and activities will score lower on measures of role strain and depression and higher on measures of self-esteem, role ease and other indicators of well being” (Marks & MacDermid, 1996, p. 417). The balance and combination of competing responsibilities of employment, relations with their spouse, and parenthood is affected by how women and men allocate time across multiple roles (Brayfield, 1995).

Less strain between work and family roles are found in a more supportive organizational culture. Warren and Johnson (1995) found the perception of a more supportive organizational culture for employees with family responsibility led to less strain between
work and family roles. In addition, women felt better about adequately fulfilling the demands of their work and family roles when they utilized the family oriented benefits available to them at their workplace.

Students who are parents have many roles. There are many factors that influence their ability to carry out all of those roles: role balance, time, family role quality, and organizational culture.

*Adult Learners*

The review of the higher education literature focusing on adult students found mainly suggestions for program implementation. The following are issues facing adult students, identified in the literature.

To identify the problems and needs of nontraditional students at a particular institution, Marlow (1990) recommends identifying the following factors: sex, marital and parental status, ethnicity, and age. Of particular interest in this study is parental status. Each of the remaining variables will also be explored.

In a study of adult women students over 28 years of age, Breese and O'Toole (1994) found that “the role of student is a transitional or marginal one” (p. 185). Their involvement on campus is “somewhat marginal.” In addition, “they tend to seek out only the necessary assistance for practical concerns and issues, and their time on campus is limited to cursory and periphery activity” (p. 185). For these female adult students, there is not broad acceptance for the role of student. Their priorities continue to lie elsewhere. When in need of assistance, these students are more likely to find help in their internal network rather than through campus services.
In a study of poor single-parent female college students conducted by Van Stone, Nelson, and Niemann (1994), participants identified several sociological and psychological belief factors important to their academic success. The sociological factors included support of other students, university services, support of family, and support of faculty. The psychological belief factors included personal ambition, prior knowledge and experience, effort and discipline, and self-confidence.

In a qualitative study examining how adults manage their time for lifelong education, Blaxter and Tight (1994) discovered students who were responsible for one or two major roles (e.g., employee, spouse, parent) were usually able to cope. But an unforeseen event such as a sick child, an urgent order at work, or their partner’s demands would likely undermine such coping. This continuing strain upon the individual seriously restricted their capacity to engage in their studies. Schlossberg, Lynch, and Chickering (1989) also found that adult students are more likely to interrupt their studies because of family- or job-related matters.

Nora, Cabrera, Hagedorn, and Pascarella (1996) undertook a study to “examine in a single comprehensive theoretical framework what cognitive, affective, and environmental factors contributed the most to persistence decisions and the extent to which these factors varied among different ethnic and gender groups” (p. 428). The sample was drawn from the National Center on Teaching, Learning, and Assessment study and was made up of 3,900 freshman students.

The researchers had several interesting findings related to this study. “Minorities, both males and females, were more likely to be responsible for dependent children” (p. 446). For minority students, having children reduces the likelihood of persistence in college by
The likelihood for minority persistence is further hindered by working off-campus (36% reduction).

At an urban university, Hammer, Grigsby, and Woods (1998) studied how adult students’ perceived effectiveness of support services influenced their ability to manage the demands of work, family, and school. They found high degrees of work-school conflict were related to working more hours, perceiving lower effectiveness of support services, and having lower levels of satisfaction with educational experiences. In addition, the researchers also found higher degrees of work-school conflict were related to having more children and enrolling in more credit hours.

In a study of adult female students at a two-year public college in the southeast, Johnson, Schwartz, and Bower (2000) found that age, marital status, and the presence of children in the home affect the ability to cope with various stresses. Students who were parents, “felt excessively burdened by the stressful demands of parenting” (p. 297).

Several studies have looked at undergraduate student stress. Struthers, Perry, and Menec (2000) studied the relationship among academic stress, coping, motivation, and performance in college. The researchers found that “college students’ stress at the beginning of the academic year directly and positively predicted their use of Problem-Focused Coping and Emotion-Focused Coping, their motivation, and inversely predicted their introductory psychology course grade at the end of the academic year” (p. 588).

In a study of graduate student stress and student burnout, Koeske and Koeske (1991) found student burnout, events stress, subjective (felt) stress, conflict stress, symptoms, and intent to quit were significantly and positively correlated. As social support decreased, conflict stress and intention to quit school increased.
Positive and negative social support systems are not independent of each other. Richardson, Barbour, and Bubenzer (1991) found that the same person can be a source of both positive and negative support. In other words, a support system could both support and detract.

For a study on adult undergraduate students' definitions of their experiences and their successes, Donaldson, Graham, Martindill, and Bradley (2000) collected data through in-depth interviews with a total of 13 returning adult undergraduate students from a Research I institution and a Baccalaureate College II institution. Participants were encouraged to “tell their stories” (p. 4). Two categories of success emerged: success in college and success in learning. Experience, maturity, motivation, self-monitoring, reinforcement systems, and the nature and quality of their experiences within the classroom supported or hindered the attainment of the two types of success. Specifically related to the present study, work, friends, family, and former teachers were identified as reinforcement systems.

The literature on adult learners reveals that these students maintain multiple roles and that they receive support and detraction from both campus and internal systems. In addition, several background variables affect their success.
Methodology

Sample

Random samples of 202 independent undergraduate students who had a family size greater than one and 208 independent undergraduate students with no dependents (family size of one) were supplied by the Office of Student Financial Aid at Iowa State University. The information used to determine one’s placement in one of these two groups was obtained through self-reporting on the 1998-99 Free Application for Federal Student Aid (FAFSA). The family size greater than one indicates that the applicant has dependents, defined below.

The initial file from the Iowa State University Student Financial Aid ID file of undergraduate, independent, enrolled in spring 1999 for full-time, half-time or less than half-time aid filers contained 2,451 students. From that population the “with children” group was selected; the population of 589 students included married students with a family size greater than two and unmarried students with a family size greater than one. The random sample of 202 was selected from this population.

The comparison group excluded those selected in the first pass. From the remaining 1,862 students, 208 were randomly selected. This group included married students with a family size equal to two and single students with a family size equal to one.

According to the Office of Student Financial Aid at Iowa State University, independent status for financial aid purposes is defined by meeting one of the following criteria: age 24 or older; working on a degree beyond a bachelor’s degree; married, orphaned, or ward of the court; veteran of the U.S. armed forces; or having dependents who receive more than half of their support from the student. For this research, both the primary sample and the comparison group are considered independent, undergraduate students enrolled full-
time, half-time, or less than half-time. The only difference between the two groups is that individuals in the primary population have one or more dependents.

Of the 202 students with children, 57.9% (N=118) completed and returned the survey. Return rates for the comparison group were lower; of the 208 students in the comparison group, 39.5% (N=83) completed and returned the survey. Overall, 201 (48.4%) surveys were completed and returned. Nine respondents were excluded from the 118 respondents with children because they did not currently have a child or children under the age of 18 living with them, leaving a sample of 109. Two respondents were excluded from the comparison group because they currently had a child or children under the age of 18 living with them, leaving 81 in the comparison group.

For the primary sample (students with children) the average age was 30 years; 57.8% of the primary sample were female and 42.2% were male. The majority (64.5%) were married, 12.7% were single, 10% were divorced, 1.8% were separated, and .9% were widowed.

Half (50.9%) of the primary sample were classified as seniors, one-third (34.5%) as juniors, 7.3% as sophomores, 4.5% as freshman, and 2.7% as Veterinary Medicine. Each of the ISU colleges was represented in this sample: Liberal Arts and Sciences (23.6%), Education (19.8%), Business (17.3%), Engineering (12.3%), Family and Consumer Sciences (10.4%), Agriculture (9.4%), Design (3.8%), and Veterinary Medicine (2.8%).

For the comparison group (students without children) the average age was 26; 56.8% of that group were female and 43.2% were male. For partner status, 46.3% were single, 40% were married, 5% were divorced, and 8.8% were single but cohabitating.
The majority (63%) of students in the comparison group were classified as seniors. The remaining indicated their class rank as junior (21%), Veterinary Medicine (9.9%), sophomore (6.2%), and freshman (0%). One quarter of the students (26.3%) were in the College of Liberal Arts and Sciences. Remaining students specified their major college as Business (21.3%), Agriculture (15%), Veterinary Medicine (10%), Education (8.8%), Family and Consumer Sciences (8.8%), Engineering (6.3%), and Design (3.7%).

According to the Office of Institutional Research *ISU Fact Book* (Iowa State University, 2001), in the 1998-1999 academic year, the average age for the undergraduate and first professional (Veterinary Medicine) student body was 21; 44.4% of the students were female and 55.6% were male. One-quarter (27.7%) of the students were classified as seniors, 26% as freshmen, 21.7% as juniors; 20.1% as sophomores, and 1.8% as Veterinary Medicine. Each of the colleges was represented: Liberal Arts and Sciences (28.4%), Engineering (20.2%), Business (14.5%), Agriculture (13.6%), Education (8.6%), Design (7.7%), Family and Consumer Sciences (5.1%), and Veterinary Medicine (1.8%).

On average, both the primary sample and the comparison group are older than the undergraduate and first professional (Veterinary Medicine) student body. Gender is similar across all three groups. Both the primary sample and the comparison group over represent upper-class students, specifically seniors. Engineering is underrepresented in both samples. Education is over represented in the primary sample and Veterinary Medicine is over represented in the comparison group. A summary of background variables for both the primary sample and comparison group is presented in Table 1.
Table 1

*Background Variables for Primary Sample and Comparison Group*

<table>
<thead>
<tr>
<th>Background Variables</th>
<th>Primary Sample</th>
<th>Comparison Group</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>30 years</td>
<td>26 years</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>42.2%</td>
<td>43.2%</td>
</tr>
<tr>
<td>Female</td>
<td>57.8%</td>
<td>56.8%</td>
</tr>
<tr>
<td><strong>Partner Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>64.5%</td>
<td>40.0%</td>
</tr>
<tr>
<td>Single</td>
<td>12.7%</td>
<td>46.3%</td>
</tr>
<tr>
<td>Divorced</td>
<td>10.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Separated</td>
<td>1.8%</td>
<td>0%</td>
</tr>
<tr>
<td>Widowed</td>
<td>.9%</td>
<td>0%</td>
</tr>
<tr>
<td>Single but Cohabitating</td>
<td>0%</td>
<td>8.8%</td>
</tr>
<tr>
<td><strong>Classification</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>4.5%</td>
<td>0%</td>
</tr>
<tr>
<td>Sophomore</td>
<td>7.3%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Junior</td>
<td>34.5%</td>
<td>21.0%</td>
</tr>
<tr>
<td>Senior</td>
<td>50.9%</td>
<td>63.0%</td>
</tr>
<tr>
<td>Veterinary Medicine</td>
<td>2.8%</td>
<td>9.9%</td>
</tr>
<tr>
<td><strong>Major College</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liberal Arts and Sciences</td>
<td>23.6%</td>
<td>26.3%</td>
</tr>
<tr>
<td>Education</td>
<td>19.8%</td>
<td>8.8%</td>
</tr>
<tr>
<td>Business</td>
<td>17.3%</td>
<td>21.3%</td>
</tr>
<tr>
<td>Engineering</td>
<td>12.3%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Family and Consumer Sciences</td>
<td>10.4%</td>
<td>8.8%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>9.4%</td>
<td>15.0%</td>
</tr>
<tr>
<td>Design</td>
<td>3.8%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Veterinary Medicine</td>
<td>2.8%</td>
<td>10.0%</td>
</tr>
</tbody>
</table>
**Instruments**

Respondents were asked to complete Rocha-Singh's (1994) Graduate Stress Inventory-Revised (GSI-R), an assessment of services provided for commuter students and adult learners at Iowa State University, and three open-ended questions (see Appendix A). The GSI-R consists of two sections. The first section, a background questionnaire, was revised to fit the needs of the current study. The original background questionnaire included gender, ethnicity, marital status, academic status, country of citizenship, area of specialization, parents' educational attainment, and financial situation. The researcher added additional questions addressing partner status, classification, credit hours, class attendance, living arrangements, commute distance, commute method, number and ages of children, childcare, employment, and orientation experience. The second section is a 21-item self-report instrument that measures the degree to which professional/academic, environmental, familial/parenting, and monetary obligations are perceived as stressful. The 7-point Likert scale was changed to a 5-point Likert scale. Original value labels of moderately stressful (1) and extremely stressful (7) were revised to somewhat stressful (1) and very stressful (5) respectively.

The services assessment, developed by the researcher, focuses on delivery and usefulness of specific services already provided or under consideration the Iowa State University campus. The three open-ended questions allow for deeper exploration of sources of stress and the relationship to parenting.

**Procedure**

After obtaining permission from the Institutional Review Board, student names and addresses were obtained using the random procedure described in the sample section. Both a
cover letter (see Appendix B) and a questionnaire packet were mailed to each student’s school address. The mailing was timed to arrive shortly before students returned from spring break in March, 1999. A follow-up postcard (see Appendix C) was sent one week later to remind them to complete and return the questionnaire. Follow-up phone calls were made during the first week in April to encourage students to complete and return the survey.

As an incentive, students were informed that the first ten students returning a completed survey would receive a $10 grocery store gift certificate. In addition, the remaining students returning a completed survey by April 10, 1999 were placed in a drawing for two $25 grocery store gift certificates (see Appendix D).

Data Analysis

Quantitative data were analyzed using SPSS for Windows version 9.0. The Graduate Student Inventory-Revised (GSI-R) was re-factor analyzed. Previous analysis by Rocha-Singh (1994) with graduate student samples yielded three factors: academic stress, environmental stress, and family/monetary stress.

Two-sample independent t-tests were performed to compare means of the two main groups (students with children and the comparison group). Correlations analyses were performed among the continuous variables (age, gender, class attendance, commute distance, commute method, number of children, credit hours, income, and citizenship status) and dichotomous variables. Initially, the researcher had planned to perform Chi-square tests of independence with the categorical variables partner status, classification, employment, race/ethnicity, and orientation experience. Due to low cell counts, the categorical variable were collapsed into dichotomous variables and included in the correlation analysis. The Code Book found in Appendix F outlines the variable labels, values, and value labels.
Frequencies, percentages, means, and standard deviations were computed for the services assessment. Frequencies and percentages were computed for the services assessment accessibility portion of the survey. Results for both the services assessment and the services assessment accessibility are reported by parent status.

Qualitative data were entered using Microsoft Word. Independently, two researchers organized the responses into a coding system. This process entailed searching through the data for regularities and patterns and writing down words and phrases to represent these topics and patterns (Bogdan & Biklen, 1992). As recommended by Guba (1981), the two researchers met to reach an agreement on the overriding themes that emerged from the data and resolve any differences in interpretation.
Results

Factor Analysis

A factor analysis was performed on the Graduate Student Inventory-Revised (GSI-R). Two of the GSI-R items, "arranging child care" (Item 5) and "finding support groups sensitive to your needs" (Item 6), had poor response rates of 61.3% and 62.5% respectively. Consequently, those two items were excluded from the factor analysis and further data analysis.

An initial factor analysis using a principal component extraction and varimax rotation on the remaining 19 items yielded five factors. One item, "being obligated to participate in family functions" (Item 4), loaded on both the first and fifth factor, with loadings of .462 and .463 respectively. Results of the standardized Cronbach coefficient alpha yielded low reliability for the fifth factor ($r = .34$). Because of the dual loadings for Item 4 and the low reliability for the fifth factor, the researcher chose to move Item 4 to Factor 1, Academic Demands, leaving Factor 5 with only one variable, Item 2, “trying to meet peers of your race/ethnicity on campus.” The researcher chose to treat that item as a separate one-item factor.

A subsequent factor analysis using a principal component extraction and varimax rotation on the remaining 18 items yielded four factors. Factor one, Academic Demands, had seven items; the second factor, Academic Relationships, had four items; the third factor, Monetary Stress, had four items; and the fourth factor, Environmental Stress, had three items (see Table 2).
Table 2

Factor Analysis of the GSI-R with Factor Loadings, Variance, and Reliability (Principal Components Extraction, with Varimax Rotation)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Communality</th>
<th>Factors and Item Contents</th>
<th>Factor Loading</th>
<th>Proportion of Variance</th>
<th>Reliability</th>
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Five independent-samples t-tests were conducted to investigate whether the primary sample and the comparison group differed in regard to their perceived levels of stress with Academic Demands, Academic Relationships, Monetary Stress, Environmental Stress, and Item 2. No significant differences in perceived levels of stress were found between the primary sample with children and the comparison group without children (see Table 3), although Academic Demands approached significance, $t(173) = -1.74, p = .08$.

Table 3

Independent-Samples t-Tests of the GSI-R Factors Between Students With Children and the Comparison Group Without Children

<table>
<thead>
<tr>
<th>Factors</th>
<th>Students with Children (n=109)</th>
<th>Comparison Group (n=81)</th>
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<td>1.64(0.90)</td>
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Correlations

Correlation coefficients were computed among the variables Academic Demands, Academic Relationships, Monetary Stress, Environmental Stress, Item 2, gender, class attendance, miles traveled to campus, transportation, number of children, credit hours,
monthly take home income, country of citizenship, parent status, hours employed, class rank, partner status, employment, race/ethnicity, and ISU orientation. The results of the correlational analyses presented in Table 4 show that 37 out of 210 correlations were statistically significant. Caution should be taken when interpreting these correlations, especially relatively marginal levels of significance. Using the Bonferroni approach to control for Type I error across the 210 correlations, a $p$ value of less than .0002 would be required for significance. Also, using the .05 level, 11 of these statistically significant correlations may be significant by chance.

Academic Demands significantly correlated with the other three factors and one background variable. The correlation between Academic Demands and Academic Relationships was significant, $r (165) = .37, p < .01$; as academic demands perceived stress increased, academic relationships perceived stress also increased. The correlation between Academic Demands and Monetary Stress was also significant, $r (169) = .52, p < .01$; therefore, as academic demands perceived stress increased, monetary perceived stress also increased.

The third significant correlation was between Academic Demands and Environmental Stress, $r (162) = .41, p < .01$. As academic demands perceived stress increased, environmental perceived stress also increased. The correlation between the academic demands perceived stress scale and the number of children was significant, $r (185) = .16, p < .05$. Students with more children had higher academic demands perceived stress.

In addition to correlating significantly with Academic Demands, Academic Relationships correlated significantly with Monetary Stress, $r (157) = .35, p < .01$, Environmental Stress, $r (155) = .35, p < .01$, and Item 2, $r (158) = .33, p < .01$. The results
### Table 3

**Correlations Among All Continuous Variables on the GSI-R and Background Questionnaire**

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*p < .05.  **p < .01.
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show that as academic relationship perceived stress increased, monetary stress, environmental perceived stress, and the stress of trying to meet peers of similar race/ethnicity peers on campus also increased.

In addition to correlating significantly with Academic Demands and Academic Relationships, Monetary Stress correlated significantly with Environmental Stress, Item 2, gender, and class attendance. The correlation between Monetary Stress and Environmental Stress was significant, $r (155) = .38, p < .01$. Essentially, as monetary perceived stress increased, environmental perceived stress also increased.

Monetary Stress significantly correlated with Item 2, $r (158) = .29, p < .01$. So, as monetary perceived stress increased, the stress of trying to meet peers of similar race/ethnicity on campus also increased. Females were more likely to experience monetary stress than males, $r (173) = .29, p < .01$. Monetary stress significantly and negatively correlated with class attendance, $r (174) = -.17, p < .05$, indicating that as monetary stress increased, classroom attendance decreased.

As discussed above, Environmental Stress correlated with each of the other GSI-R factors. Environmental Stress also correlated with Item 2, $r (155) = .25, p < .01$; thus, as environmental perceived stress increased, the stress of trying to meet peers of similar race/ethnicity on campus also increased. In addition, Environmental Stress correlated with partner status, $r (167) = .21, p < .01$. Single (unmarried, divorced, separated, or widowed) students had higher levels of environmental perceived stress.

In addition to correlating with three of the factors, Item 2 also correlated with employment $r (172) = .23, p < .01$ and ISU Orientation, $r (163) = .18, p < .05$. Thus, working students had greater levels of perceived stress trying to meet peers of their
race/ethnicity on campus. The negative correlation with ISU orientation indicates students receiving less help from ISU orientation had greater levels of perceived stress trying to meet peers of their race/ethnicity on campus.

Age was significantly and positively related to five background variables, all in the expected direction. Age was significantly correlated with class attendance, $r(188) = .18, p < .05$, miles traveled to campus, $r(186) = .23, p < .05$, number of children, $r(188) = .33, p < .05$, monthly take home income, $r(172) = .24, p < .01$ and, parent status, $r(188) = .28, p < .01$. Older students were more likely to attend class, travel more miles to campus, have more children, have a higher monthly take home income, and be parents.

Gender (coded male = 1, female = 2) had a significant negative correlation with hours employed, $r(183) = -.17, p < .05$. Males were more likely to be working more hours than females.

Monthly take home income significantly correlated with miles traveled to campus, $r(171) = .23, p < .05$, number of children, $r(173) = .18, p < .05$, parent status, $r(173) = .22, p < .05$, partner status, $r(172) = .31, p < .01$, and race/ethnicity, $r(173) = -.17, p < .01$. Students with higher monthly take home incomes also traveled more miles to campus, had more children, were more apt to be white and married or cohabitating.

Citizenship was significantly negatively correlated with class rank. International students were more likely to be underclassmen, $r(188) = -.15, p < .05$. As expected, international students were more likely to self-report a racial/ethnic background other than White, $r(188) = .35, p < .01$.

Partner status had a significant negative correlation with miles traveled to campus, $r(187) = -.15, p < .05$, number of children, $r(190) = -.25, p < .01$, and parent status, $r(190) =$
Married and single but cohabitating students travel further to campus, have more children, and are more likely to be parents.

Race/ethnicity had a significant negative correlation with class rank, \( r \) (191) = .18, \( p < .05 \), and a significant positive correlation with partner status, \( r \) (190) = .19, \( p < .01 \). Thus, White students were more likely to be upperclassmen. Minority students were more likely to be underclassmen and to be married or single but cohabitating.

**Frequencies**

Frequencies, percentages, means, and standard deviations were computed for the services assessment portion of the survey. This portion focuses on delivery and usefulness of specific services provided on the Iowa State University campus. Results for the service items are presented in Table 5.

Respondents were provided a list of services currently provided or being considered at ISU. First, respondents checked whether or not they would use this service. If yes, respondents would then rate the importance of the service based on a 5-point Likert scale (coded 1=not very important, 3=somewhat important, and 5=very important). If no, respondents continued to the next item. Programs and services with at least 40.0% reported use are listed below.

Over half of the students with children would use child care during the day (55.6%), programs on child care (50.9%), extended hours for campus programs and services (65.1%), inclusion of families in special events (50.0%), and child care offered at music events and speaker series (50.0%). Just under half of the students with children would use campus programs offered through the Office of Adult Learner and Commuter Student Programs (49.5%).
Table 5

_Frequencies, Percentages, Means, and Standard Deviations of the Use of Service Items by Parent Status_

<table>
<thead>
<tr>
<th>Item content</th>
<th>Primary</th>
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<th>Comparison</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes Freq.(%)</td>
<td>No Freq.(%)</td>
<td>M(SD)</td>
<td>Yes Freq.(%)</td>
<td>No Freq.(%)</td>
<td>M(SD)</td>
</tr>
<tr>
<td>Commuter student lounge in the Memorial Union</td>
<td>32(29.9)</td>
<td>75(70.1)</td>
<td>3.00(1.19)</td>
<td>25(30.9)</td>
<td>56(69.1)</td>
<td>2.79(1.38)</td>
</tr>
<tr>
<td>Commuter student organization</td>
<td>20(19.0)</td>
<td>85(81.0)</td>
<td>3.20(1.15)</td>
<td>21(25.9)</td>
<td>60(74.1)</td>
<td>3.10(1.02)</td>
</tr>
<tr>
<td>Child care during the day</td>
<td>60(55.6)</td>
<td>48(44.4)</td>
<td>4.47(.94)</td>
<td>11(14.5)</td>
<td>65(85.5)</td>
<td>4.10(.88)</td>
</tr>
<tr>
<td>Programs on child care</td>
<td>55(50.9)</td>
<td>53(49.1)</td>
<td>3.98(1.12)</td>
<td>11(14.3)</td>
<td>66(85.7)</td>
<td>3.64(1.21)</td>
</tr>
<tr>
<td>Ability to bring children to class in an emergency</td>
<td>74(68.5)</td>
<td>34(31.5)</td>
<td>4.22(1.05)</td>
<td>17(22.1)</td>
<td>60(77.9)</td>
<td>4.13(.89)</td>
</tr>
<tr>
<td>Extended hours for campus programs and services</td>
<td>71(65.1)</td>
<td>38(34.9)</td>
<td>3.62(1.02)</td>
<td>49(62.8)</td>
<td>29(37.2)</td>
<td>3.72(1.17)</td>
</tr>
<tr>
<td>Inclusion of families in special events</td>
<td>54(50.0)</td>
<td>54(50.0)</td>
<td>3.39(1.29)</td>
<td>26(32.9)</td>
<td>53(67.1)</td>
<td>3.32(1.44)</td>
</tr>
<tr>
<td>Child care offered at music events and speaker series</td>
<td>54(50.0)</td>
<td>54(50.0)</td>
<td>3.57(1.24)</td>
<td>11(14.3)</td>
<td>66(85.7)</td>
<td>3.50(1.35)</td>
</tr>
<tr>
<td>Campus programs and services offered through the Office of Adult Learner and</td>
<td>52(49.5)</td>
<td>53(50.5)</td>
<td>3.24(1.09)</td>
<td>33(42.9)</td>
<td>44(57.1)</td>
<td>3.16(1.19)</td>
</tr>
<tr>
<td>Commuter Student Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Total primary sample and comparison group number values may not equal 109 and 81, respectively, due to non-responses. b The scale for these items is as follows: 1=Very important; 3=Somewhat important; 5=Very important.*

Over half of the students in the comparison group would use extended hours for campus programs and services (62.8%). Just under half of the students in the comparison group would use campus programs and services offered through the Office of Adult Learner and Commuter Student Programs (42.9%).

Students indicating their use of a program or service were also asked to rate the importance of that service. Students with children rated the following programs or services somewhat important or greater (only programs or services with at least 40.0% reported use
are presented): child care during the day (4.47), programs on child care (3.98), extended hours for campus programs and services (3.62), inclusion of families in special events (3.39), child care offered at music events and speaker series (3.57), and campus programs and services offered through the Office of Adult Learner and Commuter Student Programs (3.24).

Students in the comparison group rated the following programs or services somewhat important or greater (only programs or services with at least 40.0% reported use are presented): extended hours for campus programs and services (3.72) and campus programs and services offered through the Office of Adult Learner and Commuter Student Programs (3.16).

Frequencies and percentages were computed for the services assessment accessibility portion of the survey. This portion focuses on the accessibility of specific services provided on the Iowa State University campus. Results for the accessibility service items are presented in Table 6. Overall, a majority of respondents in the primary sample and the comparison group felt the services and programs provided accessible hours for their schedule.
Table 6

Frequencies and Percentages of Service and Program Accessibility Items by Parent Status

<table>
<thead>
<tr>
<th>Item content</th>
<th>Primary</th>
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<th></th>
<th>Comparison</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes Freq.(%)</td>
<td>No Freq.(%)</td>
<td>Yes Freq.(%)</td>
<td>No Freq.(%)</td>
<td></td>
</tr>
<tr>
<td>Dean of Students Office</td>
<td>76(82.6)</td>
<td>16(17.4)</td>
<td>61(88.4)</td>
<td>8(11.6)</td>
<td></td>
</tr>
<tr>
<td>Office of Adult Learner and Commuter Student Programs</td>
<td>64(87.7)</td>
<td>9(12.3)</td>
<td>50(86.2)</td>
<td>8(13.8)</td>
<td></td>
</tr>
<tr>
<td>Student Health Services</td>
<td>83(89.2)</td>
<td>10(10.8)</td>
<td>64(82.1)</td>
<td>14(17.9)</td>
<td></td>
</tr>
<tr>
<td>Office of Student Financial Aid</td>
<td>85(81.0)</td>
<td>20(19.0)</td>
<td>61(76.3)</td>
<td>19(23.8)</td>
<td></td>
</tr>
<tr>
<td>Parks Library</td>
<td>99(92.5)</td>
<td>8(7.5)</td>
<td>68(87.2)</td>
<td>10(12.8)</td>
<td></td>
</tr>
<tr>
<td>Durham Computer Labs</td>
<td>92(94.8)</td>
<td>5(5.2)</td>
<td>74(97.4)</td>
<td>2(2.6)</td>
<td></td>
</tr>
<tr>
<td>ISU Student Counseling Services</td>
<td>68(85.0)</td>
<td>12(15.0)</td>
<td>53(81.5)</td>
<td>12(18.5)</td>
<td></td>
</tr>
</tbody>
</table>

*Total primary sample and comparison group number values may not equal 109 and 81, respectively, due to non-responses.

Description of Themes from Open-Ended Responses

Both the primary sample and the comparison group were asked three open-ended questions related to student role conflict, support systems, detract systems, sources of stress, and sources of stress relief; two of the questions had two parts. Although many respondents from both groups did not complete the second portion of the two-part questions, several common themes emerged from the remaining responses. The questions are listed below with the themes that were discovered from the responses to that question first for the student with children followed by the comparison group. Following each theme are examples chosen from the data to represent that theme.

Question 1. How does your student role conflict with your other roles (e.g., family, work)?
A. For students with children, responses to this question clustered into the following themes: campus issues, family responsibilities, finances time, and work.

1. The theme of campus issues included feedback from faculty, fit with other students, program demands, and semester timing:

   For the most part, being a student does not usually conflict with my family role. However, because I put my family first I have often found professors unable or unwilling to understand the special circumstance in my life such as 'snow days' or being unable to spend a huge amount of time outside of class on-campus. (feedback from faculty)

   I know that there are plenty of people on campus who are my age or older, but sometimes it seems as though everyone else is 21 and has school and a job to think about period. No baby, no painting the deck, none of that. (fit with other students)

   I feel that the engineering program is very demanding for the student, but excessive for a single parent family with young children. (program demands)

   When exam time comes I must ignore my families routine and concentrate on my studies, this makes me feel guilty as I think I’m cheating them out of quality time. (semester timing)

2. The theme of family responsibilities included child care, study time, household operations, family/community activities, and priorities:

   I work my schedule around her father’s work and school schedule. I try to have either a Tuesday and Thursday campus schedule (or MWF). The other days are her father’s schedule for work and school. (child care)

   I don’t have time to dedicate evening hours for studying and projects because it would take away from time with wife and children. (study time)

   My role as mother/wife always will come first. As I try to balance my class work amid the housework. I know I slack on areas like cleaning, cooking, etc., because of homework. (household operations)
I’m not always able to allow my children to do certain things, such as attending special events, because I’m busy with homework or studying and don’t have time to take them. (family/community activities)

Being a single parent, there never seems to be enough of me to go around as BOTH children need me at the same time in different spots – and I was constantly torn for my own priorities. But I think this just goes with being a single parent. (priorities)

3. Finances, time, and work themes seemed to be meshed together as shown below:

I need to spend more time studying and attending group functions for class and organizations but with the expenses of day care this doesn’t allow me to attend or study as much as I should.

Struggling to make enough money at a part-time job and still get good grades.

Financial obligations make you want to work more. You work more or study more and feel guilty about time taken from your child. You do more with your child and then worry about money and grades.

B. For students in the comparison group, responses to this question clustered into the following themes: family, finance/work/time, and fit with other students.

1. Family:

My education at 32 is considered a joke to my family. I should have been a mother by now with eight years of marriage.

It gets more difficult as I get older because I’m expected to be a more responsible adult and present at family functions.

2. Fit with other students:

It is difficult being a married student. Much of the social life revolves around single life.

Being an adult student somewhat conflicts with being a student. It is hard to find relationships with younger students.
3. Finances, time, and work also seem to be meshed together with this theme:

I am newly married and I just transferred to ISU this year. It is very hard to find a balance between work, home, and school. It is also hard for people to understand the amount of time I spend outside of the classroom on homework. I have zero free time as I am at work or school 50 hours a week. That doesn’t include commuting or time for homework.

It is difficult to fit everything in. Time management is important and organizing meetings, work, and appointments is a struggle.

Sometimes school and family becomes second to work. I have to support myself and so I have to work. This causes me to get stressed out in school and not attend classes.

Sometimes I have problems scheduling classes that allow me to be available to work enough hours every week.

Question 2a. What are your particular support systems and how do they assist you in attaining your degree (e.g., peers, particular staff or office)?

A. For students with children, responses to this question clustered into the following themes: campus services/offices, family, friends/peers, and professors.

1. Campus services/offices:

I started seeing a therapist at Student Services. I can’t believe what a difference it has made.

I use the ISU website a lot at home to answer questions about specific areas (class schedule, financial aid, etc.). I have always had very supportive and flexible teachers if problems at home arose.

My advisor always tries to help me find classes that fit into my work and children’s school schedules.

2. Family:
My parents have been a large support. Some friends that I have had for many years have also been very helpful. My children have also been there to listen to my complaints.

My family is my main support system. If I have a busy week my parents will watch my son in the evenings.

My husband is my greatest support. He helps me study and helps with our daughter so I have time to get my work done.

3. Friends/peers:

Peers, being an older member of my class, I am welcomed into their circles and have their respect as well.

My mother and children are very supportive. So are my friends. I get discouraged and very tired at times, but they help.

My support system is creating a study group. I am currently enrolled in Math 151 (Business Calculus) and Accounting 285 (Managerial Accounting). I have a study partner and have added two more people to the group because I have an A so far and I am willing to share my knowledge with others. On the contrary, I have a D in Acct 285 and one of my study partners has a B. So we recently agreed that I will help her in Math 151 and she will help me in Act 285.

4. Professors:

There are a few professors who are sympathetic to us being an older, married couple with a child trying to go to school. They make emergency exceptions when we really need it (e.g., when our daughter can’t go to school).

All of the professors I’ve encountered have been great. They teach interesting classes, they are available for extra help if necessary, and they understand that their students sometimes need a little extra support. My baby was born during spring finals last year, and one professor let me take my final at home, after we came home from the hospital.

My professor always reminds me to never lose focus in my education. She offers a great deal of support to myself as a parent and a student.
B. For students in the comparison group, responses to this question clustered into the same themes as for the students with children: campus services/offices, family, friends/peers, and professors.

1. Campus services/offices:

   Advisor has been particularly helpful in locating internship and permanent job openings.

   My advisor has been an excellent help as I am a non-traditional student.

2. Family:

   My husband is wonderful. He encourages me to do my best, and tries to help out with things around the house.

   The only support system I have is my husband who sometimes helps out with the housework.

3. Friends/peers:

   Friends listen and are supportive, an encouragement to continue college when discouraged.

   Good peer network – we all take care of each other with respect to missed classes, studying for exams, projects, etc.

   Peers answer questions and clarify problems.

4. Professors:

   I really enjoy the help provided by my professors and fellow students. It seems help is always available if one just asks.

   Vet school faculty and staff, always trying to help you get through.

Question 2b. Do any systems detract from your degree progress?

A. For students with children, responses to this question clustered into the following themes: campus services/offices and family.

1. Campus services/offices:
Campus system, not at all accommodating to the life and needs of adult students.

Class schedules, if more classes were offered one day a week for a longer class time it would free students time and make it easier to find employment, baby sitters, and quality time with family.

I did not find much help from the counselors in my department. They are not flexible on meeting times whatsoever.

2. Family:

Unfortunately my wife has declared that she comes before my studies and that “she will not be ignored.” This creates more pressure and resentment and is less than helpful.

My significant other can be very helpful and supportive but he can also be very unsupportive.

My family (children) are ones that distract me the most as I want to have more free time with them.

B. For students in the comparison group, responses to this question clustered into the following themes: campus services/offices and friends/peers.

1. Campus services/offices:

It is too bad that I can’t say staff or advisors are a part of my support systems. Instead, it is because of them I was forced to stay at ISU an extra year (because of a mistake they made).

2. Friends/peers:

Peers can be distracting if they aren’t as devoted to their classes as I try to be.

I could say that at times my family and friends detract me from my degree progress just by imposing daily situations on me that I don’t have time for.

Question 3a. What do you consider to be the greatest source of stress in your life?
A. For students with children, responses to this question clustered into the following themes: balance, crises/unexpected situations, family, finances and work, school, and time.

1. Balance:

Trying to be too many things at once (mother, employee, student).

Trying to balance school, family life, and work. I worry about schoolwork.

2. Crisis/unexpected situation:

I get most stressed at the end and beginning of a semester. It never fails that I have to change my schedule somehow, or my financial aid check is delayed.

I missed a test once because my daughter cut herself at school and I had to take her to get stitches. It wasn't until months later that I realized I might have been able to make that test up.

3. Family:

By far the greatest source of stress in my life is finding good affordable day-care. This is especially true now that my son is in half-day kindergarten and needs care (i.e., gets off the bus) in the middle of the day. I can recall countless times over my ISU career that I had to change or drop a class because of inadequate or problems with child care, even when we lived in Ames and my son was young.

The greatest stress in my life is my child. I worry about him all the time. It never fails, that he always gets a cold during finals week or something equally important. This makes studying incredibly difficult. Although he is also the greatest relief.

4. Finances and work:

Finances! Money is the greatest stress. I'm fearful of never becoming independent.

Making more money for my family – Bills, food, phone, utilities for home, then gas (car) and baby needs!

5. School:
Meeting assignment deadlines.

Trying to get all my projects and assignments done on time while keeping my other life together as well.

6. Time:

The greatest source of stress in my life is lack of time. Time to study, time with my family, and time to myself.

Family vs. school time needs.

B. For students in the comparison group, responses to this question clustered into the following themes: balance, family, finances, future, school, and time.

Five of these, balance, family, finances, school, and time, were the same for both groups.

1. Balance:

Trying to juggle my schoolwork, executive positions and jobs is the greatest source. It is not any of these in particular, but the combination.

My greatest source of stress is balancing my tremendous homework load with my household obligations.

2. Family:

Being married and students too.

I want to get a degree but my mom thinks that I can’t get a job after graduation so I’m better off if I get a job right now and earn money. I do want a degree so conflict and sub-conflict prevents me from getting the degree I want.

3. Finances:

Money, sometimes that seems to be the only limitation on what you want to do while in college.

Finances are my greatest source of stress because without proper funding and insurance one accident could ruin my life.
4. Future:

Finding an internship and a full-time job after graduation.

The greatest source of stress for sure is the uncertainty of employment after I get a degree, employment in my area of study.

5. School:

Five exams in a week and projects due in the same week.

Taking exams are the greatest source of stress. The fact that it is a primary source for measurement of GPA and ultimately my graduation which comes down to one hour of spitting back what I remembered.

6. Time:

Trying to fit everything I want/need to into a little time and try to learn an impossible large amount of material for class in little time.

*Question 3b. What do you consider to be the greatest source of stress relief in your life?*

A. For students with children, responses to this question clustered into the following themes: activities/pursuits, faith, family, just knowing relief is in sight, and work.

1. Activities/pursuits included hobby/activity, physical activity, and relaxation:

   Music, I play Bass and have a great love for the blues. (hobby/activity)

   The stress relief for me is a good workout. Then I don’t think about school and I get out all my tension. (physical activity)

   The greatest source of relief has been talking to my parents and taking a hot bath. (relaxation)

2. Family:

   My husband’s confidence in me, our relationships, win or lose, succeed or fail we still have each other.
Rocking my kids to bed at night. This makes me realize how precious they are to me and how I can always go to school but they will only grow up once and there’s no way I’m going to miss that for the world!

3. Just knowing relief is in sight:

I am relieved when I get my schoolwork done but that doesn’t last long. It just starts up again until summer break. The summer time I don’t take classes so I can at least have a few months of lower stress and can really see my family.

Time off, when I don’t have to worry about the next ‘chemistry’ test.

4. Work:

Well I’m relaxed at work because I’m only expected to do my job not 10,000 other things.

B. For students in the comparison group, responses to this question clustered into the following themes: activities/pursuits, friends, just knowing relief is in sight, and spouse/significant other. Three of these, activities/pursuits, family, and just knowing relief is in sight were the same for both groups.

1. Activities/pursuits included entertainment, faith, physical activity, and relaxation:

   TV. (entertainment)

   Prayer. (faith)

   Stress relief for me is time in the outdoors, hunting, fishing, and walking. (physical activity)

   Reading a book on my front porch swing is the greatest source of stress relief. It relaxes me so much that I often fall asleep. (relaxation)

2. Friends:

   My greatest stress reliever is the company of friends visiting and going out just to talk.
My greatest stress reliever is when my husband and I are both free for a day and we can enjoy a night out with friends. It’s nice to go out like we did before we were married.

3. Just knowing relief is in sight:

My greatest source of stress relief is simply knowing I am almost done at ISU.

The greatest source of stress relief is to graduate and stay away from school for a while.

4. Spouse/significant other:

Spending time with my husband. I don’t get to see him often because of our schedules. (spouse)

Stress relief is found in relaxing conversation with my girlfriend. (significant other)
Discussion

In this section, I will discuss the results of this research, explain the significance of the study, present limitations, and introduce implications for future research. First, I will discuss the results.

Discussion

In this study the major null hypothesis, there are no differences in perceived stress between independent students with dependent children and independent students without dependent children, was tested. No significant differences in perceived levels of stress were found between the primary sample and the comparison group and therefore the null hypothesis was not rejected.

These findings were certainly not expected. Bird (1997) found that parents report higher levels of psychological distress than persons without children, particularly mothers with children under age 18. Johnson et al. (2000) also found that students who were parents “felt excessively burdened by the stressful demands of parenting” (p. 297). However, positive marital and parental experiences may mediate this. Barnett (1994) found there is little relationship between job experiences and distress when marital and parental experiences are positive.

In addition to the major hypothesis, stress was investigated in relation to age, gender, class attendance, miles traveled to campus, transportation, number of children, credit hours, income citizenship, parent status, hours employed, class rank, partner status, employment, race/ethnicity, and ISU orientation.

As expected, several of the background variables correlated with each other and with one of the perceived stress scales. Parent status correlated with several background variables.
Students who are parents are older, have higher monthly take home income, are married or single but cohabitating, and are enrolled in fewer credit hours. The first three correlations appear to be logical. The last correlation (fewer credit hours), demonstrates a coping mechanism for students with children. Grigsby and Woods (1998) found students with higher degrees of work-school conflict tended to be enrolled in more credit hours.

Several of the background variables significantly correlated with one of the perceived stress scales. First, females were more likely to experience monetary stress than males. As monetary stress increased, classroom attendance decreased. As Blaxter and Tight (1994) found, strain on the individual in one area of their life can negatively affect studies. Adult students are more likely to interrupt their studies because of work or job related matters (Schlossberg et al., 1989).

Students with more children had higher academic demands perceived stress. It is interesting to note that Academic Demands was the one GSI-R factor which approached significance (p< .08) with the independent t-tests. It appears that children do in fact add to the stress and that as there are more children the stress increases. Grigsby and Woods (1998) also found that higher degrees of work-school conflict were related to having more children.

Single (unmarried, divorced, separated, or widowed) students had higher levels of environmental perceived stress. This makes sense in light of the items in this factor: living in the local community, handling relationships, and adjusting to the campus environment. Single students may be more apt to look for support from the campus community in lieu of a spouse.

Working students and students receiving less help from ISU orientation had greater levels of perceived stress trying to meet peers of their race/ethnicity on campus. Related to
this finding, Grigsby and Woods (1998) found that high degrees of work-school conflict were related to working more hours, perceiving lower effectiveness of support services, and having lower levels of satisfaction with educational experiences.

Students with children and the comparison group differed in their use of specific services for students at ISU. However, most of those differences were related to services designed specifically for students with children (e.g., child care offered at music events and speaker series). Over half of the students with children said they would use child care during the day, programs on child care, extended hours for campus programs and services, inclusion of families in special events, and child care offered at music events and speaker series. Just under half of the students with children would use campus programs offered through the Office of Adult Learner and Commuter Student Programs.

Over half of the students in the comparison group would use extended hours for campus programs and services. Just under half of the students in the comparison group would use campus programs and services offered through the Office of Adult Learner and Commuter Student Programs.

Students with children and the comparison group also differed in the importance of specific services for students at ISU. However, most of those differences were related to services designed specifically for students with children. For those programs or services with at least 40.0% reported use (listed above), students in both groups rated those programs or services somewhat important or greater.

What does this information mean for ISU? The feedback from these two groups of students is important because it informs the ISU community on the adult student use and importance of various services either currently being provided or being considered. Students
with children would use services that support their role as parents. Also, both groups would use extended hours for campus programs and services and the Office of Adult Learner and Commuter Student Programs. Thus, ISU could continue to provide and expand programs and services for students with children. In addition, extended hours for campus programs and services could be explored (e.g., additional information available on the internet, expanded hours for walk-ins or phone inquiries) and the Office of Adult Learner and Commuter Student Programs should continue to receive institutional support and continue to inform the campus on the unique needs of these populations.

Students with children and the comparison group did not differ in their perception of the accessibility of specific services for students at ISU. Overall, a majority of respondents in the primary sample and the comparison group felt the services and programs provided accessible hours for their schedule.

Students with children and the comparison group did differ in the kinds of conflicts that arose amid their student role and other roles. Responses from students with children clustered into the following themes: campus issues, family responsibilities, and finances/work/time. The campus issues theme is related to the organizational culture of ISU. According to Warren and Johnson (1995), the perception of a more supportive organizational culture for employees with family responsibility led to less strain between work and family roles. In other words, supportive campus cultures lead to less strain for students with children. Responses from students in the comparison group clustered into the following themes: family, finance/work/time, and fit with other students.

Students with children and the comparison group identified similar support systems.
themes: campus services/offices, family, friends/peers, and professors. However, the two groups differed in how these systems assisted in degree attainment.

Other research has also identified several of these support systems: support of other students, university services, support of family, and support of faculty (Van Stone et al., 1994). In a study of adult undergraduate students (Donaldson et al., 2000), work, friends, family, and former teachers were identified as reinforcement systems.

Using Belsky's (1984) model, Simons et al. (1993) found that parental behavior was more influenced by spouse support than social support network. Although, social network did indirectly influence parenting behaviors through it’s effect on parents’ emotional well-being. Students with children seemed to rely on both spouse support (if married) as well as their social support network.

Several campus services/offices provided much-needed support for students with children. This support ranges from being understanding to providing resources. Students in the comparison group identified academic advisors as their primary source of campus service/office support. Breese and O'Toole (1994) found that older adult students “tend to seek out only the necessary assistance for practical concerns and issues” (p. 185).

Various family members, (e.g., spouses, parents, children) serve as a source of support for student with children. Spouses serve as a major source of support for students in the comparison group. The support is given through encouragement and helping out around the house.

For students with children, friends and peers often lend an ear as well as their knowledge. Support ranges from being welcoming to creating reciprocal relationships.
Students in the comparison group found friends and peers to be a source of encouragement and academic help.

Professors also often play a supporting role for students with children. This is frequently demonstrated through attitudes and policies. Students in the comparison group viewed faculty as a source of help when needed; these students did not report relying on faculty for the same "emergency situation" support needs indicated by students with children. This is also related to Warren and Johnson's (1995) findings discussed earlier. In the college setting, if students perceive a supportive environment, they will experience less role strain. In addition, women feel better about filling all of their roles when they utilize family-oriented benefits.

Many of the same support systems that assist students in attaining their degree often also detract. Specifically, students with children identified both campus services/offices and families as systems that detract from their degree progress. Students in the comparison group also identified campus services/offices as well as friends/peers as systems that detract from degree progress. The very people and places who help us also stand in our way. This is consistent with research on social support which shows that the same person can be a source of both positive and negative support (Richardson et al., 1991).

Students with children and students in the comparison group identified both similar and different sources of stress. Responses from students with children clustered into the following themes: balance, crises/unexpected situation, family, finances/time/work, and school. Responses from students in the comparison group were the same as for students with children for four of the five themes: balance, family, finances/time/work, future, and school. Responses from both groups indicated stress from both daily hassles and central hassles.
DeLongis et al. (1982) define hassles as irritating, frustrating, annoying, and distressing demands that to some degree characterize everyday transactions with the environment. Gruen et al. (1988) define central hassles as “those which reflect important ongoing themes or problems in the person’s life” (p. 743).

Both groups of students struggle with balancing all of their roles. Brayfield found that the balance and combination of competing responsibilities of employment, relations with their spouse, and parenthood is affected by how women and men allocate time across multiple roles. Students with children seem to be most affected by crises and unexpected situations. Both groups see family as a great source of stress. More often, students with children reported stress related to parenthood and their children, whereas students in the comparison group identified other family members as the greatest source of stress.

Finances, time, and work are great sources of stress for both groups, although the needs and concerns of students with children appear to be more immediate (e.g., bills, food, baby needs). It is easier to deal with one’s own needs in these basic areas than to have to factor in a dependent.

Students in the comparison group view the future as a great source of stress in their lives. Specifically, they are concerned about what will happen after graduation (e.g., job, graduate school). School is a great source of stress for both groups.

Students with children and the comparison group had different sources of stress relief. Responses for students with children clustered into the following themes: activities/pursuits, family, just knowing relief is in sight, and work. Comparison group responses also clustered into activities/pursuits, and just knowing relief is in sight. In addition, comparison group responses cluster into friends and spouse/significant other.
Students with children see hobbies/activities, physical activities, and relaxation as sources of stress relief in their lives. Students in the comparison group view entertainment, faith, physical activity, and relaxation as activities/pursuits to relieve stress.

Although family and spouse/significant other serve as a great source of stress for students with children and comparison group students respectively, they also serve as a great source of stress relief. Both groups see knowing relief is in sight as a source of stress relief.

Significance of the Study

This problem is important because students with children often have unique life circumstances in addition to their student role. The dimension of parenting is a part of the student’s life and students cannot be partitioned into separate roles (e.g., student, parent, employee). Colleges and universities need to have a better understanding of the whole student and the student’s lives outside of the campus. Student life outside of campus provides a myriad of supports and distractions.

Limitations

The following limitations will be discussed: GSI-R, generalizability, timeliness, and comparative design. I will begin by discussing the instrument, GSI-R, used in this research.

The GSI-R was developed to measure perceived stress for graduate students. Although many graduate students also have children, the graduate and undergraduate student experiences may be different enough that another instrument may have been more appropriate.

Results from this study could be generalized to campuses and campus bodies similar to ISU. However, these results might not be generalizable to community colleges or distance education institutions which serve a large proportion of students in this population.
Timeliness is an issue. Data were collected in spring 1999. Campus culture, policies, and study body characteristics may have changed during this time. Specifically, data evaluating campus services may not apply to the current wave of adult students.

The final limitation focuses on the comparative design. Feedback from respondents, particularly in the comparison group, indicated that the survey may have been better designed for the primary sample (students with children) than the comparison group. Specifically, the background questionnaire collected data on age and number of children and child care. Several respondents in the comparison group commented on specific items not applicable to them. The GSI-R included items on child care. Students in the comparison group were unable to answer this item and the item had to be excluded from further analysis.

If a comparative design is employed in the future, the researcher may consider using a comparison group other than independent students to draw a sharper contrast between students with children and other student samples. Although the comparison between students with children and independent students is relevant, it may minimize some important differences between students with children and other student populations.

Implications for future research

There are several implications for further research. Further qualitative studies, continued assessment by colleges and universities, and additional research on students with children are discussed.

Further qualitative studies of students with children could be conducted to find out “what is going on here.” Even within this group, there is a great amount of diversity in age, gender, marital status, and life experience. In addition, similar research focusing on gender differences might shed light on some differences that were only hinted at in this study.
Colleges and universities need to stay abreast of current research on adult learners. In addition, they need to know who their students are and how they can best be served. This can be achieved through ongoing assessment with a feedback loop to make changes in campus policies, services, and awareness.

Although data were collected on the age of children, no analyses were conducted on child’s age. This could be an area for further exploration. Does the age of the affect perceived stress? In addition, many returning students are caught in the “sandwich” generation. These students may be caring for both children and older parents. How do those multiple roles impact perceived stress?

In conclusion, this research examined the differences in perceived stress between two independent undergraduate student groups (those with children and those without children). Although the two groups were not significantly different in their reports of stress, it appears after further statistical analyses that Academic Demands do make a greater impact on students who are parents than students who are not. One of the ways this group of students copes with this is to cut back on the number of academic credit hours that they take at any one time.

Several background variables were related to perceived stress. Females experienced more monetary stress than males. As monetary stress increased, classroom attendance decreased. Single students had higher levels of environmental perceived stress. Working students and students receiving less help from ISU orientation had greater levels of perceived stress trying to meet peers of their race/ethnicity on campus.

Students with children and the comparison group differed in their use of specific services for students at ISU. However, most of those differences were related to services
designed specifically for students with children. Both students with children and students in
the comparison group felt services and programs provided accessible hours for their
schedule.

Students with children and the comparison group did have similar and different kinds
of conflicts that arose amid their student role and other roles. The two groups identified
similar support systems. For both groups, many of the same support systems were also
identified as detractions. The two groups identified both similar and different sources of
stress and the two groups relieve their stress in different ways.

As the college population continues to get older and with students having more roles,
it is important that colleges and universities know who their students are both inside and
outside of the classroom. This knowledge may lead to changes or accommodations to better
serve this student population.
Appendix A

Graduate Student Inventory-Revised (GSI-R)
Background Questionnaire

1. Your age in years at last birthday: __________

2. Your gender: ______
   a) male
   b) female

3. What is your partner status? ______
   a) married
   b) single
   c) divorced
   d) separated
   e) widowed
   f) single but cohabitating

4. What is your class rank? ______
   a) freshman
   b) sophomore
   c) junior
   d) senior

5. How many credit hours are you enrolled in this semester? ______

6. How would you rate your class attendance? ______
   a) attend almost everyday
   b) miss a day a week
   c) miss 2 days a week
   d) miss 3 days a week
   e) hardly attend

7. Where do you live? ______
   a) University Student Apartment Community
   b) Residence Halls
   c) apartment
   d) in parent’s home
   e) in a house ______ own _______ rent (please specify)

8. How many miles do you travel to campus (one way)? ______

9. If you live outside of Ames, how do you get to campus? ______
   a) personal car
   b) carpool

10. Ages of children under 18 living with you: ________________________
11. Who cares for your children while you are in school? ____________
   a) in home day care provider
   b) private day care provider
   c) university day care
   d) Head Start
   e) friend/relative
   f) other (please specify) ______________

13. Employed: ________
    a) on campus
    b) off campus
    c) not employed

   Number of hours employed/week: ______________

14. Sources of financial support (list all that apply): _______________________
    a) job
    b) spouses job
    c) savings
    d) loans
    e) scholarships or other financial aid
    f) social services
    g) money from parents
    h) child support
    i) alimony
    j) other (please specify) ______________

15. Monthly take home income (include all sources of financial support): _______

16. What is your racial/ethnic background? ____________________
   a) African American
   b) American Indian/Alaskan Native
   c) Asian American/Pacific Islander
   d) Hispanic
   e) White (non-Hispanic)
   f) Other (please specify) ______________

17. What is your country of citizenship? _____________

18. How helpful was the Iowa State University Orientation in preparing you for your
    student experience? _______
    a) not at all helpful
    b) somewhat helpful
    c) very helpful

19. What is your major? __________________________
Graduate Stress Inventory - Revised

Rate each item to indicate how stressful each of these events has been for you since you entered college. (If the content of an item does not apply to you, mark NA.) Please use the following scale:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Fulfilling responsibilities both at home and at school</td>
</tr>
<tr>
<td>2.</td>
<td>Trying to meet peers of your race/ethnicity on campus</td>
</tr>
<tr>
<td>3.</td>
<td>Taking exams</td>
</tr>
<tr>
<td>4.</td>
<td>Being obligated to participate in family functions</td>
</tr>
<tr>
<td>5.</td>
<td>Arranging child care</td>
</tr>
<tr>
<td>6.</td>
<td>Finding support groups sensitive to your needs</td>
</tr>
<tr>
<td>7.</td>
<td>Fear of failing to meet program expectations</td>
</tr>
<tr>
<td>8.</td>
<td>Participating in class</td>
</tr>
<tr>
<td>9.</td>
<td>Meeting with faculty</td>
</tr>
<tr>
<td>10.</td>
<td>Living in the local community</td>
</tr>
<tr>
<td>11.</td>
<td>Handling relationships</td>
</tr>
<tr>
<td>12.</td>
<td>Handling the academic workload</td>
</tr>
<tr>
<td>13.</td>
<td>Peers treating you unlike the way they treat each other</td>
</tr>
<tr>
<td>14.</td>
<td>Faculty treating you differently than your peers</td>
</tr>
<tr>
<td>15.</td>
<td>Writing papers</td>
</tr>
<tr>
<td>16.</td>
<td>Paying monthly expenses</td>
</tr>
<tr>
<td>17.</td>
<td>Family having money problems</td>
</tr>
<tr>
<td>18.</td>
<td>Adjusting to the campus environment</td>
</tr>
<tr>
<td>19.</td>
<td>Being obligated to repay loans</td>
</tr>
<tr>
<td>20.</td>
<td>Anticipating finding full-time professional work</td>
</tr>
<tr>
<td>21.</td>
<td>Meeting deadlines for course assignments</td>
</tr>
</tbody>
</table>

Adapted from Rocha-Singh, 1994
Assessment of Specific Services for Students at Iowa State University

Below is a list of services either currently provided or being considered at Iowa State University. We would like your responses about these services.

1) Would you use this service?
Check whether or not you would use this service.

2) If yes, how important is this service to you?

<table>
<thead>
<tr>
<th>Not Very Important</th>
<th>Somewhat important</th>
<th>Very important</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Services</th>
<th>Would you use this service?</th>
<th>If yes, how important is it? (rate 1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Commuter Student Lounge in the Memorial Union</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>2. Commuter Student Organization</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>3. Child care during the day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Programs on child care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Ability to bring children to class in an emergency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Extended hours for campus programs and services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Inclusion of families in special events, i.e. Homecoming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Child care offered at music events and speaker series</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Campus programs and services offered through the Office of Adult Learner and Commuter Student Programs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do the following services and programs provide accessible hours for your schedule?

1. Dean of Students Office
2. Office of Adult Learner and Commuter Student Programs
3. Student Health Services
4. Office of Student Financial Aid
5. Parks Library
6. Durham Computer Labs
7. ISU Student Counseling Services

Yes/No
Open-ended questions

How does your student role conflict with your other roles (e.g. family, work)?

What are your support systems and how do they assist you in attaining your degree (e.g. peers, particular staff or office)? Do any systems detract from your degree progress?

What do you consider to be the greatest source of stress in your life? What do you consider to be the greatest source of stress relief in your life? Please explain.
Appendix B

Cover Letters
PARENT SAMPLE COVER LETTER

March, 1999

Dear Iowa State Student:

I am a Masters student in Human Development and Family Studies at Iowa State University, working on a thesis in the area of parenting and stress. Particularly I am studying the issues related to the multiple roles of being a parent while also being an undergraduate student. You have been identified as fitting these multiple roles. I hope you will find this topic as interesting as I do and help me complete this research by filling out the enclosed questionnaire and returning it in the enclosed prepaid envelope by April 10, 1999.

The first ten students returning a completed survey will receive a $10 grocery store gift certificate. The remaining students returning a completed survey by April 10, 1999 will be placed in a drawing for two $25 grocery store gift certificates. I realize you are very busy and I really appreciate your taking the time to respond to this material. Your response will be kept strictly confidential. The code number on your form will be used to store and identify data, and no questionnaire will be identified with a name. Only Iowa State research personnel associated with this project will see the returned forms.

Participating in this project is entirely voluntary, and I would be happy to answer any questions you might have. If you have any questions or concerns, please call me at (515) 572-4441. The enclosed survey will take about 20 minutes to complete.

Remember to return your survey in the prepaid envelope by April 10, 1999. Thank you so very much for your help with this project.

Sincerely,

Michelle D. McFadden, Graduate Student
Human Development and Family Studies

Sedahlia Jasper Crase, Ph.D.
Major Professor
COMPARISON GROUP SAMPLE COVER LETTER

March, 1999

Dear Iowa State Student:

I am a Masters student in Human Development and Family Studies at Iowa State University, working on a thesis in the area of role stress. Particularly I am studying the issues related to the multiple roles of being an undergraduate student. I hope you will find this topic as interesting as I do and help me complete this research by filling out the enclosed questionnaire and returning it in the enclosed prepaid envelope by April 10, 1999.

The first ten students returning a completed survey will receive a $10 grocery store gift certificate. The remaining students returning a completed survey by April 10, 1999 will be placed in a drawing for two $25 grocery store gift certificates. I realize you are very busy and I really appreciate your taking the time to respond to this material. Your response will be kept strictly confidential. The code number on your form will be used to store and identify data, and no questionnaire will be identified with a name. Only Iowa State research personnel associated with this project will see the returned forms.

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Remember to return your survey in the prepaid envelope by April 10, 1999. Thank you so very much for your help with this project.

Sincerely,

Michelle D. McFadden, Graduate Student
Human Development and Family Studies

Sedahlia Jasper Crase, Ph.D.
Major Professor
Appendix C

Reminder Postcards
PARENT SAMPLE POSTCARD

Recently I sent you a questionnaire about parenting and stress. If you have completed and returned it to me, please accept my sincere thanks. If not, please do so today. Remember, the first ten respondents will receive a $10 grocery store gift certificate and the remaining students who respond by April 10, 1999, will be placed in a drawing for two $25 grocery store gift certificates.

Your opinions and experiences are very important to the evaluation. If you have any questions or need another copy of the survey, please call me at (515) 572-4441. Thank you for your time.

Sincerely,

Michelle D. McFadden, Graduate Student
Human Development and Family Studies

COMPARISON GROUP SAMPLE POSTCARD

Recently I sent you a questionnaire about role stress. If you have completed and returned it to me, please accept my sincere thanks. If not, please do so today. Remember, the first ten respondents will receive a $10 grocery store gift certificate and the remaining students who respond by April 10, 1999, will be placed in a drawing for two $25 grocery store gift certificates.

Your opinions and experiences are very important to the evaluation. If you have any questions or need another copy of the survey, please call me at (515) 572-4441. Thank you for your time.

Sincerely,

Michelle D. McFadden, Graduate Student
Human Development and Family Studies
Appendix D

Thank You Letters
GENERAL THANK YOU LETTER

April, 1999

Dear Iowa State Student,

Thank you for agreeing to participate in my study by completing and returning the undergraduate stress survey. Group results of the study will be shared with Iowa State University administrators, published in my Master’s thesis, and presented at state and national conferences.

I hope to have my thesis done by the end of the summer. If you would like to have a one-page summary please let me know via e-mail by the end of the semester, mcfadden@iastate.edu. I will send the document to you as an e-mail attachment in August. If you will not have an e-mail account in the fall, please let me know how to get the information to you.

Thank you for sharing your experience with me. Best of luck in your studies this semester and beyond.

Sincerely,

Michelle D. McFadden, Graduate Student
Human Development and Family Studies
THANK YOU LETTER $10 INCENTIVE RECIPIENT

April, 1999

Dear Iowa State Student,

Thank you for agreeing to participate in my study by completing and returning the undergraduate stress survey. I also appreciate your quick response. Your $10 grocery store gift certificate can be picked up at 101 Child Development Building. The office is open weekdays 8 a.m. to 12 noon and 1 p.m. to 5 p.m. If you need to make other arrangements, please contact me 572-4441.

Group results of the study will be shared with Iowa State University administrators, published in my Master’s thesis, and presented at state and national conferences. I hope to have my thesis done by the end of the summer. If you would like to have a one-page summary please let me know via e-mail by the end of the semester, mcfadden@iastate.edu. I will send the document to you as an e-mail attachment in August. If you will not have an e-mail account in the fall, please let me know how to get the information to you.

Thank you for sharing your experience with me. Best of luck in your studies this semester and beyond.

Sincerely,

Michelle D. McFadden, Graduate Student
Human Development and Family Studies
THANK YOU LETTER $25 INCENTIVE RECIPIENT

April, 1999

Dear Iowa State Student,

Thank you for agreeing to participate in my study by completing and returning the undergraduate stress survey. Congratulations, you have won a $25 grocery store gift certificate. Your gift certificate can be picked up at 101 Child Development Building. The office is open weekdays 8 a.m. to 12 noon and 1 p.m. to 5 p.m. If you need to make other arrangements, please contact me 572-4441.

Group results of the study will be shared with Iowa State University administrators, published in my Master’s thesis, and presented at state and national conferences. I hope to have my thesis done by the end of the summer. If you would like to have a one-page summary please let me know via e-mail by the end of the semester, mcfadden@iastate.edu. I will send the document to you as an e-mail attachment in August. If you will not have an e-mail account in the fall, please let me know how to get the information to you.

Thank you for sharing your experience with me. Best of luck in your studies this semester and beyond.

Sincerely,

Michelle D. McFadden, Graduate Student
Human Development and Family Studies
Appendix E

Code Book
## Code Book

<table>
<thead>
<tr>
<th>Variable Label</th>
<th>Values and Value Labels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent status</td>
<td>1 = comparison group; 2 = primary sample</td>
</tr>
<tr>
<td>Academic Demands</td>
<td>Continuous (1-5); 1 = Not very stressful; 3 = Somewhat stressful; 5 = Very stressful</td>
</tr>
<tr>
<td>Academic Relationships</td>
<td></td>
</tr>
<tr>
<td>Monetary Stress</td>
<td></td>
</tr>
<tr>
<td>Environmental Stress</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Continuous</td>
</tr>
<tr>
<td>Gender</td>
<td>1 = Female; 2 = Male</td>
</tr>
<tr>
<td>Partner status</td>
<td>1 = Married or single but cohabitating; 2 = Single, Divorced, Separated, or Widowed</td>
</tr>
<tr>
<td>Class rank</td>
<td>1 = underclassmen (Freshman or Sophomore); 2 = upperclassmen (Junior, Senior, or Vet Med)</td>
</tr>
<tr>
<td>Credit hours</td>
<td></td>
</tr>
<tr>
<td>Class attendance</td>
<td>1 = attend almost everyday; 2 = miss a day a week; 3 = miss 2 days a week; 4 = miss 3 days a week; 5 = hardly attend</td>
</tr>
<tr>
<td>Miles travel to campus</td>
<td>Continuous</td>
</tr>
<tr>
<td>Transportation</td>
<td>1 = personal car; 2 = carpool</td>
</tr>
<tr>
<td>Number of children</td>
<td>Continuous</td>
</tr>
<tr>
<td>Employment</td>
<td>1 = not employed; 2 = employed on campus, off campus, or both</td>
</tr>
<tr>
<td>Hours employed</td>
<td>Continuous</td>
</tr>
<tr>
<td>Monthly take home income</td>
<td>Continuous</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td>1 = White (non-Hispanic); 2 = minority</td>
</tr>
<tr>
<td>Citizenship</td>
<td>1 = United States; 2 = other</td>
</tr>
<tr>
<td>ISU Orientation</td>
<td>1 = not at all helpful; 2 = somewhat helpful; 3 = very helpful</td>
</tr>
<tr>
<td>helpfulness</td>
<td></td>
</tr>
</tbody>
</table>
References


