Experiences of Student-Parents at the University of California, Irvine

Desiree De Pace

July 16th, 2016

Psychology and Social Behavior

University of California, Irvine

Faculty Advisor: Dr. Wendy Goldberg

Psychology and Social Behavior

Acknowledgements

Abstract

The aim of the current study was to better understand school-family conflict and perceived supports and resources for student-parents at UCI. Personal and institutional factors related to student-parents' academic success and well-being were explored. Specifically, this study examined the experiences and challenges of both undergraduate and graduate student-parents at UCI, and explored the associations among student-parents' awareness and use of resources and role strain, stress, school-family conflict, utilization of informal and formal resources, and academic success. Furthermore, this study explored differences between UCI student-parents' utilization of formal resources, informal supports, stress, school-family conflict, and academic success based upon their ages, majors, student status as an undergraduate or graduate student, and gender. This study was designed in two phases, a quantitative survey and a qualitative interview. Eighty-two student-parents– 31 graduate (19 women) and 51 undergraduates (29 women) ranging in age from 19–50 years ($M = 32.45$, $SD = 6.45$) participated in the Phase 1 Survey portion of the study and eight of the 82 student-parents from the survey sample also participated in the Phase 2 interview. Findings suggest that student-parents at UCI may benefit from more efficient dissemination of information regarding resources available to student-parents, a resource center for student-parents, or a website for student-parents, and financial assistance.

Keywords: non-traditional, student-parents, students with children

Introduction

Adult learners or "non-traditional" student populations have increased across the United States, constituting nearly 85% of postsecondary education enrollment in four-year institutions in 2013 (Choy, 2002; Hussar & Bailey, 2013; Soares, 2013). Non-traditional students have been defined as students who meet one or more of the following criteria: have delayed enrollment into a postsecondary education program after high school, attend college part time, work full-time or part-time while matriculating, are considered financially independent, have dependents other than a spouse, are single parents of children under 18, and attend college but do not have a high school diploma or GED equivalent (Choy, 2002; U.S. Department of Education, 2015). Non-traditional students also do not follow a conventional path once they matriculate. Between 1986 and 1992, non-traditional students were less likely to complete their degree within five years and were more likely to leave school before completing their degree than traditional students. Among undergraduates, approximately 31 percent of non-traditional students had completed their degree within 5 years, compared to 54 percent of their traditional counterparts, a trend that persisted through 2012 (Advisory Committee on Student Financial Assistance (ACSFA), 2012; National Center for Education Statistics (NCES), 2015). According to the NCES, from 2013 to 2018 the enrollment of non-traditional students is projected to increase (2013). Considering that 85% of students participating in post-secondary education programs can be considered non-traditional, it is clear that non-traditional students are now the majority of enrollees in higher education (Pelletier, 2010).

Student-parents, a subpopulation of non-traditional students, often meet criteria for more than one of the previously stated domains for non-traditional student. Essentially, student-parents are considered "highly non-traditional students" (Choy, 2002). Student- parents are more likely

to be financially independent, attend part time, have paid employment, and have delayed enrollment in postsecondary education (Choy, 2002; Institute for Women's Policy Research (IWPR), 2014; NCES, 2015?). According to the IWPR, in 2014, 4.8 million (26 percent) of all postsecondary students and 3.4 million women in the United States were raising dependent children (IWPR, 2014). As the population of non-traditional students in postsecondary education continues to rise, the number of student-parents entering postsecondary education programs is expected to increase as well (Hussar & Bailey, 2013). Despite the consistently increasing numbers of student-parents in higher education, policies, research, resources, and funding for this population are severely limited. Considering that educational attainment is a strong indicator of economic and social mobility for both students and their children, more research regarding this population is needed in order to ensure their successful matriculation (Costello, 2012; Schumacher, 2013). This thesis addresses the perceived needs and challenges faced by student-parents at one university

Until recently, research regarding student-parents in the U.S. has been limited to marginal references within studies oriented toward the broader category of non-traditional students. Many universities within the U.S. do not separate student-parents from the non-traditional student category and as a result there is limited data regarding the number of student-parents at universities and what resources, policies, and supports assist them toward degree completion. The limited body of research in the U.S. regarding student-parents has been primarily focused on community college students, women, and underrepresented minorities (Brown & Nichols, 2012; Costello, 2012; Lovell, 2013; Rose & Hill, 2013). The studies regarding student-parents in the U.S. that do exist tend to be unpublished dissertations (e.g., Caldwell, 2015; Leaman, 2015; Sallee, 2015; Swingle, 2013). There appear to be only two published U.S. studies that utilized

quantitative methods to explore challenges faced by this segment of the campus population and

to examine demographic differences among student-parents such as age, major, student status

and gender (Leaman, 2015; Swingle, 2013)

In contrast, within the past 10 years, researchers in the United Kingdom (U.K.) and

Canada have studied and published work concerning student-parents' unique needs and revealed

barriers that impede their educational achievement (Gault, Reichlin, Reynolds, & Froehner,

2014; Moreau & Kerner, 2013; van Rhijn, 2014). Consistent barriers which have been identified

by scholars in the U.S., the U.K., and Canada include feelings of invisibility, stress related to

negotiating parenting and academic responsibilities, financial difficulties regarding child care,

tuition, and housing, and managing emotional and physical health (ACFSA, 2012; Brown &

Nichols, 2012; Marandet & Wainwright, 2010; Rose & Hill; 2013; Sores, 2013; van Rhijn,

Quosai, Lero, 2011; Yakaboski, 2010). Whereas most of the barriers faced by student-parents are

not exclusive to this population, the conflicting role demands of student-parents add a unique

feature to their experiences and as a result may impact their needs and academic outcomes

compared to their traditional counterparts. In the U.K. and Canada, the countries and campuses

have responded with government initiatives, support programs, resource services, and

institutional funding to assist student-parents (Gault, Reichlin, Reynolds, & Froehner, 2014;

Moreau & Kerner, 2013; van Rhijn, 2014). Traditional undergraduates, those who enroll full

time in a postsecondary education program after completing their high school diploma or GED

equivalent, are typically able to direct most of their time and energy towards their studies;

however, this is not the case for non-traditional students and especially not the case for student-

parents.

Instead of being able to focus full-time on their studies like traditional undergraduates,

most non-traditional students try to balance multiple roles such as employee, student, and parent.

Due to the fact that family and academia are both considered "greedy" institutions in that they

both place high demands upon the individual, role strain among student-parents is common

(Caldwell, 2015; Home, 1997; Leaman, 2015; Moreau & Kerner, 2015; Sallee, 2015; Swingle,

2013; van Rhijn, 2012). Role strain occurs when a person inhabits two conflicting roles (Goode,

1960). For example, studying and attending classes to meet rigorous academic demands as a

student while taking primary responsibility for the care of a child may strain the individual's

capacity to fulfill the responsibilities of both roles.

Characteristics of the student-parents may influence how well they manage their multiple

roles. Swingle (2015) found that student-parents who are older tend to experience less role strain

than their younger counterparts and both groups of student-parents tend to report higher GPA's

than traditional students in general despite the barriers they face (2013). This may be due to the

successful student-parents' strong time management skills and keen motivation for higher

education compared to non-student-parents (Carney-Crompton & Tan, 2002; Swingle, 2015).

Although most research regarding traditional students has not found significant

differences between men and women students, gender differences among student-parents may

exist due to varying gender based role demands placed on student-parents (Swingle, 2013).

Female student-parents are more likely to maintain more hours of caregiving responsibilities than

their male counterparts and that gender heavily contributes to the experiences of student-parents

in institutions of higher education and possibly their motivations for study (Brown & Nichols,

2012; Marandet &Wainright; 2010; Moreau & Kerner, 2015; Swingle, 2013). There are gender

differences in major field: similar to traditional students, female student-parents are less likely

than their male counterparts to major within science, technology, engineering, and math fields

(STEM) (Nelson, Froehner, & Gault, 2013). Because women student-parents outnumber male student-parents enrolled in post-secondary education programs (Carney-Crompton & Tan, 2002; Moreau & Kerner, 2015; Swingle, 2013; van Rhijn, Quosai, Lero, 2011), they tend to the group that is studied. The current study includes both men and women student-parents.

Although existing publications report primarily qualitative data regarding student-parents, resources such as institutional supports and policies for student-parents, access to community resources, and informal supports such as peer support groups and family support, have been found to contribute to academic success and well-being of student-parents (Demeules & Hamer, 2013; Lovell, 2014; Moreau & Kerner, 2013; Robertson, Weider, A., Weider, J. & Morey, 2012; Swingle, 2013). Furthermore, previous qualitative findings indicate that student-parents benefit psychologically from formal institutional resources such as high quality on campus child care, counseling services, peer support groups and academic flexibility, or the ability to arrange their schedules according to their personal and family needs, as well as financial assistance for child care and scholarships for student-parents (ACFSN, 2015; Demeules & Hamer, 2013; Lovell, 2014; Moreau & Kerner, 2013; Robertson, Weider, Weider, & Morey, 2012;Swingle, 2013;). Despite findings regarding the importance of formal institutional resources for student-parents, resources for this population do not exist or have begun to decline on many college campuses. For example, child care services available to student-parents on campus, an essential resource for many student-parents, has been declining over the past five years (IWPR, 2013). Also, many four year universities do not provide adequate financial aid for student-parents, often forcing student-parents to work while matriculating in order to support their families thereby adding to their stress and role strain (Leaman, 2015). Research that has examined how institutional supports may be improved upon in order to help student-parents

complete their degrees and decrease stress related to balancing both the student and parent roles has found that the areas in need of most improvement are housing, financial assistance, access to child care, and dissemination of information regarding the existence of resources available to student-parents (Brown & Nichols, 2012; van Rhijn, 2012; Carney-Crompton & Tan, 2002; Home, 1997; Marandet & Wainwright, 2009; Medved & Hiesler, 2010; Scott, Burns, & Cooney, 1996; Swingle, 2013; van Rhijn, Quosai, Lero, 2011). Clearly, in order to support student-parents during their academic careers, institutions of higher education must adapt existing student services in order to accommodate the needs of this population.

A number of past studies have called for quantitative study of student-parents and comparisons between groups of student-parents based upon their ages, majors, student-status, and gender, however, the current study is the first known to do so (Caldwell, 2015; Costello, 2012; Lovell, 2014; Marandet & Wainwright, 2010). Building on past research and in order to contribute to the limited body of research regarding student-parents, the current study examined knowledge and use of resources related to child care, counseling services, and academic flexibility as well as informal supports such as partner support and neighborhood support. This study also identified potential barriers that student-parents may face when utilizing the few institutional resources available to them. Finally, this study is the first known to quantitatively and qualitatively explore differences between student-parents' knowledge and use of resources and informal supports and their well-being and academic outcomes.

The current study

The aim of the current study was to better understand school-family conflict and perceived supports and resources for student-parents at UCI. Personal and institutional factors related to student-parents' academic success and well-being were explored. Specifically, this

study examined the experiences and challenges of both undergraduate and graduate student-parents at UCI, and explored the associations among student-parents' awareness and use of resources and role strain, stress, school-family conflict, utilization of informal and formal resources, and academic success. Furthermore, this study explored differences between UCI student-parents' utilization of formal resources, informal supports, stress, school-family conflict, and academic success based upon their ages, majors, student status as an undergraduate or graduate student, and gender.

The current research study consisted of two phases. Phase one of the study first surveyed a convenience sample of student-parents attending UCI about what formal resources, or institutional supports, they knew about, which resources they had used, and which types of resources they felt they could benefit from. The survey also included measures of school-family role strain, stress, and academic success. After data from the survey were analyzed, phase two of the study recruited student-parents from willing participants in the survey sample who indicated high levels of school-family role conflict and stress to participate in a semi-structured qualitative interview in order to gain a deeper understanding of their experiences. Phase two of the study was conducted in order to learn more about the nature of school-family conflict and to gain insight regarding what resources student-parents have utilized, or feel they may benefit from.

The overall goal of the study was to explore the associations between formal resources and informal supports and student-parents' well-being and academic success. The two specific aims from the Phase One survey were to:

(1) (a) Learn the extent to which student-parents know about and/or have utilized formal resources such as a campus social worker, child care policies, and policies that promote academic flexibility; (b) examine whether knowledge and/or use of resources varies by

student-parents' age, major, student status, and gender.

(2) (a) Examine whether student-parents' knowledge and/or use of formal resources and

informal supports are associated with their psychological well-being and academic

success. (b) Examine whether the associations between formal resources and informal

supports and outcomes differ by by age, major, student status, and gender.

The two specific aims from the Phase Two interview were to:

(3) Describe perceived barriers to use of resources.

(4) Describe potential resources that student-parents believe may assist them toward

degree completion and achievement, lessen perceived stress, and promote academic

success.

Methods

Participants

Eighty-two student-parents– 31 graduate (19 women) and 51 undergraduates (29 women)

ranging in age from 19–50 years ($M = 32.45$, $SD = 6.45$) participated in the Phase 1 Survey

portion of the study. Of the 82 participants, 41 identified as White/European American, 19 as

African American, 13 as Hispanic/Latino; 4 as Asian, and 5 as multi-ethnic. The majority of the

student-parents were married or partnered ($n=70$) and described themselves as heterosexual

($n=76$). Exactly half of participants were majoring in STEM fields ($n=41$) and the number of

children ranged from one to four with a mean of 1.3 (See Table 1 and Table 2 for description of

sample). Participants were recruited through convenience sampling methods including

informational flyers posted at UCI child care facilities, student resource offices, and an

advertisement placed in the monthly graduate student newsletter.

Table 1

Means and Standard Deviations for Major Study Variables (N=82)

Variable	*M*	*SD*
School-Family Role Strain	2.79	.39
Partner Support for School	2.86	.55
Grade Point Average (GPA)	3.76	1.12
Health Symptoms	1.33	.94
Neighborhood Support	3.43	1.09
Satisfaction with Child Care	17.5	2.83
Number of Stressful Events	.05	.09
Resources Known	2.98	1.81
Resources Used	.38	.58
Known Child Care Resources	.744	.44

Table 2

*Descriptive Information about Student-Parent Sample (*N= 82)

Variable	*%*	*M*	*SD*
Gender			
Women	58.5		
Men	40.2		
Ethnicity			
European American	50		
African American	23.2		
Latino/a	15.9		
Other or Multi-ethnic	11		
Student Status			
Graduate	62.2		
Undergraduate	37.8		
Relationship Status			
Married/Partnered	85.4		
Divorced/Single	14.6		
Major			
S.T.E.M.	50		
Non-STEM	50		
Age in Years		32.45	6.45

Eight of the 82 student-parents from the survey sample also participated in the Phase 2

interview (see procedures below). Of the eight participants, two were men and six were women,

four were undergraduates, four were graduate students, and their ages ranged from 25 to 42 years

old (M =32.43, SD =6.5). Six of the participants were married or partnered while two were single or divorced. Two participants described themselves as Hispanic/Latino, three as White/European American, one as Asian, and one as multi-ethnic. Seven of the eight participants described themselves as heterosexual. Three participants were majoring in STEM fields. The number of children for these participants ranged from one to two with one participant expecting a third (M=1.57, SD=.53).

Procedure

All participants provided consent before starting the Phase 1 survey and indicated whether or not they were interested in Phase 2 of the study. Upon completion of the survey, participants were offered compensation of a $10 Amazon gift card or course credit according to their preference. The 25 participants who scored above the mean for school-family role strain (M = 89.5, SD = 12.8) and who indicated interest in Phase 2 (the interview portion) of the study were contacted via email to schedule interviews. Of the 25 participants contacted, eight agreed to participate and completed Phase 2 of the study.

Measures

Survey. Phase 1 of the study consisted of a survey of 42 questions designed using Qualtrics survey software. The survey included questions regarding demographic information such as age, gender, relationship status, sexual orientation, ethnicity, student status, and major/departmental affiliation. Other sections addressed resources and benefits, role strain and well-being, sources of support, and academic success. A copy of the interview schedule can be found in Appendix A

Resources and benefits. Sections of the University of California's Faculty Work and Family Survey (Mason, 2003) were adapted for a student sample to assess the *formal institutional resources* known and utilized by student-parents at UCI, what resources student-parents believed

they may benefit from, and how much time student-parents allocated attending to academic work, household work, or caregiving during the week. Tailored to the only formal institutional resources available to student-parents at UCI, student-parents responded to individual questions asking if they knew about: the availability of on campus child care and how child care hours were determined; whether they knew about the existence of a social worker on campus and whether or not they had ever been referred to a social worker; whether they knew about the ability to request an incomplete or a withdrawal from a course; and whether or not they have used either of these indicators of academic flexibility. Participants indicated "yes", they knew about or had used the resource, or "no", they did not know about or use the resource. "Yes" responses were coded one and "no" responses were coded 0. In order to assess how many resources student-parents knew about or had used "yes" responses were summed and totaled. Specifically, formal resources that student-parents knew about were summed and totaled (maximum score =6); resources that were used were summed and totaled (maximum score = 2), and knowledge of child care resources and polices were summed and totaled (maximum score = 3).

When asked about *resources they think they might benefit from*, student-parents replied on a 4-point Likert-type scale ranging from 4 = "very useful" to 0 = "not at all useful". Specifically, student-parents were asked whether or not they believed they would benefit from a social worker, a website for student-parents, emergency child care services, a study space for student-parents on campus, and an on campus organization for student-parents. Scores were recoded such that 1's and 2's were recoded to 0= "not very useful/not at all useful" to and 3's and 4's were recoded to 1= "very/somewhat useful." Also using a 4- point Likert-type scale ranging from 4 = "very useful" to 0 = "not at all useful", student-parents were asked about their level of

support for the creation of each resource. Scores were recoded in the same manner such that 0 =

"not very supportive/not at all supportive" to 1= "very supportive/somewhat supportive."

Role strain and well-being, Goldberg and Greenberger's Survey of Measures for the Study of

Work, Parenting, and Well-being (1989) was adapted for a student sample to assess school-

family role strain, use of informal supports, and well-being. The 31-item measure of *school-*

family role strain (adapted from work-family role strain, Greenberger, 1989) used a 4-point

Likert-type response scale ranging from 1 = "strongly disagree" to 4 = "strongly agree".

Responses were averaged to create a total scale score (α = .85).

The survey also included a 35-item measure of Health Symptoms (Cohen & Hoberman,1983

scale modified by Greenberger & Goldberg, 1989) as an indicator of physical well-being.

Participants were asked to report how frequently, 0 = "not at all" to 5 = "extremely often", they

had experienced common physical symptoms such as headaches within the past three months.

Following Cohen and Hoberman (1983), responses were averaged in order to create a total score

(α = .97).

The Life Events Scale (Yim, 2016) was used to assess frequency and intensity of stressful

events in students' lives. For example, student-parents were asked to indicate whether or not they

had experienced stressful life events such as a break up, marriage, divorce, pregnancy, birth, or

miscarriage within the past six months and how stressful they found the event to be. 0= "no,"

they had not experienced the stressful life event and yes, meant that they had experienced the

event and 1= "low stress", 2= "mild stress", 3= "high stress." Scores were collapsed into 0 =

"no," they had not experienced a stressful life event, or 1 = "yes they had experienced a stressful

life event." The responses were averaged to create a frequency of stressful life events.

Using free responses of weekly hour estimates for each activity, student-parents reported the number of hours spent attending to academic work, paid work, house work, and caregiving responsibilities using a free response scale. Specifically, student-parents were asked "in the past year what is the average number of hours per week you have spent on each of the following activities? Rough estimates are fine (there are 168 hours in a week)." Weekly hour estimates for each activity were used.

Sources of support. Measures of the informal support systems used by student-parents incorporated into the survey were: The Partner Support for Work and Parenting, Neighborhood Support, and Quality of Child Care measures (Greenberger & Goldberg, 1989). The *Partner Support for Work and Parenting* measure was modified for a student population and included 27 items concerning informal support for combining school and parenting. A 4-point Likert-type scale was used, ranging from 1= "definitely not true" to 4 = "very true", (Greenberger, Goldberg, & Hamill, 1989). Responses were averaged to create a total score (α = .87). The *Neighborhood Support for Work and Parenting* was adapted for use by a student population and consisted of 9 items answered using a 6-point Likert-type scale ranging from 1= "strongly disagree" to 6= "strongly agree" (Greenberger, 1989). Items three and four were reverse scored and a total score was formed by averaging responses to all items (α = .79). The *Quality of Child Care* measure consisted of three items on a 5-point Likert-type scale ranging from 1= "does not meet my child's needs" to 5 = "meets my child's needs extremely well". Total scores were calculated by averaging responses to the three items (α = .69).

Academic success. Academic success was measured using participant reports of *grade point average* (GPA), which ranged from 2.6 to 10. Additionally, participants indicated via free

response their *involvement in three extra-curricular activities:* honors societies, research labs,

and internships. Each individual item was measured.

A copy of the survey measures is included in Appendix A.

   Interview. Phase 2 of the study consisted of a semi-structured qualitative interview. During

the interview, participants were asked to elaborate upon their experiences as a student-parent at

UCI, what resources they knew about and used, changes they believed would benefit them,

perceived support from their department/major, and their experiences with student support

services on campus such as financial aid. Interviews were recorded using a Sony ICD-PX333

audio recorder. A copy of the interview schedule can be found in Appendix A.

   Data Analysis

Survey data were analyzed using SPSS version 23.0.0.0. Frequencies were used in order to

assess the extent to which student-parents knew about and utilized formal resources such as a

campus social worker, child care policies, and policies that promote academic flexibility. In

order to examine whether student parent's knowledge and /or use of resources varied by age,

correlational analyses were used. Furthermore, in order to examine whether student-parent's

knowledge and/or use of resources varied by major, student status, and gender independent

sample t-tests were used. Furthermore, in order to examine whether student-parent's knowledge

and/or use of formal resources and informal supports were associated with their psychological

well-being and academic success, Pearson correlational analysis were conducted. Independent

sample t-tests were used to examine whether the associations between resources/supports and

outcomes differed by major, student status, and gender.

   Based on the qualitative interviews conducted with eight of the 25 participants who reported

school/family role strain above the mean ($M = 89.5, SD = 12.8$), key themes were identified by

listening to recorded interviews. Interview data were analyzed using grounded qualitative

analysis to identify recurring themes (Schutt, 2014). In order to identify themes that pertained to

barriers to use of resources and perceived resource needs, interviews were listened to and

barriers that were mentioned by participants were tallied.

Results

Survey: Knowledge and use of formal resources and stress, well-being, and academic success

When asked about what resources they knew about, a more than three fourths of the 82

participants (n=58; 70.7%*)* knew that child care services were available for student-parents at

UCI. However, less than half of the participants (n=42.7;35%) knew that admittance to child care

and hours of child care were determined by unit load, such that the more units a student-parent is

enrolled in, the more child care hours are allocated to them. Also, 47 (57.3%) participants knew

that child care is determined by need, such that the income and relationship status of student-

parents are taken into account when determining eligibility for child care services on campus.

Thirty-one (37.8%) participants knew about the availability of a social worker on campus;

however, only 18 (22%) participants had been referred to a social worker at UCI. Of the 82

participants, 41(50%) participants knew about institutional policies that promoted academic

flexibility. Specifically, student-parents knew about the ability to request an incomplete or a

withdrawal from a course; however, only 13 (15.9%) participants had used this option and 5

(6.1%) had applied but were denied the use of this option (see Table 3).

Table 3

Student-Parents' Knowledge and Use of Formal Resources (%)

Resource	*N*	*%* (n) Known/Used	*%* (n) Not Known/Used
Campus Child Care for Students	79	70.7 (58)	26.6 (21)
Child Care Determined by Unit Load	80	42.7 (35)	54.9 (45)
Child Care Determined by Financial Need	80	57.3 (47)	40.2 (33)
Withdrawal	79	37.8 (31)	58.5 (48)
Incomplete	80	50 (41)	47.6 (39)
Social Worker	81	37.8 (31)	61 (50)
Offered Withdrawal/ Incomplete	81	15.9 (13)	82.9 (68)
Denied Withdrawal/Incomplete	81	6.1 (5)	92.7 (76)
Social Worker	81	22 (18)	76.8 (63)

Pearson *r* correlational analysis between demographic variables and measures of knowledge/use of formal resources revealed that the age of student-parents at UCI was not significantly related to knowledge of child care resources or formal resources (see Table 4). Independent sample t-tests revealed that academic major was not significantly related to knowledge of resources, such that student-parents majoring in science, engineering, technology, or math (STEM) were not any more or less likely to know of formal resources such as child care, a social worker, or the ability to request an incomplete or withdrawal from a class than non-STEM majors. However, student-parents majoring in non-STEM majors were significantly more likely to use formal resources such as taking an incomplete or a withdrawal from a course compared to STEM majors. Furthermore, student-parents majoring in STEM fields were significantly less likely than non-STEM majors to know about the existence of a social worker on campus (see Table 5).

Table 4
Correlations Among Age, Knowledge and Use of Formal Resources, Psychological Well-being, and Academic Success

Variable	*M*(SD)	*N*	Age	Resources Known	Resources Used	Known Child Care Resources	School Role Strain	Stressful Events	Health Symptoms	GPA	Scholarships	Project/Labs	Internships
Age	32.45(6.45)	82											
Resources Known	2.99 (1.82)	78	-.037										
Resources Used	.38 (.58)	81	.077	.189									
Known Child Care Resources	1.74(1.14)	79	-.057	.894***	.111								
School Role Strain	2.79(.39)	79	-.245*	-.105	.156	-.60							
Number of Stressful Events	.057 (.09)	82	-.096	.046	.107	.140	.355**						
Health Symptoms	1.33.94)	76	-.137	-.036	.093	-.033	.104	-.13					
GPA	3.76(1.12)	81	.092	.172	-.092	.105	-.027	-.118	.245*				
Scholarships	1.29(1.40)	79	.151	.093	.005	.099	-.166	-.027	-.220	.132			
Project/Labs	1.33(1.26)	82	.355**	.098	.005	.098	-.128	-.058	-.041	.150	.326**		
Internships	1.45(2.33)	82	.235*	.137	.160	.248*	-.181	-.114	.053	.177	.405**	.450**	
Honors Societies	1.43(1.94)	82	.273*	-.009	.124	-.088	-.148	-.286**	.145	.419**	-.024	.230*	.235*

* *p*<.05, ** *p*<.01, ****p*<.00

Table 5

Mean Differences (t-tests) between Non-STEM and STEM Student-Parents on Major Study Variables

Variable		n	M	SD	t(df)
Resources Known					.555(75)[a]
	Non-STEM	37	3.11	1.79	
	STEM	41	2.88	1.86	
Resources Used					1.81(73.82)[b†]
	Non-STEM	40	.50	.64	
	STEM	41	.27	.50	
Known Child Care Resources					.511(77)[a]
	Non-STEM	41	.78	.42	
	STEM	41	.70	.46	
Know about Social Worker					2.718(77.35)[b]*
	Non-STEM	40	.50	.51	
	STEM.	41	.27	.45	
Use of Social Worker					.558(79) [a]
	Non-STEM	40	.25	.44	
	STEM	41	.20	.40	
Offered Withdrawal/Incomplete					2.19(63.64)[b]*
	Non-STEM	40	.25	.44	
	STEM	41	.07	.26	
Denied Withdrawal/Incomplete					1.40(57.94) [b]
	Non-STEM	40	.10	.304	
	STEM	41	.02	.156	
School Role Strain					1.19(54.76)[b]
	Non-STEM	38	2.85	.50	
	STEM	41	2.74	.26	
Health Symptoms					-2.75(74)[a]*
	Non-STEM	36	1.03	.82	
	STEM	40	1.60	.96	
Stressful Life Events					1.77(80)[a†]
	STEM	41	.07	.09	
	STEM	41	.03	.08	
GPA					-.489(79)[a]
	Non-STEM	41	3.70	1.18	
	STEM	40	3.82	1.05	
Scholarships					.694(77)[a]
	Non-STEM	40	1.40	1.49	
	STEM	39	1.18	1.31	
Projects/Labs					-2.06(80)[a]*
	Non-STEM	41	1.05	1.20	
	STEM	41	1.61	1.26	

Internships					$-3.03(49.99)^{b}**$
	Non-STEM	41	.71	1.05	
	STEM	41	2.20	2.96	
Honors Societies					$-2.02(80)^{a}*$
	Non-STEM	41	1.00	1.14	
	STEM	41	1.85	2.44	
Partner Support for School					$2.71(45.14)^{b}**$
	Non-STEM	36	3.03	.70	
	STEM	39	2.69	.28	
Neighborhood Support					$3.02(33.38)^{b}**$
	Non-STEM	36	3.01	1.22	
	STEM	41	3.79	.82	
Satisfaction of Child Care					$-.023(53.87)^{b}$
	Non-STEM	36	1.94	.39	
	STEM	41	1.94	.22	

[a] Equal variances assumed through use of the Levene's Test for Equality of Variances
[b] Equal variances not assumed through use of the Levene's Test for Equality of Variances
[†] $p<.10$, * $p<.05$, ** $p<.01$

In terms of student status, graduate student parents were marginally more likely to know of formal resources than undergraduate student-parents. The student status of student-parents was significantly related to formal resources used, such that graduate student-parents were significantly less likely to use formal resources such as child care, a social worker, or request to take an incomplete or withdraw from a class. Furthermore, student status was significantly related to being offered the ability to withdraw or take an incomplete in a course such that graduate student-parents were significantly less likely to be offered an incomplete or withdrawal from a course and more likely to be denied an incomplete or withdrawal from a course (see Table 6). Gender was not significantly related to either the use or knowledge of formal resources (see Table 7).

Table 6

Mean Differences (t-tests) between Graduate and Undergraduate Student-Parents on Major Study Variables

Variable	n	M	SD	$t(df)$
Resources Known				-1.86(76)[a] [†]
Undergraduate	48	2.69	1.72	
Graduate	30	3.47	1.89	
Resources Used				3.16(78.71)[b]**
Undergraduate	50	.52	.64	
Graduate	31	.16	.37	
Known Child Care Resources				-1.75(77)[a] [†]
Undergraduate	49	1.57	1.11	
Graduate	30	2.03	1.15	
Know about Social Worker				
Undergraduate	50	.34	.48	-.998(79)[a]
Graduate	31	.45	.51	
Use of Social Worker				1.70(75.97)[b] [†]
Undergraduate	50	.28	.45	
Graduate	31	.13	.34	
Offered Withdrawal/Incomplete				3.01(71.14)[b]**
Undergraduate	50	.24	.43	
Graduate	31	.03	.18	
Denied Withdrawal/Incomplete				2.33(49)[b]*
Undergraduate	50	.10	.303	
Graduate	31	.00	.000	
School Role Strain				-.44(42.86)[b]
Undergraduate	49	2.77	.31	
Graduate	30	2.82	.51	
Health Symptoms				1.05(74)[a]
Undergraduate	48	1.42	.91	
Graduate	28	1.18	.98	
Stressful Life Events				-1.36(80)[a]
Undergraduate	51	.04	.08	
Graduate	31	.07	.09	
GPA				-1.28(79)[a]
Undergraduate	51	3.64	1.14	
Graduate	30	3.97	1.07	
Scholarships				-1.54(38.74)[b]
Undergraduate	50	1.08	1.04	
Graduate	29	1.66	1.83	
Projects/Labs				-1.42(80)[a]
Undergraduate	51	1.18	1.27	
Graduate	31	1.58	1.20	
Internships				-.293(80)[a]
Undergraduate	51	1.39	1.77	

		n	M	SD	t(df)
	Graduate	31	1.55	3.06	
Honors Societies					.493(80)[a]
	Undergraduate	51	1.51	1.59	
	Graduate	31	1.29	2.43	
Partner Support for School					-.193(73)[a]*
	Undergraduate	47	2.76	.56	
	Graduate	28	3.01	.49	
Neighborhood Support					.646(75)[a]
	Undergraduate	48	3.49	1.07	
	Graduate	29	3.32	1.14	
Satisfaction of Child Care					.160(75)[a]
	Undergraduate	48	1.96	.30	
	Graduate	29	1.93	.32	

[a] Equal variances assumed through use of the Levene's Test for Equality of Variances
[b] Equal variances un-assumed through use of the Levene's Test for Equality of Variances
[†] $p<.10$, * $p<.05$, ** $p<.01$

Table 7
Mean Differences (t-tests) Between Men and Women Student-Parents on Major Study Variables

Variable		n	M	SD	t(df)
Resources Known					-.576(75)[a]
	Men	32	2.84	1.85	
	Women	45	3.09	1.83	
Resources Used					.08(78)[a]
	Men	33	.39	.67	
	Women	47	.38	.68	
Known Child Care Resources					-.87(76)[a]
	Men	32	1.59	.47	
	Women	46	1.82	.42	
Know about Social Worker					
	Men	33	.39	.49	.09(78)[a]
	Women	47	.38	.49	
Use of Social Worker					.85(78)[a]
	Men	33	.27	.45	
	Women	47	.19	.39	
Offered Withdrawal/Incomplete					.-.83(78)[a]
	Men	33	.12	.33	
	Women	47	.19	.39	
Denied Withdrawal/Incomplete					.87(78)[a]
	Men	33	.09	.29	
	Women	47	.04	.20	
School Role Strain					-1.90(76)[a] [†]
	Men	32	2.70	.34	
	Women	46	2.87	.42	

Health Symptoms					$.56(59.77)^a$
	Men	32	1.41	1.03	
	Women	43	1.29	.86	
Stressful Life Events					$-2.08(78.97)^b*$
	Men	33	.03	.06	
	Women	48	.07	.10	
GPA					$1.46(37.41)^b$
	Men	32	4.01	1.59	
	Women	48	3.58	.624	
Scholarships					$-.83(70.16)^b$
	Men	31	1.10	.746	
	Women	47	1.32	1.57	
Projects/Labs					$1.33(79)^a$
	Men	33	1.52	1.43	
	Women	48	1.15	1.05	
Internships					$.04(79)^a$
	Men	33	1.33	1.49	
	Women	48	1.31	2.33	
Honors Societies					$.08(79)^a$
	Men	33	1.45	1.82	
	Women	48	1.42	2.06	
Partner Support for School					$.10(73)^a$
	Men	32	2.86	.41	
	Women	43	2.85	.63	
Neighborhood Support					$4.11(71.81)**$
	Men	32	3.92	.70	
	Women	44	3.03	1.17	
Satisfaction of Child Care					$-1.88(74)^{a\dagger}$
	Men	32	1.86	.27	
	Women	44	1.99	.33	

[a] Equal variances assumed through use of the Levene's Test for Equality of Variances
[b] Equal variances un-assumed through use of the Levene's Test for Equality of Variances
$^\dagger p<.10$, $* p<.05$, $** p<.01$

Pearson r correlational analysis revealed that student-parents' knowledge and use of formal resources was not significantly associated with their psychological well-being as measured by the Health Symptoms, Role Strain, and Stressful Life Events scales. Knowledge and use of resources also were not significantly correlated with academic success as measured by GPA and involvement in extracurricular activities such as labs/projects, internships and honors societies. However, knowledge of child care resources, such as policies regarding the allocation

of child care, was significantly related to the number of internships that student-parents held such that the more child care policies student-parents' knew about, the more internships they reported (see Table 4).

Age of student-parents was significantly associated with school-family role strain; such that younger student-parents were significantly more likely to report higher levels of school role strain compared to older student-parents. Furthermore, age was also significantly related to the number of academic projects/labs student-parents participated in, the number of internships student-parents held, and the number of honor societies student-parents were part of, each of which are indicators of academic success (see Table 8).

Table 8

Correlations among Age, Informal Supports, Psychological Well-being, and Academic Success

Variable	*M*(SD)	*n*	Age	School Role Strain	Stressful Events	Health Symptoms	Partner Support for School	Neighborhood Support	Satisfaction with Child Care	GPA	Scholarships	Projects/Labs	Internships
Age	32.45(6.45)	82											
School Role Strain	2.99 (1.82)	79	-.245*										
Stressful Events	2.51 (4.03)	82	-.096	.355**									
Health Symptoms	46.67(32.95)	76	-.137	.104	-.130								
Partner Support for School	77.26(14.89)	75	.183	-.107	-.046	-.291*							
Neighborhood Support	30.87(9.88)	77	.216	-.290*	-.576**	.128	-.151						
Satisfaction with Child Care	5.82(.943)	77	.106	-.073	-.086	.072	-.090	-.099					
GPA	3.76(1.12)	81	.092	-.027	-.118	.245*	.075	.100	-.028				
Scholarships	1.29(1.40)	79	.151	-.166	-.027	-.220	.258*	.004	.243*	.132			
Projects/Labs	1.33(1.25)	82	.355**	-.128	-.058	-.041	.076	.242*	.008	.150	.326**		
Internships	1.45(2.33)	82	.235*	-.181	-.114	.053	-.167	.366**	.113	.177	.405**	.450**	
Honors Societies	1.43(1.94)	82	.273*	-.148	-.286**	.145	-.092	.147	.002	.419**	-.024	.230*	.235*

* $p<.05$, ** $p<.01$

Independent sample t-tests revealed that student-parents majoring in STEM fields were significantly more likely than non-STEM majors to experience more health symptoms, an indication of poorer well-being. In contrast, student-parents majoring in non-STEM fields were marginally more likely to report more stressful life events than those majoring in STEM fields. Student-parents who majored in STEM fields were significantly more likely than non-STEM majors to report more involvement in projects/labs on campus, higher number of internships, and membership in more honors societies (see Table 5).

Independent sample t-tests also revealed that student status as an undergraduate student-parent or a graduate student-parent was not significantly related to measures of well-being, stress, or academic success (see Table 6). However, independent sample t-tests revealed that student-parents' gender was significantly related to experiencing stressful life events, such that women were more likely to report more stressful life events than men. Furthermore, women were marginally more likely to report higher levels of school-family role strain (see Table 6).

Survey: Use of informal supports and stress, well-being, and academic success

Pearson *r* correlational analysis among informal supports, psychological stress and well-being, and academic success revealed that student-parents who reported higher levels of partner support for school also reported significantly fewer health symptoms, an indicator of better well-being, and significantly more scholarships, an indicator of academic success. Furthermore, student-parents who reported higher neighborhood support reported less school-family role strain and fewer stressful life events, and more involvement in projects/labs on campus and internships, indicators of academic success. Also, satisfaction with child care was significantly and positively associated with the number of scholarships that student-parents reported receiving (see Table 8).

Correlational analysis between informal supports and age of student-parents revealed that older student-parents reported less school-family role strain and more involvement in projects and labs on campus, more internships, and more membership in honors societies (see Table 4).

Independent sample t-tests revealed that student-parents use of informal supports significantly varied by major. Student-parents in STEM fields reported significantly more neighborhood support for school than non-STEM majors but less partner support for school (see Table 5).

Independent sample t-tests revealed that graduate student-parents reported significantly higher levels of partner support for school (see Table 6). In terms of gender, male student-parents reported higher levels of neighborhood support for school than did female student-parents. Women student-parents reported dedicating significantly more hours toward caregiving than their male counterparts (see Table 9 and Table 10).

Table 9

Differences (t-test) Between Men and Women Student-Parents' Work-Family Hours

Variable		*n*	*M*	*SD*	*t(df)*
Academic Work					-1.45(79)[a]
	Men	33	21.36	13.81	
	Women	48	26.42	16.30	
Paid Work					.516(79)[a]
	Men	33	14.42	13.12	
	Women	48	13.17	8.82	
House Work					-.842(79)[a]
	Men	33	14.61	7.98	
	Women	48	16.25	9.05	
Child Caregiving					-3.05(76.50)[b]**
	Men	33	15.64	16.20	
	Women	48	30.96	28.72	

[a] Equal variances assumed through use of the Levene's Test for Equality of Variances
[b] Equal variances un-assumed through use of the Levene's Test for Equality of Variances

$^{\dagger}p<.10,$ * $p<.05,$ ** $p<.01$

Table 10
Means and Standard Deviations for Student-Parents' Hours of Responsibility (N=81)

Variable	*M*	*SD*
Hours of Academic Work	24.55	14.45
Hours of Paid Work	13.88	10.80
Hours of House Work	15.76	8.71
Hours of Caregiving	26.46	29.82

Survey: Perceived needs

Frequency analysis revealed that 69 (84.1%) of student-parents who participated in the survey believed they would benefit from an accessible social worker, 74(90.2%) believed they would benefit from available childcare, 71(86.6%) believed they would benefit from a student-parent website. Furthermore, 62(75.6%) of student-parents who participated in the survey believed they would benefit from an adjustment of the academic calendar to fit with the local school calendar. Student-parents also believed that they would benefit from emergency childcare 69(84.1%), a student-parent organization on campus 62(75.6%), and a student-parent study space 74(90.2%) (see Table 11).

Table 11
Resources Student-Parents Believed They May Benefit from and their Support for Resource (%)

Resource	*N*	*%(n)* Beneficial	*N*	*%(n)* Support
Accessible Social Worker	79	84.1 (69)	78	87.8 (72)
Available Child Care	79	90.2 (74)	78	90.2 (74)
Student-Parent Website	79	86.6 (71)	76	80.5 (66)
Academic Calendar w/ Local School Calendar	79	75.6 (62)	77	75.6 (62)
Emergency Child Care	79	84.1 (69)	78	82.9 (68)
Student-Parent Org.	79	75.6 (62)	77	85.4 (70)
Student-Parent Study Space	79	90.2 (74)	78	85.4 (70)

Interviews: Barriers to use of resources and perceived needs

Themes that described perceived barriers to use of resources and describe potential resources that student-parents believe may assist them toward degree completion and achievement, lessen perceived stress, and promote academic success were identified via listening to recorded audio interviews. The themes regarding barriers to use of resources which appeared consistently throughout all eight of the recorded interviews were: invisibility and lack of resources on campus, frustration regarding the lack of knowledge about the few resources available for students with families, financial hardship, and access to child care

These themes remained consistent throughout all eight interviews regardless of age, major, student status as an undergraduate or graduate student, or gender. However, it must be noted that of the eight participants, all four of the undergraduate participants, mentioned facing barriers regarding housing and finding resources due to the fact that resources seemed to be oriented toward graduate student-parents.

Student-parents consistently shared feelings of "invisibility" when asked about their overall experience as a student-parent at UCI and often stated that they felt that as students they felt welcomed on campus but not as parents. Undergraduate student-parents in particular felt that they were invisible and their needs were not taken into account while matriculating. For example, one student-parent mentioned, "I knew it wasn't going to be easy … because no one expected me to make it this far ... And no one here expected me to be here either..." (30, undergraduate, partnered, mother of two, non-STEM). A male graduate student-parent also remarked that UCI was "a large and uncaring place, sure they care about the student, but they don't care about their children or their families," (31, graduate, partnered father of three, non-

STEM). Another graduate student mentioned that he would appreciate some acknowledgement that there are students who are parents stating that the university could improve by, "acknowledging that there are students who are parents and that our graduate experience is a lot different than most… and we're really not taken into account… they don't really take that [having a child] into consideration" (28, graduate, single father of one, STEM). Student-parents mentioned consistently being told that they just weren't expected to be at the university. One student-parent mentioned that they were told that they were "the only case" that their advisor could think of and that there really wasn't a precedent that allowed for the establishment of resources (42, graduate, partnered mother of one, STEM). When seeking resources for herself, one undergraduate mentioned being told by an administrator, "we just don't expect people like you to make it this far," (25, undergraduate, single mother of one, non-STEM field).

During the interviews it was clear that the invisibility experienced by student-parents led to conflicted feelings regarding student-parents' place among their peers and within their department. When referring to events such as conferences held by departments and social events held by peers, those interviewed often felt that they had to choose between inclusion and opportunities within academia and their children. This theme was prevalent among all eight participants. One undergraduate?? in particular mentioned that she often felt that she was isolated from her peers due to her family responsibilities stating, "I have some close friends but I'm more of another mother to them… it's not really a close relationship… it's hard because parents need a break," (30, mother of two majoring in non-STEM). A single father of one stated that he was often forced to choose between his student role and his role as a parent stating, "We're kind of left on our own to choose whether or not we're going to attend or not, and I've had to make that choice plenty of times," (28, graduate, single father of one, STEM). An older, graduate student-

parent said:

> "I feel like I'm fighting an up-hill battle, I could use a lot more support I'm not saying it has to come from the school … it definitely doesn't feel like I'm in a place that is super welcoming for my child you know… me and my child …I absolutely cannot bring my child to school … I have department seminars that I'm supposed to attend and I remember early on … I was trying to decide if I could come to the seminars but I had an infant and you know the question was what would happen if he started crying during one of the seminars and the … unspoken [idea] was why don't you just not come, because it would be … unheard of if during my chemistry seminar if my child started crying," (42, graduate, partnered mother of one, STEM).

When asked about resources and the support they were offered as student-parents, participants consistently mentioned that their needs were not taken into account and that there was a lack of knowledge regarding resources available to them. One graduate student father stated:

> "I don't really feel like my department address that [student-parents]. It's … there's really not much talk… but they weren't even aware of the latest benefits that we had as graduate student-parents or child care for example, like the reimbursement program that is available… they didn't know until I told them that… they mentioned 'oh I think we have something' and they gave some out dated information about it. And so that really let me know that they're not really up to date on what's available, either because they don't care or… there aren't many student-parents in our department… I'm not sure what it is but I found that a little bit disconcerting and so it makes it imperative for a parent to seek

out things independently…because … when your administration doesn't even know what is available that is a problem…it's frustrating" (28, graduate, single father of one, STEM).

The dissemination of information regarding resources available to student-parents was reported as a barrier against the utilization of resources, particularly among undergraduate students:

 "Because all I could find was information for graduate students with families, I just assumed that those resources were only available for graduate students, not me… I didn't know of anything until I met other parents … I didn't know about social workers, I didn't know about any of this, and I don't think anyone told me…I was always clear that I was a parent and I needed help… but I don't think anyone ever knew," (30, undergraduate, partnered, mother of two, non-STEM).

Another undergraduate student-parent stated, "I just wish someone would have told me about something… anything… I mean I asked… but no one knew," (25, undergraduate, single mother of one, non-STEM). When asked about her experience with student support services on campus such as financial aid, academic counselors, or the various other departments on campus, another student-parent stated:

 "Whenever I tell them I'm a parent, that I come from a different situation, I'm not a typical college student, I have other responsibilities, I have to worry about putting food on the table for my children… I've talked to so many departments here at UCI and every time I'm told 'There's nothing I can do or I don't know what to tell you" (30, undergraduate, partnered, mother of two, non-STEM).

When asked about what improvements student-parents believed they could benefit from, the most consistent themes were: more knowledge regarding what resources were available to student-parents, list or website of resources, and departmental and administrative training regarding resources for student-parents, and easier access to child care and housing for undergraduate student-parents. One student-parent stated:

"First of all to be familiar [his department] with what is available so if I were to come to them and ask for assistance they'd be able to help me out and not scurry and try to find something on the lamb and then send me off somewhere… if they are knowledgeable about what is available then it can expedite that process and make it a lot more effective and efficient and a lot less frustrating" (28, graduate, single, father of one, STEM).

Both graduate and undergraduate student-parents also expressed that they were very burdened financially. One student-parent who found her family demands, academic demands, and work demands were conflicting quit her job in order to attend UCI stating, "I definitely had to give up my job… there was no way I could have a job and come to UCI" (30, undergraduate, partnered, mother of two, non-STEM). When asked about financial aid at UCI, a student-parent stated that "in the sense that I am a parent, financial aid, is not very helpful, they always tell me 'I don't know, I don't know what to tell you'" (30, undergraduate, partnered, mother of two, non-STEM). In reference to financial aid office, she also stated "as far as me being a parent they don't offer me anything else… they don't care... I've told them I work, there was a time I had three jobs just to be able to go here and they don't care… or not that the don't care… but there's nothing they can do." One student-parent reported depending on loans in order to meet their financial needs stating, "We're a family of three and I get a stipend and I'm grateful for it but I also rely on student loans… there's a child care reimbursement but that doesn't even begin to

cover the cost of care so I take out extra loans to pay for the cost of child care" (42, graduate, partnered, mother of one, STEM). One graduate student in particular mentioned difficulty providing his family with health insurance and affording the cost related to insuring dependents on the graduate student health insurance plan stating, "It's too expensive and we can't get free health care because we are not from here [the U.S.]" (31, graduate, partnered, father of three, non-STEM).

Difficulty finding child care was a consistent theme that emerged for student-parents with children of varying ages. All eight participants mentioned that due to time scheduling conflicts, such as seminars, classes, or conferences being held on weekends or during the evening after five, it was often difficult to find child care and they would have to choose between academia and family. One participant stated, "A lot of departmental events are scheduled for evenings or weekends and its difficult finding child care during those times …we have to choose whether or not were going to attend… I've had to make that choice plenty of times," (28, graduate, single, father of one, STEM).

During the interview, undergraduate student-parents consistently mentioned that they faced major difficulties finding housing on campus and navigating and finding resources. One student-parent stated:

"Because all I could find was information for graduate students with families, I just assumed that those resources were only available for graduate students, not me… I didn't know of anything until I met other parents … I didn't know about social workers, I didn't know about any of this, and I don't think anyone told me…I was always clear that I was a parent and I needed help… but I don't think anyone ever knew," (30, undergraduate,

partnered, mother of two, non-STEM).

All four of the undergraduate student-parents shared difficulties accessing student housing. One stated:

"So when we first moved here it was a little hard to get… because we moved from Arizona… it was a little hard to get into family living, so we lived in an apartment in Irvine which was not cheap, because they don't give out their acceptance letters for undergraduates because you're on the wait list until a month before you start school… it's been pretty stressful… because I overloaded my everything between lab and working three jobs … the first two years were very stressful… so I had to work pretty much full-time in order to attend school, no [just] to pay the bills" (30, undergraduate, partnered, mother of two, non-STEM).

One student-parent mentioned a theme that recurred among undergraduate student-parents saying that housing problems were a significant source of stress and anxiety, "… I mean the fact that housing renewals are not guaranteed for undergraduate student-parents causes me a lot of anxiety and stress" (38, undergraduate, partnered, mother of one, non-STEM).

Discussion

The main objective of this study was to explore the associations between formal resources and informal supports and student-parents' well-being and academic success. The specific aims of this study were to quantitatively examine the extent to which student-parents know about and/or have utilized specific resources available to them and whether or not the use of these resources was associated with well-being and academic success and whether the use of resources varied by age, major, student status, and gender. This study also quantitatively

examined whether or not informal supports, such as partner support for school, neighborhood

support, and child care, were associated with well-being and academic success and whether

knowledge and use of informal supports varied by age, major, student status, and gender.

Furthermore, this study utilized qualitative analysis of interviews in order to describe perceived

barriers to use of formal resources and to describe resources that student-parents believe may

assist them toward degree completion and achievement, lessen perceived stress, and promote

academic success.

Consistent with the scant previous research conducted in the U.S. (Robertson, Weider,

Weider, & Morey, 2012; Schumaker, 2013), this study found that student-parents' knowledge of

resources and how they were allocated was limited. The majority of student-parents knew about

the existence of child care on campus existed and more than half knew that income and

relationship status were factors in determining eligibility for child care. However, less than half

knew that admittance to child care and hours of child care were determined by unit load. To the

extent that findings from this study generalize, the gaps in knowledge about specifics of child

care indicate that student-parents may benefit from information regarding how details about child

care services such as eligibility and how hours and care are allocated.

Past research on student-parents has found that social workers and counseling services on

campus are often gateways not only to campus resources for student-parents, but also for

community resources such as food pantries, alternative child care, and affordable housing

(Robertson, et al., 2012; Schumacher, 2013). However, less than one-third of participants in this

study knew about the availability of a social worker on campus and only about one-fifth of

participants had been referred to a social worker, indicating that very few student-parents

actually used this resource. The underuse of this resource may be in part due to the fact that at

UCI, student cannot self-refer to the social worker. Students must be referred via a "referring agent" such as the director of a department within student services, a professor, academic counselor, or other staff at UCI who is aware of this resource. Considering, that social workers and counseling services have been found to be essential elements of student-parent success, student-parents at UCI may benefit from the expansion of this program, or the creation of a similar resource where they are given a person to contact who can assist them in navigating both community and campus resources (ACSFA, 2012; Schumacher, 2013).

Also consistent with previous research (Robertson, et al., 2012), knowledge and use of policies that permit academic flexibility was limited. Considering that student-parents benefit from policies and programs that promote academic flexibility in that they are more likely to complete their degrees and graduate with less debt (Robertson, et al., 2012; Brooks, 2012; Schumacher, 2013; Sallee, 2015), the dissemination of information regarding resources which promote academic flexibility would most likely benefit student-parents at UCI.

Due to the fact that at UCI at least, student financial aid does not factor in support for dependents, student-parents, especially those without a partner or parent to help out, may need to work for pay while matriculating in order to support their families. This means that more academic flexibility, such as the ability to attend part-time, take night classes, or online classes might allow student-parents to balance their multiple roles more effectively and possibly graduate with less debt.

The current study's findings are consistent with previous research regarding the need for resources to be accurately disseminated in order to ensure their use and to allow for student-parents to benefit from them (Robertson, et al., 2012; Schumacher, 2013). All eight participants in the qualitative interview said that they had faced difficulties finding resources available to

student-parents. Regardless of major in STEM or non-STEM fields or status as an undergraduate or graduate student-parent, all eight interview participants expressed frustration regarding the lack of information about resources for student-parents within their departments, a consistent theme in past research (CITE). Furthermore, all eight participants mentioned that they believed they would benefit from a website or list of resources which they could access prior to starting classes at the university. This theme about how information about resources for student-parents should be distributed and the frustration regarding the inefficient dissemination of information regarding resources has been reported in prior research as well (Robertson, et al., 2012; Schumacker, 2013).

Overall, the experiences shared during the interview portion of the study echoed themes that were raised in previous qualitative studies (ACFSA, 2012; Brown & Nichols, 2012; Marandet & Wainwright, 2010; Rose & Hill; 2013; Sores, 2013; van Rhijn, Quosai, Lero, 2011; Yakaboski, 2010). Student-parents in this study often felt invisible, financially burdened, and had child care problems. Lack of knowledge about resources was a theme mentioned by student-parents in the current study.   In the interviews, student-parents reported that they often found resources independently and when they did seek resources from student services departments, there was often a limited amount of information regarding what resources are available. This indicates that student-parents at UCI and student services departments may benefit from a webpage or pamphlet or some source of information that outlines available services and their descriptions to student-parents at UCI. Furthermore, student service departments at UCI may benefit from additional training regarding what resources are available to student-parents.

Student-parents majoring in non-STEM fields may be more likely to use formal resources that promote academic flexibility, specifically requesting a withdrawal or an incomplete from a

course, for various reasons such as smaller class sizes, easier access to professors, teaching assistants, administrators within their departments, and/or the distance of STEM departments on campus to student service departments. Student-parents majoring in non-STEM fields may also be more likely to know of and use a social worker due to the proximity of student services departments and referring agents to their major departments.

Unsurprisingly and consistent with past research, women student-parents reported dedicating significantly more hours toward caregiving than their male counterparts (Moreau & Kerner, 2013; Rose & Hill, 2013). The differences in reported caregiving hours found in this study may help explain the higher levels of neighborhood support reported by male student-parents. Male student-parents may have reported higher levels of neighborhood support because they indicated that they could rely on another person to watch their children while they attended academic responsibilities or work. Furthermore, the differences in caregiving hours may also account for the higher levels of role strain reported by women student-parents compared to men. Past research has also found that women experience higher levels of role strain compared to male student-parents (Home, 1997).

The finding that the student status of student-parents was significantly related to use of formal resources, such that graduate student-parents were found to be less likely to use formal resources such as child care, a social worker, or request to take an incomplete or withdraw from a class may be related to the fact that graduate student-parents experience more academic flexibility by nature of their programs than undergraduate student-parents and may not need these resources. Furthermore, graduate students at UCI are given priority housing and child care on campus thereby decreasing the need for a social worker to assist them in finding and utilizing resources on campus and within the community. However, during the qualitative interview

portion of the study, the graduate student-parents cited difficulty accessing and affording child care. This may be due to the fact that funding for child care for graduate students is severely limited and much different than for undergraduate student-parents. Currently, the Department of Education in California offers child care funding, both partial and full based upon the income and relationship status of the parent, for undergraduate student-parents who are pursuing a bachelor's degree but not for graduate student-parents per current state and federal guidelines (U.S. Department of Education, 2016).

In response to the growing number of student-parents entering postsecondary education programs, a few federal initiatives to support this segment of the campus population have been attempted. In 2007, Representative Marcy Kaptur (D-OH) introduced the Elizabeth Cady Stanton Pregnant and Parenting Student Services Act. This act aimed to provide resources for student-parents by assisting "eligible institutions of higher education to establish and operate pregnant and parenting student services offices for pregnant students, parenting students, prospective parenting students who are anticipating a birth or adoption, and students who are placing or have placed a child for adoption" (govtrack.us, 2007, p. 7). Although the bill was defeated in Congress, the act was one of the first to federally acknowledge a need to assist student-parents at the university level (Brown & Nichols, 2012). While federal funding for student-parent service offices has not been secured by universities, several UC sister campuses such as Berkeley, Riverside, San Diego, and Santa Barbara have created student-parent support offices in order to meet the needs of the growing number of student-parents enrolled in higher education. Furthermore, UC Davis has begun to acknowledge the presence of student-parents by creating a campus and community resource page specifically for this segment of the student body. Future research regarding student-parents at UCI should explore efficient methods of disseminating

information, whether or not student-parents who commute struggle more than those who live on campus, and how barriers to adequate childcare and housing may impede upon academic success.

Limitations and Conclusion

Limitations to this study included the convenience sampling for both studies and the small sample size for the interview component and the lack of a comparison group of traditional students. A possible bias was due to the researcher's status as a student-parent at the same campus. Nonetheless, this research is an important step toward advocating for the collection of data and information regarding the experiences of student-parents at a large, public institution such as UCI. Based on the current study, UCI could do more to recognize the academic and personal needs of student-parents on campus through the accurate dissemination of information regarding resources via a web page, training of student services staff regarding resources for these students, and by offering student-parents a student support services office.

Appendix A

Survey – Phase 1

Q2 Age:

Q3 Gender:
○ Male (1)
○ Female (2)
○ Other: (3) _____

Q4 Relationship status:
○ Married (1)
○ Partnered and living together (2)
○ Partnered, but not living together (3)
○ Divorced (4)
○ Separated (5)
○ Widowed (6)
○ Single, never married (7)

Q5 Sexual orientation:
○ Heterosexual (1)
○ Gay (2)
○ Lesbian (3)
○ Bisexual (4)
○ Transgender (5)
○ Other: (6) _____
○ Prefer not to state (7)

Q6 How do you usually describe your ethnic/racial background? If you consider yourself to be from more than one ethnic/racial heritage, please check as many that apply.
- ❑ Black, African American (1)
- ❑ Chinese (2)
- ❑ Indian, Pakistani (3)
- ❑ Japanese (4)
- ❑ Korean (5)
- ❑ Pacific Islander (e.g., Filipino, Samoan) (6)
- ❑ Southeast Asian (e.g., Vietnamese, Cambodian) (7)
- ❑ Mexican, Mexican - American, Chicano (8)
- ❑ Other Latino (e.g., Guatemala, Colombia) (9)
- ❑ Middle Eastern (e.g., Egyptian, Iranian, Israeli) (10)
- ❑ Native American, American Indian (11)
- ❑ White, Caucasian, European (non-Latino, and non-Middle Eastern) (12)
- ❑ More than one (e.g., Chinese/Caucasian, Mexican/Filipino) (13)
- ❑ Other (please specify) (14) _____

Q7 What is your student status? (If you are a transfer student, please indicate your student status at transfer e.g., Transfer, Junior)
- ❑ Freshman (1)
- ❑ Sophomore (2)
- ❑ Junior (3)
- ❑ Senior (4)
- ❑ Transfer (5)
- ❑ Graduate (6)

Q8 What is your primary major/departmental affiliation? (e.g., Mathematics)

Q9 What is your secondary major/departmental affiliation?
- ❍ Secondary major/departmental affiliation: (1) _____
- ❍ I do not have a secondary major/departmental affiliation. (2)

Q10 What is your grade point average (GPA)?

Q11 How many scholarships have you been awarded at UCI?

Q12 How many research projects/labs are you currently involved in?

Q13 How many professional internships have you held?

Q14 How many honors societies are you a member of?

Q15 In the past year what is the average number of hours per week you have spent on each of the following activities? Rough estimates are fine (there are 168 hours in a week).
_____ Academic work (e.g., studying, in class, writing or working on assignments or projects, research, etc.) (1)
_____ Paid work (e.g., paid job, work study, paid internship) (2)
_____ Housework and home maintenance (e.g. shopping, cooking, cleaning, laundry, paying bills) (3)
_____ Care-giving (e.g. meeting the needs of children or teenagers, spouse/partner, elders, friends, other family members) (4)

Q16 This question describes family-friendly policies at UCI. Please indicate whether you have heard of these policies.

	Have you heard of these policies?	
	Yes (1)	No (2)
On campus childcare is available for undergraduate and graduate student parents (1)	○	○
Care hours are determined by unit load (e.g., one unit is equivalent to two hours of care with additional care hours during class time) (2)	○	○
Admittance to on campus childcare services for children of undergraduate and graduate student parents is determined by need (e.g., household income) (3)	○	○
Students may withdraw from classes for one quarter without having to reapply to the university. (4)	○	○
Students may take an incomplete in a class and must complete the course within a year of the assigned incomplete. (5)	○	○

Q17 Since you became a student at UCI, have you ever had substantial responsibility for raising one or more children under eighteen?

❍ Yes (1)
❍ No (2)

Q18 For each child that you have raised or parented, please enter their birth month and year (or month and year they entered your household if the child is adopted or is a stepchild) their connection to you, and your marital or relationship status at the time the child entered the household. Indicate what arrangements (if any) you undertook at the time (please check all that apply).

Month of birth or entry into the household	Relationship to you				Relationship status at time of birth or entry into				
(1)	Biological child (1)	Adopted child (2)	Stepchild (3)	Other (4)	Married (1)	Partnered and living together (2)	Partnered, but not living together (3)	Divorced (4)	Separat (5)
Youngest Child (Youngest to Oldest) (1)	❑	❑	❑	❑	❍	❍	❍	❍	❍
2nd youngest child (2)	❑	❑	❑	❑	❍	❍	❍	❍	❍
3rd youngest child (3)	❑	❑	❑	❑	❍	❍	❍	❍	❍
4th youngest child (4)	❑	❑	❑	❑	❍	❍	❍	❍	❍

Q19 If you marked "other" relationship of child to you, please describe the relationship(s) here:

Q20 Students sometimes find that their responsibilities as parents conflict with their academic obligations. How much tension or stress, if any, have you experienced in your parenting as a result of demands placed on you by any of the following types of academic duties?

	A great deal (1)	Some (2)	A little (3)	None (4)	Not applicable (5)
Attending classes, seminars, or meetings (1)	○	○	○	○	○
Engaging in extracurricular activities (e.g., student organizations, clubs, honors societies, sports teams, etc.) (2)	○	○	○	○	○
Conducting time-sensitive laboratory experiments (3)	○	○	○	○	○
Doing fieldwork or field research away from home (4)	○	○	○	○	○
Attending conferences or giving conferences papers (5)	○	○	○	○	○
Writing and publishing in academic journals (6)	○	○	○	○	○

Q21 Students who are struggling academically due to personal reasons have the opportunity to withdraw from classes and apply for readmission if and when they are ready to return to UCI. Also, students who do not wish to withdraw but are struggling academically due to personal reasons, may request an incomplete in one or more of their classes. If offered an incomplete, the

student must complete the coursework one year after the incomplete was given. Students are also permitted to obtain part-time student status for personal reasons.

Q22 Have you ever requested or been offered withdrawal, an incomplete in a class, or part-time student status due to personal or family reasons?
❍ Yes (1)
❍ No (2)

Q23 Were you ever denied a request for withdrawal, an incomplete in a class, or part-time student status when you were struggling academically due to personal reasons?
❍ Yes (1)
❍ No (2)

Q24 If you answered "yes" to the previous question what reasons were given for the denial?

Q25 Students who are struggling academically due to personal reasons may be referred to a campus social worker at UCI. The social worker can assist students who are struggling academically and personally by informing students about resources and advocating for resources for students. Have you heard of this resource?
❍ Yes (1)
❍ No (2)

Q26 Have you ever been referred to a campus social worker?
❍ Yes (1)
❍ No (2)

Q27 If at any time since you started attending UCI, you had the option to request withdrawal, an incomplete in a class, or part-time student status in order to attend to your personal, family, or health struggles, but chose NOT to do so, please indicate which of the following reasons contributed to your decision not to use the policy?
❍ I chose NOT to use the policy because I feared it would have led to a heavier academic load later (1)
❍ I chose NOT to use the policy because it might have hurt my chances for graduation or advancement in my graduate program (2)
❍ I chose NOT to use the policy because I did not need to at the time (3)
❍ I did NOT know about the policy (4)
❍ I was NOT the primary caregiver to the child so it was unnecessary (5)
❍ The policy did not yet exist at the time I could have used it (6)
❍ I chose NOT to use the policy because of another reason. If "another reason" was important in your decision not to use the policy, please describe it. (7) _____

Q28 The following statements describe situations or decisions often faced by student parents. Please indicate whether the statement accurately describes your past or present situation.

	Yes (1)	No (2)	Partially accurate (3)	Not sure (4)	Not applicable (5)
I have slowed down or made sacrifices in my education in order to be a good parent. (1)	○	○	○	○	○
My daily schedule is flexible, which is helpful in raising children. (2)	○	○	○	○	○
I missed some of my children's important events because I did not want to appear uncommitted to my education. (3)	○	○	○	○	○
My educational timing has meshed well with my family timing. (4)	○	○	○	○	○
I came back to school sooner than I would have liked after having, adopting, or fostering a child because I wanted to be taken seriously as a student.	○	○	○	○	○

(5) I tried to time new children to come during the summer break. (6)	○	○	○	○	○
The department of my major has been supportive of my need to balance school, family, and/or work life. (7)	○	○	○	○	○
I have not brought my children to classes because I worry that my professor/other students will be bothered. (8)	○	○	○	○	○

Q29 The following question seeks to gauge how useful possible family friendly policies or initiatives would be or would have been to you in facilitating your enjoyment of both a successful academic career and family life; and how supportive you would be of other students using these proposed policies.

	Usefulness of policy to you (at any time during your education at UCI				Your level of support for implementation and use of policy by UCI graduate and undergraduate students?			
	Very (1)	Somewhat (2)	Not Very (3)	Not at all (4)	Very (1)	Somewhat (2)	Not very (3)	Not at all (4)
A readily available social worker to help student parents navigate resources at UCI. (2)	○	○	○	○	○	○	○	○
Readily available infant care and child care slots in a university facility for infants and children of students (3)	○	○	○	○	○	○	○	○
An interactive website that provides students with a public forum for discussion of student and family policy and experience at UCI (4)	○	○	○	○	○	○	○	○
A	○	○	○	○	○	○	○	○

reworking of UCI's calendar to fit more closely with the primary and secondary school calendar (5)								
An emergency back-up child care program with co-pay by user (6)	○	○	○	○	○	○	○	○
A student-led organization founded to support academic and personal success for student parents (7)	○	○	○	○	○	○	○	○
A study space located on campus designed for student parents and their children (8)	○	○	○	○	○	○	○	○
Other policies or initiatives? (9)	○	○	○	○	○	○	○	○

Q30 Below is a list of statements. Please indicate the extent to which the statement accurately describes your past or present situation.

	Yes (1)	No (2)	Partially accurate (3)	Not sure (4)	Not applicable (5)
I delayed finishing my education in order to start a family. (1)	○	○	○	○	○
I stayed single because I did not have time for a partner, my child, and a successful educational career. (2)	○	○	○	○	○
I stayed single because I have not met anyone suitable. (3)	○	○	○	○	○
I had fewer children than I wanted to have. (4)	○	○	○	○	○
I did not want to have children. (5)	○	○	○	○	○
I would like to have or adopt a (or another) child in the future. (6)	○	○	○	○	○
I have been unable to consider educational opportunities outside my current geographical location because of family reasons. (7)	○	○	○	○	○

Q31 Please indicate to what extent each statement is true about school: definitely NOT true, mostly NOT true, mostly true, very true.

	Definitely NOT true (1)	Mostly NOT true (2)	Mostly true (3)	Very true (4)
My partner listens to me intently about school problems. (1)	○	○	○	○
My partner is understanding when I have to study more than usual. (2)	○	○	○	○
If I have school related tasks to do, my partner takes on extra chores at home. (3)	○	○	○	○
My partner praises me for accomplishments in school. (4)	○	○	○	○
I can rely on my partner for good advice when things get tough at school. (5)	○	○	○	○
My partner doesn't like to socialize with my friends from school. (6)	○	○	○	○
If I wanted to make an educational career change, my partner would be supportive. (7)	○	○	○	○
My partner tries to make it easier for me to	○	○	○	○

combine school and family life. (8)				
I do not discuss educational decisions that I have to make with my partner. (9)	○	○	○	○
My partner feels that my school work interferes with my family responsibilities. (10)	○	○	○	○
My partner does not complain about the amount of time I spend on school related activities. (11)	○	○	○	○
My partner is not understanding when I have to bring school work home. (12)	○	○	○	○
I don't talk about school work to my partner. (13)	○	○	○	○
My partner is not much of an asset to me when it comes to the social aspect of my academics. (14)	○	○	○	○
When I socialize with my peers after school, my partner is very understanding. (15)	○	○	○	○
My partner listens carefully	○	○	○	○

to my worries about the children. (16)				
My partner helps me to be a better parent. (17)	○	○	○	○
My partner takes on extra household responsibilities when I've had a rough day with the children. (18)	○	○	○	○
My partner does not help me to make child-rearing decisions. (19)	○	○	○	○
My partner offers advice about problems I'm encountering with the children. (20)	○	○	○	○
My partner does not support my decisions in front of the children. (21)	○	○	○	○
My partner praises me for the way I handle the children. (22)	○	○	○	○
My partner takes on extra chores so that I can spend more time with the children. (23)	○	○	○	○
My partner does not enjoy listening to me talk about my experiences with	○	○	○	○

the children. (24)				
My partner helps me when there are problems with the children. (25)	○	○	○	○
My partner is proud of the way I handle the role of parent. (26)	○	○	○	○
My partner takes an equal part in disciplining the children so I don't have to do it all. (27)	○	○	○	○

Q32 Please answer the following questions regarding your education with these options: disagree strongly, disagree slightly, agree slightly, agree strongly.

	Disagree strongly (1)	Disagree slightly (2)	Agree slightly (3)	Agree strongly (4)
When I look back in years to come, I think I will regret not having spent more time with my child. (1)	○	○	○	○
My involvement in my schooling makes it hard for me to be the kind of parent I would like to be. (2)	○	○	○	○
Things pile up at school because I have too much to do. (3)	○	○	○	○
I have no problem making arrangements for my child's care. (4)	○	○	○	○
My responsibilities as a parent are taking a toll on my intimate relationships. (5)	○	○	○	○
I have too much on my mind to get into the spirit of romance with my partner. (6)	○	○	○	○
My responsibilities at school do NOT take a toll on my intimate relationships. (7)	○	○	○	○
I do NOT feel	○	○	○	○

pulled in too many directions. (8)				
I sometimes feel I'm missing out on some of the best moments of my child's life. (9)	○	○	○	○
Responsibilities at home are putting me under some strain. (10)	○	○	○	○
Responsibilities at school are putting me under some strain. (11)	○	○	○	○
I let things go around the house because I have too much to do. (12)	○	○	○	○
My intimate relationship would be a greater source of satisfaction if I were not so involved in my education. (13)	○	○	○	○
When I am relaxing, I DO NOT feel guilty about the things I might be doing (14)	○	○	○	○
I envy people who have fewer commitments than I do. (15)	○	○	○	○
My involvement in family life interferes with my ability to	○	○	○	○

achieve my goals at school. (16)				
The quality of my everyday family life would be better if I were less involved at school. (17)	○	○	○	○
I have as much time to myself as I want. (18)	○	○	○	○
My intimate relationship would be a greater source of satisfaction if I were less involved in my child. (19)	○	○	○	○
Too much is expected of me with respect to housework. (20)	○	○	○	○
I do NOT think I study too many hours. (21)	○	○	○	○
I feel that I have too much to do and not enough time or energy to do it all. (22)	○	○	○	○
I do NOT feel that pressures from school carry over into my family life. (23)	○	○	○	○
I feel that pressures from the family carry over into my school life. (24)	○	○	○	○

My school hours interfere with my family life. (25)	○	○	○	○
I wish I had more freedom. (26)	○	○	○	○
I don't have the time to do as much as I would like to with my child. (27)	○	○	○	○
When I go to bed at night, my mind is often full of all the things I have to do tomorrow. (28)	○	○	○	○
Too much is expected of me with respect to the care of my child. (29)	○	○	○	○
Problems with childcare arrangements interfere with my schedule at school. (30)	○	○	○	○
School related travel gets in the way of my life. (31)	○	○	○	○
I feel burned out. (32)	○	○	○	○

Q33 Are you currently employed for pay?
○ Yes (1)
○ No (2)
If No Is Selected, Then Skip To How much have you been bothered IN TH...

Q34 Please indicate to what extent each statement is true in regards to work: definitely NOT true, mostly NOT true, mostly true, very true.

	Definitely NOT true (1)	Mostly NOT true (2)	Mostly true (3)	Very true (4)
My partner listens to me intently about work problems. (1)	○	○	○	○
My partner is understanding when I have to work more than usual. (2)	○	○	○	○
If I have work related tasks to do, my partner takes on extra chores at home. (3)	○	○	○	○
My partner praises me for accomplishments at work. (4)	○	○	○	○
I can rely on my partner for good advice when things get tough at work. (5)	○	○	○	○
My partner does NOT like to socialize with my friends from work. (6)	○	○	○	○
If I wanted to make a career change, my partner would be supportive. (7)	○	○	○	○
My partner tries to make it easier for me to combine work and family life.	○	○	○	○

(8) I do not discuss work related decisions that I have to make with my partner. (9)	○	○	○	○
My partner feels that my work interferes with my family responsibilities. (10)	○	○	○	○
My partner does not complain about the amount of time I spend working. (11)	○	○	○	○
My partner is not understanding when I have to bring work home. (12)	○	○	○	○
I don't talk about work to my partner. (13)	○	○	○	○
My partner is not much of an asset to me when it comes to the social aspects of my job. (14)	○	○	○	○
When I socialize with my peers after work, my partner is very understanding. (15)	○	○	○	○
My partner listens carefully to my worries about the children. (16)	○	○	○	○

My partner helps me to be a better parent. (17)	○	○	○	○
My partner takes on extra household responsibilities when I'I have had a rough day with the children. (18)	○	○	○	○
My partner does not help me to make child-rearing decisions. (19)	○	○	○	○
My partner offers advice about problems I'm encountering with the children. (20)	○	○	○	○
My partner does not support my decisions in front of the children. (21)	○	○	○	○
My partner praises me for the way I handle the children. (22)	○	○	○	○
My partner takes on extra chores so that I can spend more time with the children. (23)	○	○	○	○
My partner does not enjoy listening to me talk about my experiences with the children. (24)	○	○	○	○
My partner helps	○	○	○	○

me when there are problems with the children. (25)				
My partner is proud of the way I handle the role of parent. (26)	○	○	○	○
My partner takes an equal part in disciplining the children so I don't have to do it all. (27)	○	○	○	○

If My partner listens to me in... Is Not Displayed, Then Skip To Please answer the following questions...

Q35 Please answer the following questions regarding your work with these options: disagree strongly, disagree slightly, agree slightly, agree strongly.

	Disagree strongly (1)	Disagree slightly (2)	Agree slightly (3)	Agree strongly (4)
When I look back in years to come, I think I will regret not having spent more time with my child. (1)	○	○	○	○
My involvement in my work makes it hard for me to be the kind of parent I would like to be. (2)	○	○	○	○
Things pile up at work because I have too much to do. (3)	○	○	○	○
I have no problem making arrangements for my child's care. (4)	○	○	○	○
My responsibilities as a parent are taking a toll on my intimate relationships. (5)	○	○	○	○
I have too much on my mind to get into the spirit of romance with my partner. (6)	○	○	○	○
My responsibilities at work do NOT take a toll on my intimate relationships. (7)	○	○	○	○
I do NOT feel	○	○	○	○

pulled in too many directions. (8)			
I sometimes feel I'm missing out on some of the best moments of my child's life. (9)	○	○	○	○
Responsibilities at home are putting me under some strain. (10)	○	○	○	○
Responsibilities at work are putting me under some strain. (11)	○	○	○	○
I let things go around the house because I have too much to do. (12)	○	○	○	○
My intimate relationship would be a greater source of satisfaction if I were not so involved in my work. (13)	○	○	○	○
When I am relaxing, I DO NOT feel guilty about the things I might be doing (14)	○	○	○	○
I envy people who have fewer commitments than I do. (15)	○	○	○	○
My involvement in family life interferes with my ability to	○	○	○	○

achieve my goals at work. (16)				
The quality of my everyday family life would be better if I were less involved at work. (17)	○	○	○	○
I have as much time to myself as I want. (18)	○	○	○	○
My intimate relationship would be a greater source of satisfaction if I were less involved in my child. (19)	○	○	○	○
Too much is expected of me with respect to housework. (20)	○	○	○	○
I do NOT think I work too many hours. (21)	○	○	○	○
I feel that I have too much to do and not enough time or energy to do it all. (22)	○	○	○	○
I do NOT feel that pressures from work carry over into my family life. (23)	○	○	○	○
I feel that pressures from the family carry over into my work life. (24)	○	○	○	○
My work hours	○	○	○	○

interfere with my family life. (25)				
I wish I had more freedom. (26)	○	○	○	○
I don't have the time to do as much as I would like to with my child. (27)	○	○	○	○
When I go to bed at night, my mind is often full of all the things I have to do tomorrow. (28)	○	○	○	○
Too much is expected of me with respect to the care of my child. (29)	○	○	○	○
Problems with childcare arrangements interfere with my schedule at work. (30)	○	○	○	○
Work related travel gets in the way of my life. (31)	○	○	○	○
I feel burned out. (32)	○	○	○	○

Q36 How much have you been bothered IN THE LAST THREE MONTHS by the following:

	Not at all (1)	Occasionally (2)	Moderately (3)	Quite a bit (4)	Extremely often (5)
Weight change (gain or loss of 10lbs. or more) (2)	○	○	○	○	○
Back pain (3)	○	○	○	○	○
Constipation (4)	○	○	○	○	○
Dizziness (5)	○	○	○	○	○
Diarrhea (6)	○	○	○	○	○
Faintness (7)	○	○	○	○	○
Constant fatigue (8)	○	○	○	○	○
Migraine headache (9)	○	○	○	○	○
Headache (10)	○	○	○	○	○
Nausea and/or vomiting (11)	○	○	○	○	○
Acid stomach or indigestion (12)	○	○	○	○	○
Stomach pain (13)	○	○	○	○	○
Hot or cold spells (14)	○	○	○	○	○
Hands trembling (15)	○	○	○	○	○
Heart pounding or racing (16)	○	○	○	○	○
Poor appetite (17)	○	○	○	○	○
Shortness of breath when not exercising	○	○	○	○	○

or working hard (18)					
Numbness or tingling in parts of your body (19)	○	○	○	○	○
Felt weak all over (20)	○	○	○	○	○
Pains in heart or chest (21)	○	○	○	○	○
Feeling low in energy (22)	○	○	○	○	○
Stuffy head or nose (23)	○	○	○	○	○
Blurred vision (24)	○	○	○	○	○
Muscle tension or soreness (25)	○	○	○	○	○
Muscle cramps (26)	○	○	○	○	○
Severe aches and pains (27)	○	○	○	○	○
Acne (28)	○	○	○	○	○
Bruises (29)	○	○	○	○	○
Nosebleeds (30)	○	○	○	○	○
Pulled (strained) muscles or ligaments (31)	○	○	○	○	○
Cold or cough (32)	○	○	○	○	○
Teeth/gum problems (33)	○	○	○	○	○
Ear aches (34)	○	○	○	○	○
Flu (35)	○	○	○	○	○

Q37 How strongly do you agree or disagree with each statement below?

	Strongly disagree (1)	Disagree moderately (2)	Disagree slightly (3)	Agree slightly (4)	Agree moderately (5)	Strongly agree (6)
I am part of a close- knit neighborhood, where people are friendly and help each other out. (1)	○	○	○	○	○	○
I can call on my neighbors to lend me a hand without feeling that I am imposing on them. (2)	○	○	○	○	○	○
My neighbors disapprove of the fact that my child has a mother who is in school. (3)	○	○	○	○	○	○
We do NOT have a regular plan worked out for exchanging child-care with any of our neighbors (ex; exchanging babysitting, driving children to activities). (4)	○	○	○	○	○	○
Our neighbors help us out by looking after our child if we want to run a brief errand (a half	○	○	○	○	○	○

hour or less). (5)						
We could find a neighbor to look after our child for a day if our child was sick, and we both had to be at school or work. (6)	○	○	○	○	○	○
If a person was coming to our house and I had to be at school or work, I could ask a neighbor to let the repair man in. (7)	○	○	○	○	○	○
I could borrow a car from a neighbor, or get a neighbor to drive me to school, if my car would not start. (8)	○	○	○	○	○	○
There are older children in the neighborhood who keep an eye on the younger ones when they're all playing outside. (9)	○	○	○	○	○	○

Q38 How satisfied are you with your current child care arrangements for your youngest child? Please select one of the options below.

	Very Dissatisfied (1)	Dissatisfied (2)	Somewhat Dissatisfied (3)	Neutral (4)	Somewhat Satisfied (5)	Satisfied (6)	Very Satisfied (7)
In terms of your child's emotional needs: (1)	○	○	○	○	○	○	○
In terms of your child's social development: (2)	○	○	○	○	○	○	○
In terms of your child's health: (3)	○	○	○	○	○	○	○

Q39 Below is a list of experiences/feelings that you may or may not have had during the last 6 months and which you may have found stressful. If the event has not happened to you, select the bubble in the column labeled "NO." If it has happened, indicate how stressful it was for you.

	No	Yes			If yes, when did it occur?		If yes, please provide the date
	(1)	Low (1)	Mild (2)	High (3)	Last 6 months (1)	More than 6 months ago (2)	MM/DD/YEAR (1)
Relationship broke up (1)	○	○	○	○	○	○	
Married (2)	○	○	○	○	○	○	
Divorced (3)	○	○	○	○	○	○	
Relationship with spouse or partner changed for the worse (4)	○	○	○	○	○	○	
Separated from partner (5)	○	○	○	○	○	○	
Infidelity (6)	○	○	○	○	○	○	
Trouble with in-laws (7)	○	○	○	○	○	○	
Broke up with a friend (8)	○	○	○	○	○	○	
Started work after not working for a long time (9)	○	○	○	○	○	○	
Demoted or not promoted at work (10)	○	○	○	○	○	○	
Conditions at work changed for the worse (11)	○	○	○	○	○	○	
Laid off (12)	○	○	○	○	○	○	
Fired (13)	○	○	○	○	○	○	
Stopped work when wanted to work (14)	○	○	○	○	○	○	

Difficulty finding a job (15)	❍	❍	❍	❍	❍	❍	
Child died (16)	❍	❍	❍	❍	❍	❍	
Spouse or partner died (17)	❍	❍	❍	❍	❍	❍	
Family member other than partner died (18)	❍	❍	❍	❍	❍	❍	
Friend died (19)	❍	❍	❍	❍	❍	❍	
Spouse or partner had a serious health problem (20)	❍	❍	❍	❍	❍	❍	
Child had a serious health problem (21)	❍	❍	❍	❍	❍	❍	
Family member other than partner or child had a serious health problem (22)	❍	❍	❍	❍	❍	❍	
Physical illness (23)	❍	❍	❍	❍	❍	❍	
Injury (24)	❍	❍	❍	❍	❍	❍	
Unable to get treatment of illness or injury (25)	❍	❍	❍	❍	❍	❍	
Being the victim of rape (26)	❍	❍	❍	❍	❍	❍	
Drug or alcohol problem in family (27)	❍	❍	❍	❍	❍	❍	
Abortion (28)	❍	❍	❍	❍	❍	❍	
Became pregnant and did not want to	❍	❍	❍	❍	❍	❍	

(29)						
Miscarriage or stillbirth (30)	○	○	○	○	○	○
Change in child care arrangement (31)	○	○	○	○	○	○
Taking a full responsibility of being a single parent (32)	○	○	○	○	○	○
Someone stayed on living in your house after s/he was expected to leave (33)	○	○	○	○	○	○
Moved to a worse residence or neighborhood (34)	○	○	○	○	○	○
Unable to move after expecting to move (35)	○	○	○	○	○	○
Lost a home to fire, flood or other disaster (36)	○	○	○	○	○	○
Difficulty finding housing (37)	○	○	○	○	○	○
Assaulted, robbed (38)	○	○	○	○	○	○
Involved in lawsuit (39)	○	○	○	○	○	○
Arrested (40)	○	○	○	○	○	○
Convicted of a crime (41)	○	○	○	○	○	○
Went to jail (42)	○	○	○	○	○	○
Car, furniture or	○	○	○	○	○	○

other property repossessed (43)							
Took a cut in income (44)	○	○	○	○	○	○	
Went on welfare (45)	○	○	○	○	○	○	
Went off welfare (46)	○	○	○	○	○	○	
You got an infection (47)	○	○	○	○	○	○	
You decreased social/recreation activities (48)	○	○	○	○	○	○	
You started a new relationship (49)	○	○	○	○	○	○	
There were changes or difficulties with regard to sex (50)	○	○	○	○	○	○	
You told a family member lover or friend of your chronic illness (51)	○	○	○	○	○	○	
You encountered discrimination (52)	○	○	○	○	○	○	
You got back on drugs or alcohol (53)	○	○	○	○	○	○	
You stopped using drugs or alcohol (54)	○	○	○	○	○	○	
You experienced new or more painful	○	○	○	○	○	○	

symptoms (55)						
Your child became chronically ill (56)	○	○	○	○	○	○	
A lover, family member, found out that he/she has a chronic illness (57)	○	○	○	○	○	○	
You had to make an important medical decision for your child (58)	○	○	○	○	○	○	
Your child was hospitalized (59)	○	○	○	○	○	○	
You were hospitalized (60)	○	○	○	○	○	○	
You had a conflict or problem with health care workers (61)	○	○	○	○	○	○	
Your chronic illness status was revealed against your wishes. (62)	○	○	○	○	○	○	

Q40 If you are interested in participating in part two of this research study, please fill in your name and email address below.

Q41 How would you like to be compensated for your participation?
○ 1 SONA credit (1)
○ $10 Amazon gift card via email (2)

Q42 Please provide your email address for compensation.

Interview Questions – Phase 2

1. Tell me about your overall experience, tell me about the challenges you have faced and what has helped (academically and/or personally) as a student-parent at UCI?
2. What resources (instrumental or emotional), that you know of, are available to student-parents at UCI?
    a. What resources have you used in the past? Why?
    b. How did/do you feel about these resources?
        i. What did you like?
        ii. What can be improved?
3. What are some structural or informal changes that you would like to see at UCI in order to make life easier for student-parents?
    a. It what ways and why would you like to see these things changed? In what ways would these changes matter?
4. How do you feel you could be better supported by your academic department/major as a student-parent at UCI?
5. How do you feel about your academic department at UCI?
    a. Can you give some examples or reasons why you feel that way?
    b. What do you feel can be improved? Why?
    c. What do you feel your department does well? Why?
6. How do you feel about the instrumental support (Define) that you have received from your academic counselors at UCI?
    a. Can you give some examples or reasons why you feel that way?
    b. What do you feel can be improved? Why?
    c. What do you feel academic counselors do well? Why?

References

Advisory Committee on Financial Assistance. (2012). Pathways to success: Integrating learning

    with life and work to increase national college completion: A report to the U.S. Congress

    and Secretary of Education. Retrieved July 9, 2016, from

    http://files.eric.ed.gov/fulltext/ED529485.pdf

Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual

    Review of Psychology*, *53*(1), 371.

Brooks, R. (2012). Student-parents and higher education: a cross-national comparison. *Journal

    of Education Policy*, *27*(3), 423-439. doi:10.1080/02680939.2011.613598

Brooks, R. (2015). Social and spatial disparities in emotional responses to education: feelings of

    'guilt' among student-parents. *British Educational Research Journal*, *41*(3), 505-519.

Brooks, R. (2012). Negotiating time and space for study: Student-parents and familial

    relationships. *Sociology, 47*(3). 443-459.

Brown, V. & Nichols, T.R. (2012). Pregnant and parenting students on campus: Policy and

    program implication for a growing population. *Educational Policy, 27*(3), 499-530.

Caldwell, P. A. (2015). Overlooked and Overshadowed: Exploring the Multiple Dimensions of

    Identity in Traditionally-Aged Undergraduate Student-Parents. (Unpublished dissertation,

    The Graduate College at the University of Nebraska).

Carney-Crompton, S. & Tan, J. (2002). Support systems, psychological functioning, and

    academic performance of non-traditional female students. *Adult Education Quarterly,

    52*(2), 140-154.

Choy, S. (2002). Nontraditional undergraduates. National Center for Education Statistics. U.S.

    Department of Education. Office of Educational Research and Improvement.

Colleges Need More Child Care to Help Student Parents Graduate. (n.d.). Retrieved July 09,

    2016, from http://www.iwpr.org/press-room/press-releases/colleges-need-more-child-

    care-to-help-student-parents-graduate

Costello, C. B. (2012, March). Increasing Opportunities for Low-Income Women and Student

    Parents in Science, Technology, Engineering, and Math at Community Colleges.

    Retrieved July 09, 2016, from https://lincs.ed.gov/professional-development/resource-

    collections/profile-536

Ciciora, P. (2010, February 25). Increasing number of student-parents need on-campus child

    care. *Medical News Today*. Retrieved from

    http://www.medicalnewstoday.com/releases/180232.php

Elizabeth Cady Stanton Pregnant and Parenting Student Services Act of 2007, H.R. 1088, 110th

    Congress Cong. (2007).

Estes, D.K. (2011). Managing the student-parent dilemma: Mothers and fathers in higher

    education. *Symbolic Interaction, 34*(2), 198-219.

Gault, B., Reichlin, L., Reynolds, E., & Froehner, M. (2014, November 1). Fact Sheet: 4.8

    Million College Students Are Raising Children. Retrieved April 27, 2015, from

    http://www.iwpr.org/publications/pubs/4.8-million-college-students-are-raising-children

Gerrard, E., & Roberts, R. (2006). Student parents, hardship and debt: a qualitative

    study. *Journal of Further & Higher Education*, *30*(4), 393-403.

    doi:10.1080/03098770600965409

Goode, W.J. (1960). A theory of role strain. *American Sociological Review, 25*(4), 483-496.

Home, A. (1997). Learning the hard way: role strain, stress, role demands, and support in

    multiple-role women students. *Journal of Social Work Education,* 33 (2), 335-346.

Home, A. M. (1998). Predicting role conflict, overload and contagion in adult women university

    students with families and jobs. *Adult education quarterly*,*48*(2), 85-97.

Hussar, J.W. & Bailey, T.M. (2013). Projections of education statistics to 2021. *National Center*

    of Education Statistics, 40,

Johnson, S., & Robson, C. (1999). Threatened identities: the experiences of women in transition

    to programmes of professional higher education. *Journal Of Community & Applied*

    Social Psychology, *9*(4), 273-288

Leaman, C. R. (2015). Exploring Graduate Student Parent Experiences: How to Better Support

    and Reduce Attrition in an Underserved Population. (Doctoral dissertation, James

    Madison University).

Lovell, E. D. (2014). Female college students who are parents: Motivation clarified by the ages

    of their children. *Community College Journal of Research and Practice*, *38*(4), 370-374.

Marandet, E., & Wainwright, E. (2010). Invisible experiences: understanding the choices and

    needs of university students with dependent children. *British Educational Research*

    Journal, *36*(5), 787-805. doi:10.1080/01411920903165595

Medved, C. E., & Heisler, J. (2002). A negotiated order exploration of critical student-faculty

    interactions: student-parents manage multiple roles. Communication Education, 51(2),

    105.

Moreau, M.P. & Kerner, C. (2012). Supporting student parents in higher education: a policy

    analysis. University of Bedfordshire.

Moreau, M. P., & Kerner, C. (2015). Care in academia: An exploration of student parents'

    experiences. *British Journal of Sociology of Education*,*36*(2), 215-233.

Nelson, B., Froehner, M., & Gault, B. (2013). College students with children are common and

face many challenges in completing higher education. Retrieved April 27, 2015, from

http://www.iwpr.org/publications/pubs/college-students-with-children-are-common-and-

face-many-challenges-in-completing-higher-education-summary/at_download/file

Radford, A.W., Cominole, M., Skomsvold, P., & RTI International. (2015). Demographic and

enrollment characteristics of nontraditional undergraduates: 2011-2012. *National Center*

for Education Statistics.

Robertson, A. S., Weider, A., Weider, J., & Morey, P. (2012). I-Parent Report: When the

Nontraditional Becomes Traditional: Addressing the Needs of Student-Parents in Higher

Education.

Ross-Gordon, J. M. (2011). Research on Adult Learners: Supporting the Needs of a Student

Population that Is No Longer Nontraditional. Retrieved July 09, 2016, from

https://www.aacu.org/publications-research/periodicals/research-adult-learners-

supporting-needs-student-population-no

St Rose, A., & Hill, C. (2013). *Women in Community Colleges: Access to Success*. American

Association of University Women. 1111 Sixteenth Street NW, Washington, DC 20036.

Sallee, M. W. (2015). Adding Academics to the Work/Family Puzzle: Graduate Student Parents

in Higher Education and Student Affairs. *Journal of Student Affairs Research and*

Practice, *52*(4), 401-413.

Schumacher, R. (2013). Prepping Colleges for Parents: Strategies for Supporting Student Parent

Success in Postsecondary Education. Working Paper. *Institute for Women's Policy*

Research.

Scott, C., Burns, A., & Cooney, G. (1993). Single and married mothers as students: obstacles to

successful completion of study. Paper presented at the National Access and Equity

Conference, Newcastle University. 5th-7th October, 1993.

Scott, C., & Burns, A. (1996). Reasons for discontinuing study: The case of mature age female students with children. *Higher Education*, *31*(2), 233.

Scott, C., Burns, A., & Cooney, G. (1998). Motivation for return to study as a predictor of completion of degree amongst female mature students with children. *Higher Education*, *35*(2), 221-239.

Schutt, R. K. (2014). *Investigating the social world*. Sage Publications.

Soares, L. (2013). Post-traditional learners and the transformation of postsecondary education: A manifesto for college leaders. *undated brief), http://www. acenet. edu/newsroom/Pages/Post-traditional-Learners-and-the-Transformation-of-Postsecondary-Ed. aspx*.

Swingle, A. L. V. (2013). *College student parents: Stress, role conflict, and coping* (Doctoral dissertation, Indiana University of Pennsylvania).

Quimby, J. L., & O'Brien, K. M. (2006). Predictors of well-being among nontraditional female students with Children. *Journal Of Counseling & Development*, *84*(4), 451-460.

U.S. Congress. (2007). *H. R. 1088: Elizabeth Cady Stanton pregnant and parenting student services act of 2007*. Retrieved from http://www.govtrack.us/congress/ bill.xpd?bill=h110-1088

van Rhijn, T. M. (2012). *Post-secondary students with children: An investigation of motivation and the experiences of "student parents"* (Doctoral dissertation, The University of Guelph).

van Rhijn, T.M., Quosai, T.S., & Lero, D.S. (2011). A profile of undergraduate student parents in Canada. *Canadian Journal of Higher Education, 41*(3), 59-80.

van Rhijn, T.M. & Leron, D.S. (2014). The influence of self-efficacy beliefs for student parents

      attending university. *International Journal of Lifelong Education, 33* (4), 541-555.

Yakaboski, T. (2010). Going it alone: Single-mother undergraduate's experiences. *Journal of*

      Student Affairs Research and Practice, 47(4), 463-481.