Abstract

Title of Dissertation: UNDERSTANDING CAREER ASPIRATIONS
                          AMONG YOUNG WOMEN: IMPROVING
                          INSTRUMENTATION

                          Margo Anne Gregor, Doctor of Philosophy, 2016

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The purpose of this study was to improve an instrument used to assess career aspirations (the Career Aspiration Scale) so the revised measure can be used with confidence by counseling psychologists in research and practice. Three studies were conducted with a total of 583 undergraduate and graduate women. Results of these studies provided support for the reliability and validity of the Career Aspiration Scale-Revised when used with undergraduate and graduate women. Results from confirmatory factor analyses indicated that the three-factor solution had good model fit, thus supporting a revised measure with three subscales assessing achievement, leadership, and educational aspirations. Suggestions for future research and practice using the Career Aspiration Scale- Revised are provided.

Keywords: Career Aspirations, Instrument Development, Career Assessment

UNDERSTANDING CAREER ASPIRATIONS AMONG YOUNG WOMEN:
IMPROVING INSTRUMENTATION

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CHAPTER 1: Introduction

Women have made stable gains in the workforce; however they remain vastly underrepresented in leadership positions across many careers (Lennon, 2013). A recent study evaluating women in leadership positions in 14 sectors revealed that across a wide range of professional areas (e.g., entertainment, journalism, business, education, law, medicine, technology), women are outperforming men, but they are not obtaining leadership roles or earning salaries proportionate with their higher levels of performance (Lennon, 2013). Even in fields which are historically dominated by women, females are underrepresented in leadership positions. For instance, women hold 75% of all teaching positions but represent only 30% of educational leadership roles (Lennon, 2013). Given the concentration of women in low paid, low status positions, research and counseling interventions that address women's career aspirations have the potential for promoting healthy vocational development among young women. The purpose of this study was to improve the measure of career aspirations currently used with female undergraduate and graduate students, the Career Aspiration Scale (CAS).

Career aspirations over time

The construct of women's career aspirations has changed over time as women's involvement in the workforce has increased. Traditionally, women's career choices were categorized as either career-oriented or homemaking-oriented. More recently, women's career decisions have been analyzed in terms of prioritization of career versus family, non-prestigious versus prestigious and traditionally female careers versus nontraditional careers. However, these dichotomies may not adequately capture a woman's career aspirations (Fassinger, 1990; O'Brien &

Fassinger, 1993). Moreover, career aspirations often have been operationalized as an individual's desire to select a specific career (Farmer, 1985). One argument against this conceptualization is the assumption that women who entered less prestigious or traditional careers were less motivated for achievement. O'Brien (1996) challenged the focus on traditional measures of career choice. O'Brien argued that career aspirations should be defined as the degree to which women aspire to leadership positions and continued education within their careers, which offered a more complex and multi-dimensional conceptualization of career aspirations.

Although the classical literature has been criticized for its ineffective operationalization and measurement of career aspirations (Gray & O'Brien, 2007), research consistently has found that women report lower career aspirations when compared to males. Some of the classical literature on gender differences emphasized that women had lower levels of achievement motivation compared to men, and furthermore that women were motivated by desire for approval or social concerns rather than achievement of excellence (Hoffman, 1972). More recently, Kerr, Foley-Nicpon, and Zapata (2005) noted that gifted women tend to lower their major and career aspirations, more so than males. Women have been shown to select more traditional, less prestigious careers which underutilize their abilities (O'Brien, Friedman, Tipton, & Linn, 2000). However, some research has revealed that women have greater gender role flexibility and a broader range of career interests than their male counterparts. Mendez and Crawford (2002) examined career aspirations by differentiating between careers that had been ruled out versus careers still being considered by gifted early adolescent boys and girls. Results showed that girls were

interested in a greater number of the 60 occupations than boys. However, as previous

literature has indicated, boys were interested in occupations that had higher prestige

and required higher education than the careers selected by the girls. It is essential to

further study the career aspirations of women given these gender differences.

Additionally, given that women tend to occupy low status, low paid positions

compared to their male counterparts, it is important to have a measurement of career

aspirations that accurately reflects how women think about their future careers and

desires for career attainment.

Previous research as well as theoretical models of women's career

development are useful in identifying variables that are related to career aspirations.

Various models have been developed to explore career development for women. For

example Farmer's (1985) model of career development hypothesized that women's

career motivation developed through the interaction of psychological, environmental

and background characteristics. Other researchers proposed similar models that

included individual, educational, background and lifestyle variables to predict career

choices (Betz & Fitzgerald, 1987; Fassinger, 1985, 1990). Over time, models of

women's career development have organized salient constructs into internal and

external factors (Fitzgerald, Fassinger, & Betz, 1995) to better understand the

variables that impact women's decisions about their careers. Internal constructs are

regarded as those of the person and their perspective, and are useful for understanding

women's career decisions. External constructs reflect factors outside of the individual

that can affect their career development, e.g., societal expectations, work environment

barriers). The focus of this study was on internal factors related to women's career aspirations.

The Expectancy Value Model (Eccles et al., 1983) is useful in understanding factors that impact the career and educational choices that differ between men and women. According to this model of achievement, the values of the individual influence the tasks that they choose to pursue. This proposition has been used to help explain the underrepresentation of women and minorities in STEM fields (Battle & Wigfield, 2003; Jacobs, 2005). The values of interest in predicting career related aspirations included the value of work, family, and their balance are represented by measures of work role salience, career orientation and compromise of career for family and partner.

Work role salience has been defined as how central one's aspirations for career are to their adult life (Almquist & Angrist, 1971). For college women, the expectations for their career, marital and parental identities influence their attitudes about career (Kerpelman & Schvaneveldt, 1999). In a study on college women's identities, women anticipated marrying sooner and starting careers later than men. Moreover, family-oriented women scored the lowest in career identity salience (Kerpelman & Schvaneveldt, 1999). Work role salience also may influence women's choices for employment. One study found that work role salience positively predicted women's interest in pursuing faculty positions. Specifically, work role salience was a positive predictor of intention to pursue liberal arts and Research I university tenure-track positions; such that women with high work role salience were more likely to

report intent to pursue Research I positions than those with low work role salience (McClintock-Comeaux, 2007).

Career orientation has been defined as the relative importance of family and career (Battle & Wigfield, 2003) and has been shown to relate to women's vocational attitudes and educational aspirations. A study of 216 female undergraduate students at a large northeastern university found that women's career orientation was a positive predictor of valuing of graduate education (Battle & Wigfield, 2003).Other research indicated that career-oriented attitudes may reduce the negative effect of dependent children on women's vocational outcomes. Kan (2007) used work-life data that had been collected over a period of ten years from 5,000 households and over 10,000 individuals. The results of the study found that women who had young children had a reduced likelihood of full-time work; however, women with career-oriented attitudes were more likely to have remained in their careers. This research supports that career orientation may reduce the barriers that influence women's participation in the work force.

Another variable that has been linked to women's career aspirations is the negotiation of responsibilities for both family and career, in particular the conflict regarding whether to compromise career for family. The challenge of balancing a career with the desire to have a family has been linked with women's aspirations for their careers (Marks & Houston, 2002; O'Brien et al., 2000). The desire for a family appears to impact career decision making for many women starting at an early age. A longitudinal study found that young girls may decide to pursue less prestigious careers because of the anticipation of future family responsibilities (O'Brien et al.,

2000). Another study examined education, career development, and combining career and parenthood in a survey of 92 high achieving young women ages 15 to 17 (Marks & Houston, 2002). The results indicated that both the educational and career plans of these high achieving women were influenced by their views of their role as a future mother. Additionally, they were impacted by societal messages prioritizing motherhood and family, even to the extent of lowering their plans for further education or leaving work. It appears that early in their academic careers, adolescent female's plans about their careers and education are being shaped by their expectations of their role as a mother (Marks & Houston, 2002).

Instruments assessing career aspiration often have used a single item that asked participants to list the career to which they aspired. Surprisingly, researchers continue to study occupational aspirations this way. A recent study on adolescents' occupational and educational goals utilized a single item measure asking participants to report their aspirations and expectations for occupations (Beal & Crockett, 2013). These occupational expectations were then coded for occupational prestige using National Opinion Research Center (NORC) codes, which calculate prestige scores based on the public's perceptions of specific occupations, and generally capture both the educational requirements and the rewards a career offer (Beal & Crockett, 2013). This methodology of coding careers by prestige is fairly common in the psychological and sociological research literature and has been used in a number of studies on occupational aspirations (Beal & Crockett, 2010; Chang, Chen, Greenberger, Dooley & Heckhausen, 2006; Cook et al., 1998; Dubow, Huesmann, Boxer, Pulkkinen & Kokko, 2006).

However the utility of single item measures of career aspirations have been questioned. In her study on causal models of career choice in college women, Fassinger (1990) argued that by operationalizing career choices with single dimension items there was a failure to address the degree of achievement to which women aspire within their chosen career. She suggested that "future models more clearly differentiate between women who enter traditional fields and were committed to excelling in those fields, as opposed to women who enter nontraditional fields yet did not aspire to high levels of achievement in those areas" (p. 457). To address Fassinger's concerns regarding the measure of career orientation, O'Brien (1996) developed a measure of career aspiration to fill the void in the extant literature.

Career Aspiration Scale

Previous instruments assessed the degree of commitment to a career but did not measure an individual's aspiration to advancement within the career of choice. For example, a woman may select a traditionally female career such as teaching and still aspire to leadership roles within the field. The CAS was developed by O'Brien to move beyond the traditional measures of career choice to capture this construct. This 10- item measure assessed the degree to which individuals valued their careers, and aspired to leadership positions within their career. Participants responded to each item on a 5-point Likert scale. Sample items included, "I plan on developing as an expert in my career field" and "I would be satisfied just doing my job in a career I am interested in." The measure demonstrated adequate reliability with a sample of 282 adolescent women and demonstrated validity with positive correlations with measures of career salience, academic achievement, and career self-efficacy (O'Brien, 1996).

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The CAS was used in multiple published studies on women's career development (O'Brien, 1996, O'Brien & Fassigner, 1993, Rainey & Borders, 1997) and demonstrated adequate reliability (O'Brien & Fassigner, 1993; Rainey & Borders, 1997).

In 2007, Gray and O'Brien conducted a study to examine the psychometric properties of the CAS. These researchers investigated the factor structure, reliability and validity of the CAS across five studies, with various populations of women including 284 college undergraduates, 409 high school seniors, 207 post high school women and 364 female Mexican American high school seniors. The results of the study illustrated sound psychometric properties of the CAS when used with adolescent, college and post-college samples, and demonstrated strong test- retest reliability over a two-week period. The study demonstrated support for an eight item version of the CAS, with a two factor solution. The first subscale titled "Leadership Aspirations" appeared to assess aspirations for leadership, promotions, and training/managing others in one's career. The second subscale titled "Educational Aspirations" appeared to measure interest in further pursuing one's educational goals. The CAS demonstrated adequate internal reliability and correlated with occupational, and multiple role self-efficacy, relative importance of career versus family, and attitudes toward women's roles (Gray & O'Brien, 2007). This version of the CAS was used in research for a number of years (Fisher, Gushue, & Cerrone, 2011; Laschinger et al., 2013; Strauss, Griffin, & Parker, 2012; Thompson & Dahling, 2010). The use of the measure clearly demonstrates that a multidimensional assessment of career aspirations was needed in the research literature.

However, there were some limitations surrounding this measurement of career

aspirations particularly regarding the reliability estimates of the subscales. The range

of reliability estimates for the subscales was variable; Leadership Aspirations,

Educational Aspirations, and the total score all ranged from low to moderate

reliability. Inconsistent estimates of internal consistency called into question the use

of the CAS total score or the Educational Aspirations subscale. One explanation for

the low reliabilities is perhaps the low number of items for each scale (Leadership

Aspirations – six items, Educational Aspirations – two items). The authors offered an

additional limitation that the two scales were not strongly interrelated, perhaps

suggesting that they may not be components of a single construct (Gray & O'Brien,

2007).

Despite these limitations, the CAS has been widely used in the vocational

literature (Choi, 2003; Fisher et al., 2011; Laschinger et al., 2013; Thompson &

Dahling, 2010; Woo & Lee, 2010). The CAS has filled a need for a more complex

and multi-dimensional measurement of career aspirations. However, given the

limitations associated with this measure and the inconsistent reliability estimates

across studies, there was a need for the scale to be revised.

Revised Career Aspiration Scale

The purpose of this study was to revise the CAS to improve the psychometric

properties of the scale. As discussed previously, the limited number of items

assessing educational aspirations may have hindered its ability to reliably measure

this construct. Additionally, when assessing the items of the Leadership Aspirations

subscale, the measure appeared to adequately capture desire to become a leader,

however lacked in its ability to assess the level of achievement to which an individual strives. Particularly, the subscale appeared to be missing the ability to measure the desire to be one of the very best in their field or to be recognized for one's accomplishments. This desire to achieve in one's career may be understood using the concept of "achievement motivation."

The importance of measuring women's achievement aspirations is supported by McClelland's Achievement Motivation Theory (1961) and was the theoretical basis underlying adding an additional subscale to more fully capture career aspirations. Achievement Motivation Theory built on the work of Murray (1938) and posited the salient role of need for achievement in career-related decision making (McClelland & Boyatzis, 1982). McClelland (1961) and Atkinson (1958) defined achievement motivation as the desire to accomplish something of value or importance through one's efforts to meet standards of excellence (McClelland, Atkinson, Clark, & Lowell, 1953). This construct has been linked to the development of goals, effort expended, and success in chosen vocational activities (McClelland, 1961; McClelland & Boyatzis, 1982). Additional research supports that for women, the need for achievement predicted obtaining middle management positions and success in management, thus contributing to our understanding of career aspirations (Jacobs & McClelland, 1994).

Also expected to relate to women's career aspirations were work role salience, career orientation, and willingness to compromise career for future family, which were utilized in combination with achievement motivation in the current study to assess construct validity. As discussed previously, work role salience is defined as

how central aspirations for career are to one's adult life (Almquist & Angrist, 1971). Research supports that work role salience is a positive predictor of career commitment, and intended career path (Aryee & Tan, 1992; McClintock-Comeaux, 2007). A similar, but distinctly related construct is career orientation. Career orientation is defined as the relative importance of family and career, and has been found to correlate strongly with women's intent to further their education, as well as women's participation in the work field after the birth of a child (Battle & Wigfield, 2001; Kan, 2007). Lastly, compromising career for family and partner is defined as the willingness to adjust one's career plans to prioritize the needs of their children or partner (Ganginis Del Pino, O'Brien, Mereish, & Miller 2011). Although this is a relatively new construct, there is a long history of research that supports that women are often willing to sacrifice their career plans because of the expectations of motherhood (Mark & Houston, 2002; O'Brien et al., 2000). Given the history of research surrounding these variables, and the theoretical models supporting the importance of internal variables and values, it was hypothesized that achievement motivation, work role salience, career orientation would correlate positively with career aspirations. However, willingness to compromise career for future family was predicted to relate negatively to career aspirations.

To summarize, the purpose of this study was to develop a revised version of the CAS that could be used with both undergraduate and graduate student women, and to test the psychometric properties of the new measure. First, additional items were added to the original subscales of Leadership and Educational Aspirations. Second, items assessing Achievement Aspirations were generated. The revised

measure (Career Aspiration Scale- Revised; CAS-R) was tested in three separate studies.

The purpose of the first study was to analyze the factor structure of the CAS-R with a sample of undergraduate student women and to assess the reliability and construct validity of the revised measure. Previous research indicated the existence of two factors, and with the addition of the achievement subscale, we predicted that the factor structure would reflect these three separate subscales. To test this factor structure, a confirmatory factor analysis was conducted. Adequate reliability estimates (above .70) were expected for the subscales. We also hypothesized that scores on the CAS-R subscales would correlate positively with work role salience and negatively with willingness to compromise career for future family.

The second study investigated the stability of the factor structure and psychometric properties of the revised measure with a pre-existing data set of graduate student females. Also assessed were the reliability and construct validity of the revised measure. We anticipated that the factor structure of the CAS-R that emerged in Study 1 would be replicated in a confirmatory factor analysis using the second, independent sample. Adequate reliability estimates were expected (above .70). Additionally, it was predicted that the CAS-R subscales would correlate positively with achievement motivation and work role salience, and negatively with willingness to compromise career for future family.

Last, the purpose of the third study was to assess test-retest reliability of the CAS-R and to investigate further the psychometric properties of the instrument for use with college women. Adequate test-retest reliability estimates for the subscales

(above .70) were expected. Moreover, the CAS-R subscales were expected to

correlate positively with work role salience and career orientation.

CHAPTER 2: Method

STUDY 1

Design

The purpose of the first study was to analyze the factor structure and psychometric properties of the CAS-R with a sample of female undergraduate students. A confirmatory factor analysis was performed and reliability coefficients were calculated. As noted previously, we hypothesized that three factors would emerge and scores on the CAS-R subscales would correlate positively with work role salience, and negatively with willingness to compromise career for future family. These constructs were selected to assess convergent validity as they were hypothesized to theoretically relate to the CAS-R, and had sound psychometric properties.

Participants

Data were collected from female undergraduate psychology majors at a large mid-Atlantic university. Data from 330 undergraduate students were collected. There were no missing data, however two outliers were removed because they fell more than three standard deviations away from the mean for the CAS-R. The final sample consisted of 328 undergraduate females, representing all years of study, with an average age of 19.52 (SD=1.82). The majority of participants were White, non-Hispanic (60.1%), with 13.7% reporting Asian/Asian American, 13.4% African American, 5.8% Hispanic, 3.4% Biracial, .3% American Indian, and 3.4% other, which was representative of the undergraduate students enrolled at this university. The majority of students were heterosexual (96.3%), single (never-married; 94.8%), and not in a committed relationship (56.7%). Of the participants who were in a

relationship, only 48.2% felt that they were not at all committed to the relationship

and that their partner was not at all supportive of their work (43.6%). The majority of

participants planned to get married or be in a committed relationship in the future

(88.7%).

Procedure

To obtain data, the measures were included in a survey administered by the

Department of Psychology at the mid-Atlantic university. This method of data

collection occurs every semester and includes research measures from graduate

student and faculty investigators within the department. The measures were placed on

a single survey and undergraduate students were invited to complete the survey for

extra credit in their courses. Alternative methods for obtaining extra credit were

provided and all undergraduate students in psychology were eligible to participate.

Measures

Career aspiration. The original CAS is an eight-item scale developed by

O'Brien (1996) to assess career aspiration (which was hypothesized to include both

educational and leadership aspirations). Items on the original measure were rated on

5-point Likert scale ranging from 0 (*not at all true of me*) to 4 (*very true of me*).

Internal consistency estimates ranged from .72 to .77 (Gray & O'Brien, 2007). The

original CAS correlated in the expected direction with occupational, and multiple role

self-efficacy, relative importance of career versus family and attitudes toward

women's roles (Gray & O'Brien, 2007).

Additional items were added to increase the reliability of the measure (CAS-

R, see Appendix B). To generate new items for the CAS-R, the primary researcher

and her advisor defined domains based on the operationalization of career aspiration. This included the two existing subscales of Educational Aspirations and Leadership Aspirations as well as a third subscale entitled Achievement Aspirations. The domains were defined by the primary researcher and her advisor as the following: "Achievement Aspirations- degree to which you aspire for recognition, responsibility and promotion in your organization field;" "Leadership Aspirations- degree to which do you aspire to leadership roles, or an increased influence in your organization or field;" "Educational Aspirations- degree to which you aspire to advanced education, training, and competency in your organization or field."

These definitions were presented to a research team comprised of doctoral and undergraduate students and a professor of counseling psychology during a one hour meeting. The research team, primary investigator and advisor generated new items independently based on these definitions during the meeting. Subsequently, the primary researcher and her advisor independently selected items from the pool of items and identified additional items for inclusion on the measure. Seven of the items from the original CAS were retained (five items comprising Leadership Aspirations, and one item comprising Educational Aspirations). An additional 26 new items were generated, which resulted in 33 items total. The primary researcher, advisor, and two psychologists and an undergraduate student independently sorted the items into their respective domains and reviewed the items for clarity and representativeness of the domains. Additional edits were made based on the suggestions from these reviewers. Last, a professor of education inspected the items for face validity, and determined

that all items had adequate face validity with the exception of two items (24 and 31). These items were considered for deletion following the CFA.

Work role salience. The Work Role Salience (WRS) Scale-Short Form is a six-item self-report measure developed by Greenhaus (1973; see Appendix D). Participants responded to items on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). An example item is: "I would consider myself extremely "career minded."" The WRS was designed to assess attitudes toward work and career. The WRS-short form was used as a total score, with high scores indicating strong career salience. Internal consistency was reported at .64 (O'Brien & Fassinger, 1993). In a more recent study, the WRS was used with 220 urban high school students to predict career development. Results indicated adequate reliability (α = .73), and provided evidence for construct validity as the WRS was correlated with commitment to career (Diemer & Blustein, 2007). In the current study the WRS scale had a reliability estimate of .66.

Willingness to compromise career for future family. The Planning for Career and Family Scale (PLAN) is a 24-item measure developed by Ganginis Del Pino et al. (2011; see Appendix E). Participants were asked to rate items on a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The PLAN consists of two subscales: Compromising Career Plans For Children and Prioritizing Partner. The Compromising Career Plans For Children scale consists of 12 items and assesses the degree to which individuals are willing to adjust their careers to prioritize the needs of their children. An example item is: "I will not select a career that leaves me feeling overwhelmed and too tired to enjoy my children" (α = .86). The

Prioritizing Partner scale consists of 12 items and assesses the degree to which individuals were willing to adjust their careers to prioritize the needs of their partner. An example item is: "I will take a job that I find less satisfying if it means having more time for my partner" (α = .84). High scores on the children and partner subscales indicate willingness to compromise for children's and partner's needs when thinking about their careers, respectively. Support for the validity of both subscales was found in an investigation of the PLAN with 325 college women. Results indicated that the family and partner scales were found to relate negatively to career orientation (Ganginis Del Pino et al., 2011). In this study, the subscales were found to have adequate reliability, compromising career plans for children (α= .90), prioritizing partner (α= .89).

Demographic questionnaire. The demographic questionnaire was developed by the primary researcher to collect data regarding type of program (counseling or clinical), year in program, age, race, gender, sexual orientation, number of children, future career plans, partnership status, length and commitment to relationship, supportiveness of partner with regard to work, and plans to be married or in a committed relationship (see Appendix F).

Analyses

Descriptive statistics were calculated. To assess the factor structure of the CAS–R, confirmatory factor analyses were conducted. A post hoc statistical power analysis, using the guidelines set by MacCallum, Browne, and Sugawara (1996) confirmed that 328 participants would be adequate to run a confirmatory factor

analysis with a statistical power of 0.80, for a model of close-fit with 75 degrees of freedom, and an overall $\alpha = 0.05$.

An Item Response Theory (IRT) maximum likelihood confirmatory factor analysis (CFA) was run using Mplus VERSION 7.11 to examine the hypothesized model. Specifically, this CFA was conducted using an IRT framework to connect participant responses to the latent constructs measured by the CAS-R. Traditional factor analysis treats participant responses on the Likert scale as if they were measured at the interval level of analysis (i.e., the difference between a 1 and 2 on the Likert scale is assumed to be identical to the difference between a 3 and 4 on the Likert scale). IRT was used to take into account the possibility of different distances between the points on the Likert response scale. Thus, the IRT-CFA approach is a useful psychometric tool to convert ordinal level measurement into interval level data, and conforms to the statistical assumptions of the CFA to test the adequacy of the CAS-R model (Partchev, 2004). In addition to the factor analyses, the reliabilities of the subscales were assessed by computing Cronbach alphas. Bivariate correlations were used to examine the correlations among the subscales and the variables assessing construct validity, including work salience and willingness to compromise career for future family.

Study 1: Results

The means, standard deviations, ranges, and reliability estimates for the scales and their correlations can be found in Table 3. On average, participants mostly agreed with items on the CAS-R subscales indicating that they were moderately interested in pursuing achievement, leadership and further education in their careers (Achievement

Table 3

Correlations among Measures for Study 1

Measures	1	2	3	4	5	6
1. CAS-R: Achieve	1					
2. CAS-R: Leadership	.69**	1				
3. CAS-R: Education	.71**	.61**	1			
4. Work Role Salience	.50**	.39**	.56**	1		
5. PLAN: Children	-.02	-.12*	.04	-.14**	1	
6. PLAN: Partner	.21**	.07	.24**	-.36**	.49**	1
Mean	24.32	22.74	21.65	15.05	31.28	34.10
Standard Deviation	5.31	6.47	6.51	3.67	8.53	7.97
Actual Range	11-32	6-32	3-32	6-25	12-60	13-60
Possible Range	0-32	0-32	0-32	6-30	13-60	12-60
Alpha	.81	.87	.90	.66	.90	.89

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

M= 24.32, *SD*=5.31, range 11-32; Leadership *M*=22.74, *SD*=6.47, range 6-32; Education *M*=21.65, *SD*=6.51, range 3-32). Participants placed little importance on their careers (slightly disagreeing with most items on the Work Role Salience Scale; *M* = 15.05, *SD* = 3.67, range 6 -25). Last, in regard to willingness to compromise career for future children and partner, the participants had a slight tendency to disagree with statements, indicating that they were slightly unwilling to adjust their careers to prioritize the needs of their children (*M*=31.28, *SD*= 8.53, range 12-60) and slightly unwilling to adjust their careers to prioritize the needs of their partner (*M*= 34.10, *SD* =7.97, range 13-60).

The root-mean-square error of approximation (RMSEA), Comparative Fit Index (CFI) and Tucker–Lewis Index (TLI) cutoff were used for evaluating model fit. Hu and Bentler (1999) recommended RMSEA values less than .10 and CFI/TLI values greater than or equal to .90, as indicative of adequate model fit. However, it should be noted that opinions about acceptable fit indices differ, and cut off scores for the RMSEA, CFI, and TLI are not universally accepted. Furthermore, there is significant controversy over the use of chi-square as an indicator for model fit. A significant chi-square indicates that there is a significant difference between the hypothesized model and the data, indicating poor model fit. However, chi-square was not used as an indicator in this study because the chi-square statistic is often conflated with sample size. The higher the sample size, the higher the chi-square statistic. Thus, for large samples there is a high likelihood of the chi-square being significant even with the model provides good fit for the data (Hu & Bentler, 1995). After initially running the IRT-CFA with the 33-item measure, the fit indices were not adequate:

Satorra-Bentler SB χ^2 (94, N =328) = 892.21, p <.05, RMSEA = .16, CFI = .77, and TLI =.93.

The results of the initial analysis revealed that the items that loaded poorly on the first and second dimensions were reverse coded items. Given that reverse coded items often load on their own factor (Schmitt & Stults, 1985), a methological factor consisting of all the reverse coded items from dimension 1 and 2 was created (there were no reverse coded items on dimension 3). This methodological factor was allowed to correlate with the original first and second dimensions. It is important to note that this methodological factor is not a conceptual factor, rather it allows the reverse coded items to not solely form their own factor, but contribute to the three hypothesized dimensions.

After the methodological factor was created, items were removed if they loaded less than .4 on any of the three conceptual factors. Items 13, 24, and 25 were deleted for this reason. The fit indices improved, but to shorten the scale for usability, additional items were removed from each subscale. Items with the lowest loadings on each factor or those that were conceptually redundant with other items were dropped (2, 5, 6, 8, 15, and 17). Specifically, items 17 and 6 had the lowest factor loadings from the Achievement subscale (.44, .62); item 2 from the Leadership subscale (.68); and items 8 and 5 from the Education subscale 58, -.74). Item 15 was redundant with other items on dimension 2, and was thus eliminated. The final scale consisted of 24-items with 8 items representing each of the three subscales. The 24-item CAS-R model exhibited good model fit with undergraduate women: Satorra-Bentler SB χ^2 (241, N =328) = 909.45, p <.05, RMSEA = .09 (.086; .098), CFI = .95, TLI =.94 (see

Table 2). All of the factor loadings were significant (see Table 1). The three hypothesized factors, as well as the methodological factor were allowed to correlate and resulted in moderate to high correlations within the model (Achievement and Leadership = .88; Achievement and Education =. 87; Leadership and Education =.75; Achievement and methodological factor = .60; Leadership and methodological factor = .70; Education and methodological factor = .57).

The bivariate correlations between the factors were moderate to high (Leadership and Education subscales =.61, Leadership and Achievement = .69, Education and Achievement = .71) and the subscales demonstrated good reliability (Achievement = .81, Leadership =.87, Education = .90). Consistent to our initial hypotheses, the Achievement, Leadership, and Education subscales of the CAS-R were related positively to work role salience, indicating that women who responded that career was important to them had higher levels of achievement, leadership and educational aspirations. As hypothesized, willingness to compromise career for future children was related negatively to leadership aspirations, suggesting that women who were willing to make career sacrifices for their children were less likely to have interests in pursuing leadership positions in their future careers. However, willingness to compromise career for future children was not related to educational aspirations, or achievement aspirations. Also, contrary to our hypotheses, willingness to compromise career for future partner was related positively to achievement aspirations and educational aspirations indicating that women who were willing to sacrifice their career for their partner were more likely to want be the best in their field, and to

Table 1

Factor Loadings from Study 1 and 2

	Factor loading	
Item	Study 1	Study 2
Factor 1: Achievement Aspiration		
4: I want to be among the very best in my field.	0.74	0.72
12: I want my work to have a lasting impact on my field.	0.79	0.72
14: I aspire to have my contributions at work recognized by my employer.	0.64	0.59
20: Being outstanding at what I do at work is very important to me.	0.80	0.61
26: I know that I will be recognized for my accomplishments in my field.	0.69	0.71
29*: Achieving in my career is not at all important to me.	-0.95	-0.91
30*: Being one of the best in my field is not important to me.	-0.79	-0.75
31: I plan to obtain many promotions in my organization or business.	0.86	0.84
Factor 2: Leadership Aspiration		
1: I hope to become a leader in my career field.	0.80	0.75
3*: I do not plan to devote energy to getting promoted to a leadership position in the organization or business in which I am working.	-0.94	-0.76
7*: Becoming a leader in my job is not at all important to me.	-1.13	-0.85
9: When I am established in my career, I would like to manage other employees.	0.71	0.66
11: I want to have responsibility for the future direction of my organization or business.	0.83	0.81
19*: Attaining leadership status in my career is not that important to me.	-1.17	-0.98
22: I hope to move up to a leadership position in my organization or business.	0.89	0.93
33: I plan to rise to the top leadership position of my organization or business.	0.89	0.90
Factor 3: Educational Aspiration		
10: I plan to reach the highest level of education in my field.	0.74	0.57
16: I will pursue additional training in my occupational area of interest.	0.83	0.77
18: I will always be knowledgeable about recent advances in my field.	0.75	0.76
21: I know I will work to remain current regarding knowledge in my field.	0.86	0.83
23: I will attend conferences annually to advance my knowledge.	0.80	0.67
27: Even if not required, I would take continuing education courses to become more knowledgeable.	0.76	0.70
28: I would pursue an advanced education program to gain specialized knowledge in my field.	0.80	0.73
32: Every year, I will prioritize involvement in continuing education to advance my career.	0.80	0.77

*Note: *indicates reverse coded item*

Table 2

Fit Statistics for Confirmatory Factor Analyses for Study 1 and Study 2

Model	X^2	df	TLI	CFI	RMSEA
Study 1 – prior to item deletion	892.21	94	.93	.77	.16
Study 1	909.45	241	.94	.95	.09
Study 2	617.02	241	.92	.93	.09

Note: CFI= Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; SRMR= Standardized Root Mean-Squared

continue their education. However, sacrificing one's career for their partner was unrelated to interest in obtaining leadership positions in a future career.

STUDY 2

Design

The purpose of the second study was to investigate the stability of the factor structure of the CAS-R using a sample of graduate student women, and to further investigate its psychometric properties. A confirmatory factor analysis was performed and reliability coefficients were calculated. We anticipated that the factor structure of the CAS-R that emerged in Study 1 would be replicated. Adequate reliability estimates were expected (above .70). Additionally, it was predicted that the CAS-R subscales would correlate positively with Achievement Motivation, Work Role Salience, and scores on the CAS-R scales would correlate negatively with willingness to compromise career for children and partner.

Participants

The data were obtained from an existing data set of 202 female graduate students. There were no missing data, however three outliers were removed because their scores extended beyond three standard deviations from the mean of the CAS-R. The final sample consisted of 199 participants who were ethnically diverse, and representative of all years of doctoral study (Gregor & O'Brien, 2013). The average age of participants was 28.11 (SD=4.78), and most participants were heterosexual (87.9%), in a committed relationship (72.4%), and without children (88.9%). Participants who identified as being in a relationship indicated that they were extremely committed to the relationship (73.6%) and that their partner was extremely

supportive of their work (68.8%). The sample was mostly White non-Hispanic (74.9%), with 9.5% reporting as Asian, or Asian American, 6.0% African American, 4.0% Hispanic, 3.0% Biracial, .5% American Indian, and 2.0% reporting other. The women who participated were representative of graduate students in psychology in general in terms of age, ethnicity and sexual orientation.

Measures

The same measures that were administered in the first study were included in the second study and reliability estimates were adequate for these measures (Work Role Salience = .67; Compromising Career for Children =.95; Prioritizing Partner =.90). In addition, the Work and Family Orientation Questionnaire (Spence & Helmreich, 1983) was included, and a slightly modified demographics form was utilized (see Appendix G).

Achievement motivation. The Work and Family Orientation Questionnaire (WOFO) is a 19-item self-report measure of achievement motivation developed by Spence and Helmreich (1983; see Appendix C). Participants responded to items on a 5-point Likert scale from 1 (*strongly agree*) to 5 (*strongly disagree*). The WOFO is comprised of three dimensions of achievement motivation: work, mastery and competitiveness. The Work scale consists of six items (e.g., there is satisfaction in a job well done). The Mastery scale consists of eight items (e.g., if I am not good at something, I would rather keep struggling to master it than move on to something I may be good at). The Competitive scale consists of five items (e.g., I try harder when I'm in competition with other people). Spence and Helmreich (1983) recommended combining the Work and Mastery subscales into a single subscale as the two scales

were shown to be highly correlated (r=.51). This recommendation resulted in the use of two subscales of achievement motivation in this study: Work-Mastery, and Competitiveness. High scores on the respective subscales indicated high levels of satisfaction and commitment, and competitiveness in work.

In a study of 311 psychology undergraduate students, the personality predictors of achievement goals were examined using the two subscales of achievement motivation (Work-Mastery and Competitiveness). Results indicated adequate reliability for the two subscales (Work-Mastery α =.80, Competitiveness α = .76). Additionally, the study provided support for construct validity as work-mastery oriented students were less likely to adopt work avoidance goals and more likely to adopt mastery goals (Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997). Moreover, exploration of the WOFO's relationship with other measures (e.g., Attitudes toward Women Scale) provided additional support for construct validity (Adams, Priest & Prince 1985; Platow & Shave, 1995). In this study, the subscales were found to have adequate reliability: work-mastery (α =.79), competitiveness (α = .85).

Analyses

An Item Response Theory (IRT) confirmatory factor analysis (CFA) was run using Mplus VERSION 7.11 to examine the fit of the model that emerged in the first study. Reliability estimates were calculated and bivariate correlations were used to examine the associations among the variables assessing construct validity, including achievement motivation, work salience and willingness to compromise career for family.

Study 2: Results

The means, standard deviations, ranges, and reliability estimates for the scales

and their correlations can be found in Table 4. On average, participants responded by

agreeing to most questions in all components of the CAS-R, indicating a moderate to

strong interest in achievement (M=23.42, SD=5.10, range 8-32), a moderate to strong

interest in leadership (M=22.01, SD =6.46, range 3-32), and a moderate to strong

endorsement of educational aspirations (M=24.91, SD =4.78, range 9-32). The

participants reported somewhat agreeing or strongly agreeing to items assessing work

motivation, indicating moderately strong motivation to work hard and master skills

(M=53.24, SD = 6.24, range 33-67). However, on average, the participants were not

very competitive, scoring a mean of 14.61 on the competitiveness subscale (SD=4.58,

range 5-25) indicating disagreement with the items. With regard to work role

salience, participants placed moderately high importance on their careers (agreeing to

strongly agreeing with most items; M = 21.81, SD = 3.40, range 11-30). In terms of

willingness to compromise career for future children and partner, participants had a

slight tendency to disagree with statements indicating that they were slightly

unwilling to adjust their careers to prioritize the needs of their children (M=35.23,

SD= 11.01, range 12-58) and slightly willing to adjust their careers to prioritize the

needs of their partner (M= 42.32, SD =8.23, range 15-60).

We conducted a maximum likelihood confirmatory factor analysis to examine

the 24-item three factor model of the CAS-R using Mplus VERSION 7.11. Similarly

to Study 1, the RMSEA, CFI and TLI were used for evaluating model fit, with the

same model fit indices recommended by Hu and Bentler (1999). The 24-item three

factor model of the CAS-R demonstrated good fit with graduate student women;

Table 4

Correlations among Measures for Study 2

Measures	1	2	3	4	5	6	7	8
1. CAS-R: Achievement	1							
2. CAS-R: Leadership	.70**	1						
3. CAS-R: Education	.64**	.49**	1					
4. WOFO: Work	.42**	.41**	.40**	1				
5. WOFO: Compete	.34**	.24**	.15*	.15*	1			
6. Work Role Salience	.51**	.40**	.47**	.46**	.13	1		
7. PLAN: Children	-.08	-.04	-.09	-.09	.09	-.38**	1	
8. PLAN: Partner	-.26**	-.24**	-.21**	-.28**	.03	-.52**	.49**	1
Mean	23.42	22.01	24.91	53.24	14.61	21.81	35.23	42.32
Standard Deviation	5.10	6.46	4.78	6.24	4.58	3.40	11.01	8.23
Actual Range	8-32	3-32	9-32	33-67	5-25	11-30	12-58	15-60
Possible Range	0-32	0-32	0-32	14-70	5-25	6-30	12-60	12-60
Alpha	.82	.89	.85	.79	.85	.67	.95	.90

Note. *p <.05, **p <.01

SBχ2 (241, N =202) = 617.02, *p* <.05, RMSEA =.09 (.080; .097), CFI =.93, TLI =

.92. All of the factor loadings were significant (see Table 1). The three hypothesized

factors, as well as the methodological factor were allowed to correlate and resulted in

moderate to high correlations within the model (Achievement and Leadership = .86;

Achievement and Education =. 61; Leadership and Education = .78; Achievement and

methodological factor = .42; Leadership and methodological factor = .45; Education

and methodological factor = .44).

The bivariate correlations between factors ranged from moderate to high

(Leadership and Education subscales = .49, Leadership and Achievement = .70,

Education and Achievement = .64). Additionally, each of the subscales demonstrated

good reliability (Achievement = .82, Leadership =.89, Education = .85).

As hypothesized, scores on the Leadership, Education, and Achievement

subscales of the CAS-R were related positively to scores on the Achievement

Motivation and Work Role Salience subscales, suggesting that women who were

more likely to work hard and value their career were more likely to endorse wanting

to manage or lead others, wanting recognition in their career, and wanting to further

their education in their field. Additionally, as hypothesized, the subscales of the CAS-

R were related negatively to willingness to prioritize partner, indicating that

participants who were more likely to sacrifice their career for their partner were less

likely to be interested in attaining leadership positions, being the best in their field, or

continuing education in their future careers. However, contrary to our hypotheses, the

CAS-R subscales were not related to willingness to compromise career for children

meaning that there was no relationship between willingness to sacrifice their career for children and women's aspirations for leadership, achievement, or education.

STUDY 3

Design

The purpose of the third study was to assess the test-retest reliability of the CAS-R and to further investigate the psychometric properties of the instrument for use with undergraduate women. Adequate test-retest reliability estimates (> .70) for the subscales were expected. Additionally, it was predicted that the CAS-R subscales would correlate positively with work role salience and career orientation. The measure of career orientation was added in Study 3 to further investigate the construct validity of the CAS-R.

Procedure

During a regularly scheduled meeting of an undergraduate psychology course, an undergraduate research assistant attended the last 10 minutes of the lecture. The research assistant read the invitation to participate and the instructions to the class. The invitation stated that students had the option to participate in an 8-minute survey that included several questionnaires related to career goals. For participating in this survey and a follow up survey two weeks later, students received .5 extra credit in the course. The research assistant then administered a hard copy of the questionnaire with an informed consent form on the front page to each student and announced that those students who wished to participate in the study could begin by reading and signing the informed consent, and then starting the questionnaire. Those students who did not wish to participate could use the remaining five minutes of class to review their

course notes. The surveys were collected and the same procedure was used two weeks later during the follow up. The only change in the measures was a short debriefing message at the end of the survey thanking students for their participation and a description of the study and resources to contact if they experienced any negative feelings while completing the measures. If students participated by filling out the measures one week but not both weeks, they received .25 extra credit points (half of what was being offered for participation in both surveys).

Participants

Sixty female undergraduate participants completed the measures in an undergraduate psychology course on counseling psychology at Time 1. Four participants were deleted due to incomplete data (missing Time 2). The final sample consisted of 56 undergraduate females, mean age = 21.9 (SD = 3.04). The majority of participants were White, non-Hispanic (67.9%), with 10.7% being African American, 7.1% Biracial/Multiracial, 5.4% Asian/Asian American, 5.4% Hispanic, Latina and 3.6% other. Most participants identified as heterosexual (94.7%) and were not in committed relationships (57.9%). The majority of participants were seniors (75.4%) and psychology majors (100%). Most participants had decided on a career (66.7%) and the majority of participants stated that career pursuits and family pursuits were equally important (59.6%). Interestingly, only one participant believed that career pursuits were more important than family, but that family was important too.

Measures

The same measures that were administered in the second study were included in the third study with a few exceptions. The Planning for Career and Family Scale

(Ganginis Del Pino et al., 2011) was removed, the Family and Career Scale was added, and a slightly modified demographics form was utilized (see Appendix H). The reliability estimates were adequate for Work Role Salience at Time 1 (α =.61) and Time 2 (α =.62).

Career orientation. The Family and Career Scale (FCS) is a 16-item measure developed by Battle and Wigfield (2003) to measure family versus career orientation as well as ideas about women's roles (see Appendix I). Participants were asked to rate items on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items include "I think that women should earn money, and contribute to the family income, even after they have children." High scores on the measure represented positive attitudes toward women being oriented to career after having children. Factor analysis demonstrated that the measure adequately assessed different components of task value and moreover demonstrated adequate internal consistency (α =.89; Battle & Wigfield, 2003). In a more recent study, the Family and Career Scale was used with 401 college students. Results indicated adequate reliability (α = .89) and provided support for construct validity (i.e., negative correlations with willingness to compromise career for children or family; Ganginis Del Pino et al., 2011). In the current study, the Family and Career Scale demonstrated adequate reliability (α =.88 at Time 1, α =.90 at Time 2).

Analyses

Correlations were calculated to investigate the relations among scores on the CAS-R subscales at the initial and final administrations of the measure. Reliability estimates were calculated for all subscales. Additionally, bivariate correlations were

used to examine the correlations among the subscales of the CAS-R and the measures of work salience and career orientation.

<div align="center">Study 3: Results</div>

The means, standard deviations, ranges, and reliability estimates for the CAS-R for both Time 1 and Time 2 administrations can be found in Table 5. On average, participants mostly agreed with items on the CAS-R subscales on both Time 1 and Time 2 administrations, indicating that they had moderate to strong interest in achievement, leadership and further education in their careers (Achievement: $M = 24.98-25.77$, $SD = 3.95-4.68$, range 13-32; Leadership: $M = 23.25- 23.40$, $SD = 4.91-5.17$, range 11-32; Education: $M = 22.51-22.67$ $SD = 5.24-5.47$, range 12-32). In terms of work role salience, participants placed moderate importance on their careers (slightly agreeing with most items; $M = 20.86-21.05$, $SD = 3.26-3.48$, range 14-30). Last, participants had a slight tendency to agree with statements about career orientation, indicating that they had moderately positive attitudes about women working after having children ($M = 59.96-60.16$, $SD = 9.65-10.82$, range 36-79).

The three subscales of the CAS-R exhibited adequate reliability (Achievement Time 1= .74, Time 2 =.80; Leadership Time 1 = .79, Time 2 = .82; Education Time 1 = .87, Time 2 =.84). The two-week test-retest reliability estimates were as follows: Achievement Aspirations (.68), Leadership Aspirations (.81), and Educational Aspirations (.81). All correlations were significant at the $p < .01$ level. As hypothesized, the CAS-R subscales were related positively to work role salience at Time 1 and Time 2, however contrary to our hypotheses, scores on the CAS-R were not related to career orientation at either administration (see Table 6).

Table 5

Test-Retest Reliability Estimates for the Career Aspiration Scale-Revised and Means, Standard Deviations, Actual Range, Possible Range, and Alpha Coefficients at Time 1 and 2

	Achievement	Leadership	Education
Time 1, Time 2 Correlation	.68**	.81**	.81**
Time 1			
Mean	25.77	23.40	22.67
Standard Deviation	3.95	4.91	5.47
Actual Range	14-32	13-32	12-32
Possible Range	0-32	0-32	0-32
Alpha	.74	.79	.87
Time 2			
Mean	24.98	23.25	22.51
Standard Deviation	4.68	5.17	5.24
Actual Range	13-32	11-32	12-31
Possible Range	0-32	0-32	0-32
Alpha	.80	.82	.84

*Note. **p <.01*

Table 6

Correlations Among Measures for Study 3

Measures	1	2	3	4	5
1. CAS-R: Achievement	1	.59**	.64**	.36**	.12
2. CAS-R: Leadership	.61**	1	.28*	.31*	-.04
3. CAS-R: Education	.55**	.35**	1	.30*	.04
4. Work Role Salience	.41**	.39**	.41**	1	.07
5. Career Orientation	.23	.02	.22	.23	1

Note. *p <.05, **p <.01

Note: Time 1 is above the diagonal and Time 2 is below the diagonal.

CHAPTER 3: Discussion

Overall, the results of this study provided support for the psychometric properties of the CAS-R when used with undergraduate and graduate samples comprised mainly of White, heterosexual women. It was hypothesized that the CAS-R would have three factors, two existing factors (Leadership Aspirations and Educational Aspirations), and an added factor assessing achievement aspirations. Confirmatory factor analysis suggested good model fit for a three-factor solution comprised of Leadership, Achievement and Educational Aspirations with two samples of women. The three scales of the final 24-item measure demonstrated good internal consistency reliability, and test-retest reliability over a two-week period. Support for the validity of the subscales was demonstrated by positive correlations between the CAS-R subscales and work role salience and achievement motivation, and negative correlations with compromising career plans for partner.

The main contributions to the literature from this study were the addition of an achievement aspiration subscale to the existing measure of career aspiration and the confirmation of the three-factor solution for the revised measure. As noted earlier, the original CAS included subscales assessing leadership and educational aspirations, but was lacking in the measurement of achievement aspirations. The addition of this scale will allow researchers and therapists to determine the degree to which young women aspire to be one of the very best in their field or to be recognized for their accomplishments. This subscale could identify young women who are highly motivated to not only pursue higher education or leadership roles, but to excel in their chosen careers.

It is interesting to note that the final measure included only four of the items from the original version of the CAS, and all four were from the leadership subscale. Also, in general, both undergraduate and graduate women across the three studies endorsed moderate interest in pursuing achievement, leadership, and education in their future careers.

Across all three studies, support for the validity of the CAS-R was found. In Study 1 with undergraduate women, convergent validity of the CAS-R was supported by the moderately strong positive relationships between the salience of careers and desire for leadership, achievement or educational attainment. This result seems plausible as young women for whom work is very important would likely be interested in achievement, leadership and further education in their careers. Moreover, convergent validity was supported by the small negative relationship between the desire to obtain leadership positions and willingness to sacrifice one's career for future children. However, attitudes about sacrificing their career for future children did not relate to their desire for continued education or achievement within their careers. It is possible that in thinking about their future careers, these women considered attaining leadership positions to be more incompatible with future plans for children than educational advancement or achievement within their career.

Moreover, contrary to our hypotheses, compromising career for partner was weakly related to women's desires for career achievement and educational attainment in the opposite direction than expected. High educational or achievement aspirations were associated with willingness to sacrifice career for a partner. Perhaps women in this study believed that both educational and achievement aspirations were possible

while compromising their career for their partner's career. It also is possible that women in this study did not have realistic attitudes about multiple role planning as women in this sample were relatively young (Mean age =19.52, SD=1.82) and the majority were not in committed relationships. Alternatively, we might be tapping into young women's (perhaps unrealistic) beliefs that they can "have it all."

In the second study with the graduate student sample, the convergent validity of the CAS-R was supported by moderately strong positive relationships between women's desires for leadership, achievement and educational attainment and the desire to work hard and prioritize their careers. Conceptually it makes sense that women who enjoy a job well done and mastering skills, as well as those who are career-minded, would be likely to have interest in career attainment. Additionally, as hypothesized, the subscales of the CAS-R were related negatively to women's willingness to sacrifice their careers for a partner. This finding is particularly interesting as more than 70% of the women were in romantic relationships. It is possible that the most ambitious graduate student women had selected partners who valued their careers and did not expect them to compromise their careers for their partners. Also, women in graduate school may be less willing to make career compromises for partners given their level of educational (and likely occupational) achievement. Interestingly, no relationship was found between the CAS-R subscales and women's willingness to sacrifice their career for future children. Perhaps for the graduate student women in this sample, imagining the potential impact of a partner on their career choices was easier than imagining that of future children. This

explanation was supported by the observation that the majority of women in this sample did not have children, however many were in committed relationships.

In Study 3, convergent validity was supported with moderately strong positive correlations between all subscales of the CAS-R and undergraduate women's prioritization of their careers at both Time 1 and Time 2 administrations of the measure. Similar to the previous samples, the senior psychology students who felt that their careers were important were likely to endorse aspirations for achievement, leadership and further education. However, contrary to our initial hypotheses, career aspirations were unrelated to career orientation, at both Time 1 and Time 2. One possible explanation is that deciding to have a career while having children does not necessarily relate to the desire to achieve within that career. An example item on the Family Career Scale is "I think women should have a career whether they have children or not," which reflects the desire for women to have a career in general. It is possible that women working outside of the family is an accepted notion in today's society, and is not necessarily associated with a greater inclination toward achievement in one's career.

To summarize, the validity of the CAS-R was supported by some of our hypothesized relationships. The strongest support was found in the moderate positive correlations between the CAS-R subscale scores and women's satisfaction in working hard and mastering skills and desire to prioritize their careers. The positive relationship between the CAS-R and work role salience appeared strong across all three studies (see Table 7), and was consistent with previous research which found

Table 7

Correlations Among Validity Instruments Across Studies

Validity Measure	Study 1			Study 2			Study 3 – Time 1			Study 3 – Time 2		
	Ach	Lead	Edu	Ach	Lead	Edu	Ach	Lead	Edu	Ach	Lead	Edu
Work Role Salience	.50**	.39**	.56**	.42**	.41**	.40**	.36**	.31*	.30*	.41**	.39**	.41**
WOFO: Work	--	--	--	.42**	.41**	.40**	--	--	--	--	--	--
WOFO: Compete	--	--	--	.34**	.24**	.15*	--	--	--	--	--	--
PLAN: Children	-.02	-.12*	.04	-.08	-.04	-.09	--	--	--	--	--	--
PLAN: Partner	.21**	.07	.24**	-.26**	-.24**	-.21**	--	--	--	--	--	--
Career Orientation	--	--	--	--	--	--	.12	-.04	07	.23	.02	.22

Note. *p* <.05, **p* <.01

associations between women's career decisions and the importance of work (McClintock-Comeaux, 2007).

However, there were mixed results between women's willingness to sacrifice their careers for their future children and partners. In general, the strength of these correlations were small, however, there were stronger relationships between the CAS-R and the willingness to compromise career for partner when compared to compromising career for children (although in Study 1 the relationship was in the unexpected direction). It is possible that these mixed results were influenced by participant age or relationship status. The majority of women in Study 1 were young and single, as opposed to Study 2, where participants were older and in committed relationships. The differences in age and relationship experience may have influenced their responses about their willingness to sacrifice their careers for partner. The younger, single, women might have been more likely to underestimate how planning for family and children might affect their career decisions, whereas older partnered women might have had more realistic attitudes about multiple role planning, given their status in committed relationships. Future research is needed to clarify how women's attitudes about compromising their career for partner or child plays a role in their career aspirations.

Several limitations of the current study should be addressed. Although the women in the samples were representative of the populations in general for both graduate and undergraduate students, they were mostly White heterosexual women. Thus, generalizability to other groups of women and to men is limited. Moreover, our research did not administer the measure to individuals who were in different stages of

career development, particularly those who are employed. Also, a potential strength of this research was including both undergraduate and graduate women, however this also could be a limitation because the factor structure was established with undergraduate women but confirmed with graduate women. While the factor structure of the CAS-R was consistent among undergraduate and graduate students, further research is necessary to replicate these findings. Moreover, the three subscales were moderately to highly correlated which may indicate that they are measuring a single underlying construct of general career aspiration. Future research on the CAS-R should consider the use of a single factor scale. Additionally, future research should aim to elucidate the relationship between the subscales of the CAS-R and other measures of career attitudes, given the somewhat mixed results of convergent validity across the three studies.

Another limitation was the wording of some items on the CAS-R. For example, some items asked participants about their aspirations in their "organization or business." This wording was intended to broaden the scope of careers covered by the measure, however may have limited respondents who felt that this did not match their career goals. Moreover, we acknowledge that not all women may aspire to leadership, advanced education, and achievement in their careers, and a varying degrees of aspirations are equally valid. We support women having choices regarding their desired level of achievement in their careers.

Future Directions for Research

Prior to use, the CAS-R must be administered to more diverse samples, including men and women with very high or very low aspirations, to assess further

the stability of the factor structure and the psychometric properties of the measure. In addition, it is critical to study the development of women's career aspirations over time. Previous research has indicated that women's career aspirations decline over time (Kerr, Foley-Nicpon & Zapata, 2005), thus the CAS-R may be useful in tracking the trajectory of women's aspirations longitudinally. For example, it would be interesting to study women from their early years in high school through their establishment into a career in adulthood. However, it may be necessary to start a longitudinal study with young children as some women's aspirations decline as early as middle school (Mendez & Crawford, 2002). Additionally, longitudinal designs may help researchers to better understand the factors that not only contribute to declining aspirations, but also to investigate protective factors that may help to enhance or maintain high aspirations of young women.

As stated previously, studying women who are currently in the workforce would be an important next step in establishing the CAS-R. Administration of the CAS-R may help researchers to determine to which domains women are aspiring in their career, as it may be possible for a woman to aspire to one domain over another. For example, a woman may want leadership in her career without wanting to further her education in her field. Moreover, the CAS-R may help vocational researchers to understand the aspirations of women who occupy differing levels of leadership. Perhaps aspirations differ among women who hold positions of power within organizations versus women who do not. However, it is likely that there are many individuals who aspire to achievement or leadership in their careers, yet face barriers

to these goals. The CAS-R might be useful in identifying the aspirations of women, and the supports and barriers women encounter in achieving these aspirations.

Counseling Implications

If the results of the current study are replicated, the CAS-R has potential for use in career counseling in both school and workforce settings. Given that many students are evaluating their career options during their school years, the CAS-R could be used in occupational counseling in school settings. For students struggling to make career choices in college, a counseling psychologist might administer the CAS-R to help the student think about career options and what they aspire to within that choice. For example, if a student was interested in working in the medical field, the CAS-R might help the student to consider what occupation might be best given their career goals. This also may help the student to think about what barriers there might be to achieving their aspirations, and how they might be able to navigate them. Moreover, students may have low career aspirations in one or all of the domains on the CAS-R. By discussing the student's aspirations and examining perceived barriers, it may encourage them to think about their goals and examine a wider range of possibilities.

If the CAS-R was validated with other populations, this type of consideration about future goals could be very helpful for students early in their educational path, such as middle school or high school students. Given the literature that decisions about career may start early for young girls (O'Brien et al., 2000), it would be helpful to initiate discussions about occupational aspirations at early ages. For these younger populations, the CAS-R may be a useful tool to explore future goals, promote

discussion, and identify barriers that may keep them from achieving additional education, leadership, or achievement. It is possible that interventions with young women could help reverse the tendency of girls limiting their career options long before entering the work force. Additionally, the CAS-R could be of use with older adults who might be considering a career change. The CAS-R might illuminate if the new career will be consistent with their aspirations for leadership, achievement or educational attainment, and may help to clarify the individual's desired goals.

In conclusion, this study provided preliminary support for a revised measure of career aspirations that assesses aspirations in three different domains – leadership, achievement and education. The CAS-R demonstrated adequate psychometric properties when used with mostly White, heterosexual undergraduate and graduate students. Given that women are vastly underrepresented in leadership positions across many domains (Lennon, 2013), continued research on career aspirations of women is needed. It is our hope that the CAS-R may be used by counseling psychologists in research and counseling settings to enhance understanding of women's occupational aspirations and encourage vocational achievement for women.

Literature Review

The literature review is divided into subsections. The first section addresses

the current status of women's participation in the work force followed by the history

of the study of women's career aspirations. The third and fourth sections address the

current status of research on women's career aspirations and the correlates of this

construct. The fifth section discusses the measurement of career aspirations and the

limitations with current instruments used to assess women's aspirations. The sixth

section describes the original version of the CAS-R and associated limitations. The

final section outlines the revised version of the measure and the purpose of the current

study.

Introduction

Women remain under-represented in top leadership positions in American

corporations. While managerial ranks now contain women in many organizations, the

roles of secretary, clerk, and care provider are still female-dominated. Women are

beginning to be distributed in organizational structures similar to men; however

gender still creates a barrier for women in the workplace (Acker, 2006). A

recent study evaluated women's representation in leadership across the United States.

The researchers studied women in leadership positions across 14 professional areas:

academics, art and entertainment, business and commercial banking,

entrepreneurship, journalism and media, K-12 education, law, medicine, military,

nonprofit and philanthropic sector, politics and government, religion, sports, and

technology. On average, while women represent nearly half of the workforce and

51% of all managerial and professional workers, they make up less than 20% of

positional leaders across the United States (Lennon, 2013). In 2012, 47.3% of law

school graduates were women, but only 15% of equity partners and 5% of managing

partners were women. In politics and government, women comprise only 22.8% of all

leadership roles. In medicine, on average only 25.5% of women occupy the top

leadership positions including CEOs, executive positions and board members. Even

in traditionally female dominated careers such as K-12 education, women are

underrepresented in leadership. For instance, women hold 75% of all teaching

positions, but only represent 30% of educational leadership roles. Although women

have made stable gains in the workforce they remain vastly underrepresented in

leadership positions across many domains (Lennon, 2013).

Most psychologists acknowledge that while discrimination and social

structure account for some of the discrepancies in achievement outcomes for women,

they do not provide a complete explanation (Mednick & Thomas, 2008). Given the

continuing discrepancy of women in leadership positions across America, it is

increasingly important to have reliable and valid measures of women's career

aspirations to further aid vocational research. Thus, the purpose of the current study

was to examine the psychometric properties of a revised measure of career aspirations

that can be used by psychologists to advance women's vocational research.

History of Career Aspirations

The interest in measuring of women's vocational decisions originally grew out

of the increasing number of women entering the labor force. Prior to the 1960's, it

was assumed that women would not have a career, but rather stay home and raise a

family (Betz & Fitzgerald, 1987). During this period, career development constructs

were based on research conducted with men and conceptualized in relationship to men's career development. Moreover, little attention was paid to gender related issues. When interest shifted to women's participation in the workforce, the theories used to describe men's development were simply applied to women's development. It was assumed that women were not going through a process with different psychological, social, or environmental variables that may be influencing their paths. To address these flaws in the conceptualization and measurement of women's career development, researchers developed several models to try to explain and predict women's career choices (Betz & Fitzgerald, 1987; Farmer, 1985; Fassinger, 1985, 1990).

One of the first researchers to propose a multidimensional model of achievement motivation and career development for women was Farmer (1985). Farmer's hypothesized that career motivation developed through an interaction of three dimensions: psychological, background, and environmental. She suggested that her model was particularly applicable in studying women of diverse backgrounds because the multidimensional nature of the model allowed for the inclusion of a wide array of personal, psychological and cultural influences. Other researchers such as Betz and Fitzgerald (1987) and Fassinger (1985, 1990) also identified sets of factors that helped predict career choice including individual, background, educational and lifestyle variables. However, these researchers encountered difficulties in measuring these constructs, given the dearth of psychological instruments to assess the unique experience of women's career development. The strong need for reliable and valid

measures, particularly for outcomes such as women's career aspirations was noted by Fassinger (1990).

Historically, career aspirations referred to an individual's desire to select a specific career (Farmer, 1985). Thus instruments measuring this construct focused on the commitment an individual had to a given career. In this regard, women were viewed as either having a "homemaking orientation" or a "career orientation" by differentiating the importance of marital versus career roles. Career-oriented women were defined as those who chose to enter the work world, while homemaking-oriented women were those who chose to stay home. This categorization was the primary method for studying women's career development early in the vocational literature (Betz & Fitzgerald, 1987).

However by the late 1960's and 1970's, more women were choosing to leave home and pursue a career as well as have a family. Given that many women were planning to work outside of the home, researchers began to explore which occupations women chose to pursue. Thus the conceptualization of women's career choices shifted to "traditional" (female-dominated occupations) and "non-traditional" (male-dominated) occupations (Betz & Fitzgerald, 1987). However, this dichotomous conceptualization left researchers to assume that women who entered traditional careers wanted less achievement in their careers. Moreover, research on gender differences asserted that females had lower levels of achievement motivation as compared to males, and concluded that women were motivated by social desirability rather than by achievement in their careers (Hoffman, 1972).

In 1996, O'Brien redefined career aspirations as the degree to which women aspire to leadership and continued education within their careers. Previous instruments assessed the degree of traditionality (or the number of women employed in that field) and prestige (socio-economic status of that occupation), yet these forms of measurement did not capture an individual's aspiration to advancement within their career of choice (Gray & O'Brien, 2007). O'Brien argued that a woman may select a traditionally female career such as teaching or nursing and still aspire to leadership roles within that field such as becoming a principal or director of nursing. Thus, solely researching the individual's career choice may not accurately correspond to the desire to achieve within that profession.

Research on Career Aspirations

Occupational aspirations and success have long been recognized as an influence on mental health and overall life satisfaction (Cochran, Wang, Stevenson Johnson, & Charles, 2011). Research has demonstrated that individuals in the U.S. often define who they are based on their careers. Moreover, a successful career can be a source of self-esteem, fulfilment, and meaning of life (Niles & Harris-Bowlsbey, 2005). Additionally, failure to meet career aspirations have been linked to depression and lower reported "purpose of life" (Carr, 1997). Yet career aspirations and realization of these aspirations appear to differ by gender. Research has remained consistent in demonstrating that women tend to reduce their career aspirations more so than males. Women also tend to choose stereotypically female professions that often reflect lower levels of educational fulfillment, career aspirations and

achievement when compared to their male counterparts of the same educational level (Kerr et al., 2005; Leung, Conoley, & Schell, 1994).

One retrospective study set out to assess the career aspirations considered by gifted high school juniors (69 boys and 125 girls; Leung et al. 1994). The authors assessed the gender traditionality, prestige of the career options, and educational goals considered by the participants at the time of the study, as well as earlier in life. The results of the study indicated that girls were more likely to aspire to complete a bachelor's or master's degree; however, they were less likely than boys to aspire to a doctoral or professional degree. One explanation of this gender difference may be female perceptions that post-graduate education would conflict with having a family. This may indicate that although gifted girls aspire to prestigious occupations, their perceptions of the commitment needed to obtain post-graduate training at the doctoral level may prevent them from fulfilling these aspirations (Leung et al. 1994).

In a more recent study, Cochran et al. (2011) used a sample of randomly selected Americans that were studied longitudinally from age 15-17 through adulthood on an annual basis. Interestingly, gender was not a predictor of the level of adolescent occupational aspirations, contrary to the findings of Leung et al. (1994). However, gender was a predictor of income in midlife. When background variables were controlled for, adolescent career aspirations had a small effect on success in midlife.

Although research demonstrates that women tend to reduce their career and educational aspirations, some research demonstrates that women may have more gender role flexibility than males, which may allow for a wider array of career

interests. In 2002, Mendez and Crawford examined the career aspirations of 227 (132 girls, 95 boys) adolescents in grades six through eight, who were selected for a program for gifted students. This study assessed career aspirations by differentiating between the careers that had been ruled out versus careers that were still being considered by each participant. Additionally, students were given assessments of achievement motivation, gender attitudes and gender related personality attributions. The results indicated that girls perceived a wider range of options that were open to them than boys. Girls also showed greater gender role flexibility than their counterparts which may have contributed to the greater number of careers being considered. However similar to previous studies, gifted boys had higher education and prestige aspirations in comparison to gifted girls, and in general girls were more attracted to female-dominated careers. However, girls who aspired to the most prestigious careers appeared to be those who were higher in achievement motivation.

It is important to understand the career aspirations of women given these gender differences. Given that research supports that even gifted women tend to choose stereotypically female professions that reflect lower levels of prestige, and educational attainment when compared to men of the same educational level (Leung et al., 1994; Mendez & Crawford, 2002), it is important to continue to study how women view their vocational decisions, and their aspirations for their careers.

Correlates of Career Aspiration

Models of women's career development often organized salient constructs into internal (the person's characteristics or perspective) and external (the person's environment) factors (Fitzgerald et al., 1995). As we might expect, research has

indicated that internal characteristics related to individual's perceptions of career (e.g. work role salience, career orientation) are related to career aspirations and attitudes (Ganginis Del Pino et al., 2011; Greer & Egan, 2012; Kan, 2007; McClintock-Comeaux, 2007). Additionally other internal factors such as prioritization of family responsibilities over career also have been shown to be influential in women's vocational decision making (Betz, 2008; Marks & Houston, 2002; O'Brien et al., 2000; Walsh & Heppner, 2006).

Moreover, the Eccles et al. (1983) Expectancy Value Model is helpful in further considering the factors that might relate to the educational and career choices of men and women. Research supports that achievement choices are influenced by individual expectancies, self-perceptions, task values, social and relational variables and environmental factors (Jacobs, 2005). According to this theoretical model, values influence the tasks that an individual chooses to pursue. Moreover, research has shown that values influence academic and career choices and have been used to explain the underrepresentation of women and minorities in STEM disciplines as well as in leadership within those fields (Battle & Wigfield, 2003; Jacobs, 2005). This model helps to support that women's values for their career (represented by work role salience, career orientation) and for their families (represented by compromising career for children and partner) impact women's decisions about the career related tasks they pursue.

One variable related to career aspirations is work role salience. Interestingly, work role salience or "career orientation" grew out of the limitations of utilizing dichotomous variables to understand the nature of women's career development. In

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contrast, it was developed as a continuous variable reflecting the degree of women's preferred work involvement with or without involvement as a homemaker (Eyde, 1962). However more contemporary concepts of work role salience reflect how central aspirations for career are to adult life (Almquist & Angrist, 1971). Career salience plays an important role in vocational behavior. In an extensive review of role salience, Greer and Egan (2012) identified that work role salience affects a number of career related variables including career exploration, development, career maturity, and vocational identity.

One study set out to explore how career and parental identities influence college student's expectations about their careers. Kerpelman and Schvaneveldt (1999) sampled a total of 1,267 men and women who were never married, had at least one child, and were between 18-25 years old. The researchers identified men and women who were family, balanced, career, or career/marriage oriented, and compared their attitudes about their future careers. The results indicated that women valued their parental identity more than men, and moreover women expected to get married sooner and start their careers later than men. With regard to career identity, women who were family-oriented scored the lowest in career identity salience, however career oriented women had the highest levels of career identity salience overall (Kerpelman & Schvaneveldt, 1999).

Other research has supported that work role salience influences women's vocational decisions. In a study of primarily White (82%), female doctoral students at a large eastern University (N=273), researchers studied the factors that may influence women's decisions of whether or not to pursue tenure track faculty positions upon

graduation. Additionally, the researchers were interested in the type of faculty

positions and type of institution (Research I, liberal arts universities, or community

college) that participants were most interested in pursuing. It was hypothesized that

both external (e.g. social support, faculty role models) and internal (work role

salience, work and family balance) variables would predict female doctoral students'

intended career paths. Work role salience was a positive predictor of doctoral students

increased interest to pursue faculty positions, and specifically to pursue tenure track

positions at Research I and liberal arts universities. Moreover, women who reported

high work role salience were more likely to report interest in pursuing a Research I

position, compared to those students with low work role salience (McClintock-

Comeaux, 2007).

Work role salience also has been found to impact career women outside of

academia. For instance, in a study that aimed to test a model of the antecedents and

outcomes of career commitment, 510 full-time employed teachers and nurses were

sampled using various measures of career including career satisfaction, organizational

commitment and organizational opportunity for development. Although the

hypothesized model of career commitment was not supported, work-role salience was

a predictor of career commitment (Aryee & Tan, 1992).

Another variable which may relate to women's career aspirations is career

orientation. Career orientation is defined as the relative importance of family and

career (Battle & Wigfield, 2003). In a study of 401, primarily white (60.4%)

undergraduate women at a large eastern university, researchers were interested in the

degree to which women considered and were willing to compromise career plans for

future romantic partners or children. The results of the study indicated that female undergraduate students had moderately positive attitudes about women being oriented towards a career while having a family. Moreover, attitudes towards career orientation correlated negatively with prioritizing children and partner, such that the more career oriented they were, the less likely they were to indicate that they were willing to compromise their career for their children or partners' needs (Ganginis Del Pino et al., 2011).

Battle and Wigfield (2003) set out to determine the relationship between undergraduate female's orientation to the relative importance of career and family would be associated with the pursuit of graduate school. The sample consisted of 216 female undergraduate students at a large northeastern university. Of these participants, the majority were White (74%) and were enrolled in "traditional" fields of undergraduate study for women such as education, family studies and psychology. The results indicated that career orientation was a positive predictor of intention to attend graduate school. This study seems to support that women who had higher career orientation also tend to set higher educational goals for themselves.

Other research appears to support that women who have work-oriented attitudes experience less of a barrier to working full-time while having dependent children. In a study examining married women's work histories and their gender role attitudes, work-life history data was collected from 10,300 individuals from 5,000 households over a period of 10 years. The presence of young children has a strong effect on women's vocational choices. Particularly, having a preschool aged child reduced a woman's likelihood of full-time work. However, women who had higher

work centered values reduced the negative effect of dependent children on their employment activities. This research seems to indicate that work-centered attitudes may create a protective mechanism that allows women to stay more engaged with their careers (Kan, 2007).

One consistently linked variable to women's career aspirations is the consideration of responsibilities for both family and career, in particular how much women are willing to compromise career for family and partner. When planning for their careers, the majority of women take into consideration how their work will fit with having children and a romantic relationship. Beyond this consideration, many women often will limit their career options in anticipation of future family obligations (Betz, 2008; Walsh & Heppner, 2006).

The process of opting out of careers because of the expected family conflict may begin at an early age according to research completed by O'Brien & Fassinger (1993). These researchers began a longitudinal study in 1991 with a sample of 409 female seniors from a Catholic high school, with the intention of investigating career-self efficacy, attachment to parents, and career aspirations over five years. At Time one, students were asked about their educational and career aspirations as well as attachment and separation to parents; five years later follow up data were collected from 207 of the original sample. Over the five year period, women selected fewer prestigious and more traditional careers which underutilized their abilities. Moreover, young women indicated that family was more important than a career, such that only two women in the total sample of 207 indicated that career pursuits were far more important than family pursuits. These findings indicate that starting at a young age,

girls may decide to pursue less prestigious careers, underutilizing their potential, because of the expectation of future family responsibilities (O'Brien et al., 2000).

Other studies also have demonstrated the effects of expectations of motherhood on career. For example, Marks and Houston, (2002) surveyed 92 high achieving young women ages 15 to 17 drawn from a selective grammar school to investigate the factors that shape women's career and educational development. Long before women actually become mothers, the expectation of combining work and family influenced both career and educational plans. Moreover, perceived social pressure to give up work to care for children was a negative predictor of women's plans to continue their education, such that as women felt more pressure to become a full time mother, the more uncertain they were in in their plans for further education. Despite strong intentions to have a career and gain further education, the intention to have a child and the perceived acceptability of combining work and motherhood was a strong influence to the extent that women reported willingness to leave work or lower their plans to gain further education. Thus research seems to support that long before young women are actually faced with the challenge of combining work and family, their plans for their education and careers are being shaped by the expectation of conflict (Marks & Houston, 2002).

In summary, women's career development models as well as the Eccles et al. (1983) Expectancy Value Model are helpful in understanding variables that may have an influence on women's career aspirations. Of particular interest are internal characteristics or values of the individual (e.g., work role salience, career orientation, and compromising for future family and partner), as these are supported by the

vocational research as being important predictors of women's vocational outcomes and seem more amenable to change when compared to external forces such as societal expectations or discriminatory work environments.

Measurement of Career Aspirations

In psychological research, career aspirations have often been operationalized and measured as a single item assessing the career participants would like to pursue in the future. For example, Cranston and Leonard (1990) studied the relationship between undergraduates' experiences of campus micro-inequities, self-esteem and career aspirations. These authors operationalized career aspirations as two single item response questions: educational aspirations (i.e., what is the highest educational degree you would like to obtain eventually?) and career aspirations (i.e., if you had to pick a career right now, what would it be?). Similar single item measurements of aspirations have been used to research undergraduate women's intent to pursue science based careers (Cundiff, Vescio, Loken & Lo, 2013), and the longitudinal effects of cognitive skills and gender beliefs on occupational aspirations (Baird, 2012).

A more recent study conducted by Beal and Crockett (2013) investigated adolescents career and educational goals with a single item measure. Participants were asked to report their aspirations and expectations for occupations using two open ended questions: "What kind of work would you like to do?" and "what kind of work do you think you will probably do?" Using the National Opinion Research Center (NORC) coding system, occupations are coded based on prestige, which reflect both the salary and the educational requirements needed for that particular

occupation (Beal & Crockett, 2013). The methodology of using NORC codes is a surprisingly common practice in both psychological and sociological research (Beal & Crockett, 2010; Chang et al., 2006; Cook et al., 1996; Dubow et al., 2006). Beal and Crockett (2013) argued that while this approach is not always ideal, NORC codes generally capture career aspirations. Moreover, they indicated that careers that have higher salaries and are deemed to involve power and authority also tend to receive higher prestige scores. Thus the prestige scores allow the researchers to quantify occupational aspirations in a way that accounts for the training, authority, and financial gain. NORC codes range from 10 (low prestige) to 100 (high prestige). Examples of NORC codes include sales clerk (34), computer programmer (61), and lawyer (75; Smith, Marsden, & Hout, 2013).

Although this type of methodology is used frequently in psychological and sociological research, the ability of single item measures to capture this construct adequately has been questioned. Fassinger (1990) attempted to develop a causal model of career choice in college women by identifying sets of factors including individual, background, educational and lifestyle variables that would predict occupational decisions. However, Fassinger and other vocational researchers at the time encountered methodological problems given the lack of instrumentation to assess critical variables and their complex interactions related to the career development of women. Fassinger postulated that operationalizing critical constructs like career orientation in terms of commitment to family versus career created a limited perspective which failed to address the degree of achievement that a woman might aspire to within her career. She suggested that "future models more clearly

differentiate between women who enter traditional fields and were committed to excelling in those fields, as opposed to women who enter nontraditional fields yet did not aspire to high levels of achievement in those areas" (p. 457). She stated that although her model predicted that more liberal attitudes toward family roles related to greater career orientation and less traditional career choices, it was unable to account for the career orientation of a dedicated teacher who picked a traditional career, but may aspire to high achievements within her career.

Career Aspiration Scale

In 1996, O'Brien developed a new measure of career aspirations after identifying the lack of instrumentation to measure this important variable. In reviewing the literature, the themes of pursuing further education, aspiring to leadership, and training and managing others emerged as important aspects of occupational aspirations. Similarly to Fassinger (1990) she argued that a woman may select a traditionally female career such as teaching and still aspire to leadership roles within that field. She developed a 10-item, 5 point likert scale to assess the degree to which individuals not only valued their careers but also how much they aspired to leadership and continued education within their careers (e.g., "I plan on developing as an expert in my career field"). The CAS was tested with a sample of 282 predominantly White (82%) female high school seniors in an urban Midwest private high school. The measure demonstrated adequate reliability and support for validity was demonstrated with positive correlations in the expected direction with measures of academic achievement, career self-efficacy, and career salience (O'Brien, 1996).

Shortly after the CAS was developed, it was used in multiple published studies on women's career development (O'Brien, 1996, O'Brien & Fassigner, 1993, Rainey & Borders, 1997). For instance, O'Brien and Fassinger (1993) expanded Fassinger's (1990) model of career choice in college women by testing two causal models of career choice and orientation. The participants were 409 adolescent women enrolled in an all-female private liberal arts high school in a large Midwestern city. The CAS demonstrated adequate reliability ($\alpha = .76$) and enhanced the measurement of the latent dimension of career orientation in the causal model of career choice. A similar study attempted to investigate two models of career development of early adolescent girls with a sample of 276 seventh and eighth grade female students in a rural school system. The researchers utilized the CAS as an outcome measure alongside of career orientation. The CAS demonstrated somewhat low reliability ($\alpha = .67$), however these young adolescents reported career aspirations quite similar to those reported by the high school seniors in the O'Brien and Fassinger (1993) study. Interestingly, adolescent's argentic characteristics and maternal variables (mother-daughter relationship) contributed to girl's career aspirations, which offered some early validity support for this measure.

However, the psychometric properties of the CAS were not investigated until 2007, when Gray and O'Brien conducted a study to investigate the factor structure, reliability and validity of the CAS across five studies. Study one consisted of 228 college females from a Midwestern university. A factor analysis was conducted with CAS and found support for a two factor solution, which accounted for 53% of the total variance. The two factors were leadership and achievement aspirations which

had factor loadings ranging from .63 to.79, and educational aspirations with factor loadings ranging from .89 to.90. In study one, the CAS demonstrated adequate reliability (Total score =.77, Leadership/Achievement Aspirations =.82, Educational Aspirations =.76), and validity for the measure was demonstrated with positive correlations with attitudes towards women's roles, and multiple role self-efficacy.

Study two consisted of 409 high school seniors from a Catholic high school. Similarly to study one, the CAS had relatively high factor loadings for each subscale with the Leadership/Achievement subscale ranging from .43 to.83 and Educational Aspiration subscale ranging from .73 to.83. Adequate reliability was demonstrated (Total score =.72, Leadership/Achievement Aspirations =.72, Educational Aspirations =.63) and validity was established with positive correlations with women's roles, career decision self-efficacy, occupational self-efficacy and instrumentality.

Study three sampled 207 female graduates of a liberal arts high school. A two factor solution was found which accounted for 70% of the total variance. Factor loadings for Leadership/Achievement Aspirations ranged from .40 to.82 and from .71 to.87 for Educational Aspirations. Reliability estimates were slightly lower in study three (Total score =.75, Leadership/Achievement Aspirations =.78, Educational Aspirations =.56), and validity was supported by a positive correlation between the CAS and career decision self-efficacy.

Study four included 365 Mexican American high school female seniors. The CAS had poorer fit for this sample, and the two factor solution only accounted for 49% of the total variance, with low reliability estimates (Total score =.51, Leadership/Achievement Aspirations =.67, Educational Aspirations =.61). Factor

loadings, however, were similar to the previous studies with Leadership/Achievement Aspirations ranging from .57 to .75, and Educational Aspirations ranging from .72 to .77.

Finally study five utilized a sample of 56 undergraduate psychology students to test the reliability of the CAS over a two-week period. The results demonstrated that the CAS total score and both subscales were stable over a two-week interval (Gray & O'Brien, 2007).

The measurement development study conducted by Gray and O'Brien demonstrated support for an eight item version of the CAS. Additionally, the factor analyses confirmed a two factor solution that seemed to correspond to the hypothesized subscales of "Leadership and Achievement Aspirations" and "Educational Aspirations." The leadership subscale assessed desire for leadership, promotion, and training others, while the education subscale appeared to assess the desire for further education. Moreover, the results supported the CAS as valid and reliable when used with adolescent, college and post-college White women. This version of the CAS is used frequently in studying women's vocational decisions. Researchers using the measure reported reliability estimates for the total scale ranging from .79 to .87 (Fisher et al., 2011; Laschinger et al., 2013), whereas those researchers who chose to only utilize the leadership and achievement subscale reported a reliability estimate of .64 (Thompson & Dahling, 2010). Additionally, the CAS has been used internationally and has been translated into Korean. Reliability estimates for the Korean translated version of the CAS range from .74 to .80 (Choi, 2003; Woo & Lee, 2010).

However, Gray and O'Brien discussed some limitations surrounding the use of the Career Aspiration Scale. Of most concern were the inconsistent estimates of the internal consistency for the subscales, as they were variable across samples. These inconsistent estimates of internal consistency led Gray and O'Brien to caution against the use of the total score and the educational aspiration subscale and offered that perhaps the low reliabilities were the result of the low number of items representing the two subscales. Moreover, the authors discussed that the two subscales were not strongly interrelated (.20 to .39) and may not be components of a single overarching construct (Gray & O'Brien, 2007). However, even with these limitations and the caution regarding using the total scale, the CAS has been used widely in the vocational literature (Choi, 2003; Fisher et al., 2011; Laschinger et al., 2013; Thompson & Dahling, 2010; Woo & Lee, 2010). The CAS was an important addition to vocational research and addressed the need for a more complex and representative measurement of career aspirations. However, the inconsistent reliability estimates of the measure are particularly concerning, and researchers could be benefit from a revised and updated version of the Career Aspiration Scale.

Revised Career Aspiration Scale

The purpose of the current study was to revise the CAS to increase its validity, reliability, and multi-dimensional nature. Given the frequent use of the Career Aspiration Scale, and the limitations of alternative single item measures, it was necessary to revise the scale so that it may be used with confidence for both undergraduate and graduate student populations. The limited number of items assessing educational aspirations may have hindered its ability to be used reliability

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by vocational researchers. Although not discussed as a limitation by the authors of the measure, the Leadership and Achievement Subscale only captured desire to become a leader, thus is lacking in assessment of the level of achievement aspirations. For instance, a few example items from the original CAS (e.g., "I hope to become a leader in my career field," "I hope to move up through any organization or business I work in," and "Attaining leadership status in my career is not that important to me" (reverse scored item)), demonstrate the scale's ability to capture strivings towards leadership. However, the subscale was missing the ability to measure the pursuit to be the very best in their chosen occupation or to be recognized for their accomplishments. Thus in revising the measure, one goal was to separate the leadership from the achievement components, and create a new subscale reflecting the desire for recognition and achievement. This new subscale is most closely related to the construct of "achievement motivation."

Achievement motivation was first highlighted in the work of McClelland (1961) and Atkinson (1958) who defined this construct as the desire to accomplish something of value or importance through efforts to meet standards of excellence (McClelland et al., 1953). McClelland went on to establish Achievement Motivation Theory in 1961. Achievement Motivation Theory is built off the work of Murray (1983) and asserted that achievement motivation is a salient predictor of career related decision making (McClelland & Boyatzis, 1982). McClelland's theory is the foundational basis for adding an additional subscale to more fully capture career aspirations. The importance of achievement motivation on vocational decision making was demonstrated in a longitudinal study of 237 entry level managers.

McCelland (1961) assessed personality variables and promotion tendencies were measured at an 8 and 16 year follow up. As predicted, achievement motivation was associated with success in non-technical management jobs.

Additional research has supported the need for achievement in predicting management positions. Using a population of entry level managers (211 males, 180 females) in a 12 year longitudinal study, researchers attempted to understand if achievement motivation predicted attainment of management level. While the results showed no gender differences in motivational predictors of attained management level, the content analysis reviled two styles of power that distinguished successful men from successful women. For women, the need for achievement predicted obtaining middle management positions and success in management, thus contributing to the understanding of career aspirations (Jacobs & McClelland, 1994). More recently, Tao and Hong (2014) investigated whether achievement motivation among Chinese students would relate to their feelings about academics across five studies. In studies three and four, 152 Chinese high school students (65 males, 73 females, 14 unknown), and 131 Chinese secondary school students (68 males, 63 females) respectively, were asked about their individual-oriented achievement motivation, social oriented achievement motivation, and achievement goals. Both studies found that individual-oriented achievement motivation was a positive predictor of achievement and learning goals. In revising a measure of career aspirations, the literature appears to support that motivation for success or achievement is related to overall career aspirations, and was a useful addition to the revised measure of career aspirations.

To summarize, given the concentration of women in low paid, low status positions, it is important that vocational psychologists continue to study women's career aspirations. Research and counseling interventions that address women's career aspirations have the potential for promoting healthy vocational development among young women. To advance this line of research, the purpose of this study was to revise a measure of career aspirations that can be used with confidence by psychologists with female undergraduate and graduate populations.

Appendix B

Career Aspiration Scale – Revised

In the space next to the statements below please circle a number from "0" (not at all true of me) to "4" (very true of me). If the statement does not apply, circle "0". Please be completely honest. Your answers are entirely confidential and will be useful only if they accurately describe you.

0 = Not at all true of me
1 = Slightly true of me
2 = Moderately true of me
3 = Quite a bit true of me
4 = Very true of me

1. **I hope to become a leader in my career field.**	0	1	2	3	4
2. **When I am established in my career, I would like to train others.**	0	1	2	3	4
3. **I do not plan to devote energy to getting promoted to a leadership position in the organization or business in which I am working.**	0	1	2	3	4
4. I want to be among the very best in my field.	0	1	2	3	4
5. **Once I finish the basic level of education needed for a particular job, I see no need to continue in school.**	0	1	2	3	4
6. My work accomplishments will make a significant difference to others.	0	1	2	3	4
7. Becoming a leader in my job is not at all important to me.	0	1	2	3	4
8. I would feel unfulfilled if I ever stopped learning about my field.	0	1	2	3	4
9. **When I am established in my career, I would like to manage other employees.**	0	1	2	3	4
10. I plan to reach the highest level of education in my field.	0	1	2	3	4
11. I want to have responsibility for the future direction of my organization or business.	0	1	2	3	4
12. I want my work to have a lasting impact on my field.	0	1	2	3	4

13. I will be content to stay at the entry level of my career. 0 1 2 3 4

14. I aspire to have my contributions at work recognized by my employer. 0 1 2 3 4

15. I would like to motivate others in my organization or business. 0 1 2 3 4

16. I will pursue additional training in my occupational area of interest. 0 1 2 3 4

17. My main source of satisfaction in my life will come from achievements in my career. 0 1 2 3 4

18. I will always be knowledgeable about recent advances in my field. 0 1 2 3 4

19. Attaining leadership status in my career is not that important to me. 0 1 2 3 4

20. Being outstanding at what I do at work is very important to me. 0 1 2 3 4

21. I know I will work to remain current regarding knowledge in my field. 0 1 2 3 4

22. I hope to move up to a leadership position in my organization or business. 0 1 2 3 4

23. I will attend conferences annually to advance my knowledge. 0 1 2 3 4

24. I want to be a nationally known leader in my field. 0 1 2 3 4

25. If I have a choice, I will not spend my time or money on continuing education courses. 0 1 2 3 4

26. I know that I will be recognized for my accomplishments in my field. 0 1 2 3 4

27. Even if not required, I would take continuing education courses to become more knowledgeable. 0 1 2 3 4

28. I would pursue an advanced education program to gain specialized knowledge in my field. 0 1 2 3 4

29. Achieving in my career is not at all important to me.   0 1 2 3 4

30. Being one of the best in my field is not important to me.   0 1 2 3 4

31. I plan to obtain many promotions in my organization or business.   0 1 2 3 4

32. Every year, I will prioritize involvement in continuing education to advance my career.   0 1 2 3 4

33. I plan to rise to the top leadership position of my organization or business.   0 1 2 3 4

Achievement Aspiration items: 4, 6, 12, 13, 14, 17, 20, 26, 29, 30, 31

Leadership Aspiration items: 1, 2, 3, 7, 9, 11, 15, 19, 22, 24, 33

Educational Aspiration items: 5, 8, 10, 16, 18, 21, 23, 25, 27, 28, 32

Reverse Scored Items: 3, 5, 7, 13, 19, 25, 29, 30

Items from original CAS (Gray & O'Brien, 2007) are bolded: 1, 2, 3, 5, 9, 19 (item 3's wording was modified slightly).

Note: two items from the original scale were not retained (item 5 and 7).

Work and Family Orientation Questionnaire (Spence & Helmreich, 1983)

Instructions: Rate yourself on each item below, using the following scale.

1 = strongly disagree
2 = somewhat disagree
3 = neither agree nor disagree
4 = somewhat agree
5 = strongly agree

Work-Mastery

1. It is important for me to do my work as well as I can even if it isn't popular with my co-workers.   1 2 3 4 5

2. I find satisfaction in working as well as I can.   1 2 3 4 5

3. There is satisfaction in a job well done.   1 2 3 4 5

4. I find satisfaction in exceeding my previous performance even if I don't outperform others.   1 2 3 4 5

5. I like to work hard.   1 2 3 4 5

6. Part of my enjoyment in doing things is improving my past performance.   1 2 3 4 5

7. I would rather do something at which I feel confident and relaxed than something which is challenging and difficult. (R)   1 2 3 4 5

8. When a group I belong to plans an activity, I would rather direct it myself than just help out and have someone else organize it.   1 2 3 4 5

9. I would rather learn easy fun games than difficult thought games. (R)   1 2 3 4 5

10. If I am not good at something, I would rather keep struggling to master it than move on to something I may be good at.   1 2 3 4 5

11. Once I undertake a task, I persist.   1 2 3 4 5

12. I prefer to work in situations that require a high level of skill.   1 2 3 4 5

13. I more often attempt tasks that I am not sure I can do than tasks that I believe I can do.   1 2 3 4 5

14. I like to be busy all the time. 1 2 3 4 5

Competitiveness
15. I enjoy working in situations involving competition with others. 1 2 3 4 5

16. It is important to me to perform better than others on a task. 1 2 3 4 5

17. I feel that winning is important in both work and games. 1 2 3 4 5

18. It annoys me when other people perform better than I do. 1 2 3 4 5

19. I try harder when I'm in competition with other people. 1 2 3 4 5

Appendix D

Work Role Salience Scale (Greenhaus, 1973)

1 = Strongly Disagree
2 = Disagree
3 = Uncertain
4 = Agree
5 = Strongly Agree

1. It is more important to have some leisure time after work than to have a job in your chosen field, be devoted to it, and be a success at it.** (R)	1 2 3 4 5
2. I enjoy thinking about and making plans about my future career.	1 2 3 4 5
3. It is difficult to find satisfaction in life unless you enjoy your job.	1 2 3 4 5
4. I would consider myself extremely "career minded."	1 2 3 4 5
5. I intend to pursue the job of my choice, even if it allows only very little opportunity to enjoy my friends.**	1 2 3 4 5
6. The whole idea of working and holding a job is kind of distasteful to me. (R)	1 2 3 4 5

* As described in Greenhaus and Sklarew (1981), Career Salience (the concept and the scale) is now referred to as Work Role Salience.

** These items were previously used in a dissertation by George (cited in Greenhaus, 1970), the wording only slightly changed to accommodate the Likert format.

B. **Scoring**

1. **Response Categories**

1 = Strongly Disagree
2 = Disagree
3 = Uncertain
4 = Agree
5 = Strongly Agree

NOTE: Researchers are permitted and encouraged to use the Career Salience Scale

if they feel it may be useful for research purposes. Additions, deletions, modifications, and factor analyses of items designed to improve the scale for specific situations are also encouraged.

Appendix E

The Planning for Career and Family Scale (Ganginis et al., 2011).

The following are a number of statements that reflect the extent to which you think about your future family when deciding on a career. Rate the degree to which you agree or disagree with each statement using the following scale.

1 = Strongly Disagree
2 = Disagree
3 = Agree
4 = Strongly Agree

1. Any career that I will select must enable me to be home when

   my children come home from school.   1   2   3   4

2. Any relationship that I am in will need to realize that my career

   plans come first. (R)   1   2   3   4

3. I will have a career with flexible hours so that I can be home for

   the children I plan to have.   1   2   3   4

4. I will make my career plans independently of what my partner

   might need.(R)   1   2   3   4

5. I will select a career that can be put on hold when my children

   are young.   1   2   3   4

6. I will give up some of my career goals for my relationship.   1   2   3   4

7. Having quality time for raising children will be the most

   important consideration in my career choice.   1   2   3   4

8. I will never change my career plans for a relationship. (R)   1   2   3   4

9. When considering a future career, I will look for a job that will

   allow me the flexibility of being able to stay at home when my

   children are sick or out of school.   1   2   3   4

10. I will take a job that I find less satisfying if it means having more

    time for my partner.   1   2   3   4

11. My future career will allow me to have time off in the summer so

    I can be with my children.   1   2   3   4

12. When selecting a career, I will take a lesser paying job if it means

    I am able to prioritize my relationship.   1   2   3   4

13. When planning for my career, I will think about how much energy

    I will have for my children.   1   2   3   4

14. Taking a less demanding job to have more energy for my partner

    will not be an option. (R)   1   2   3   4

15. I will find a career where I do not have to work full-time after

    I have children.   1   2   3   4

16. My career choice will be based on my goals, not on my ability

    to balance work and love. (R)   1   2   3   4

17. Future parenting responsibilities will be an important factor in

    making my career plans.   1   2   3   4

18. The wishes of my partner will not figure into my career

    plans. (R)   1   2   3   4

19. I will select a career that allows me to slow down after I have

    children.   1   2   3   4

20. Having a fulfilling career will be very important to me, even at the

    expense of future responsibilities to my partner. (R)   1   2   3   4

21. I will not plan my career around future parenting

    responsibilities. (R)   1   2   3   4

22. When selecting a career, I will consider the needs of my

    partner.   1   2   3   4

23. When choosing a career, I will think about whether the work load

    will hinder my ability to care for my children.   1   2   3   4

24. Having a satisfying relationship is not as important as picking

    a career I love. (R)   1   2   3   4

Odd numbered items: Sum responses to each item to get Considering Children Scale. Higher score represents considering your future children when making career plans.

Even numbered items: Sum responses to each item to get Considering Partner Scale. Higher score represents considering your future partner when making career plans.

Reverse score items (items 2, 4, 8, 14, 16, 18, 20, 21, 24).

Demographics Form- Study 1

AGE:_____

SEXUAL IDENTITY: RACE/ETHNICITY:
_____ Bisexual   _____African American
_____ Gay/Lesbian   _____Asian/Asian American
_____ Queer   _____American Indian
_____ Straight   _____Biracial/Multiracial
_____Transgender   _____ Hispanic, Latina
                                          _____White, non-Hispanic
                                          _____Other (Please Specify)

RELATIONSHIP STATUS:
_____Single (never-married)
_____Single (divorced)
_____Single (widowed)
_____Living with partner
_____Married
_____Married (separated)

Are you in a committed romantic relationship? _____ Yes   _____ No

If in a relationship:

How long have you been romantically involved with your current partner? ____ Years

How committed are you to this romantic relationship?
1- Not at all committed
2- Slightly committed
3- Moderately committed
4- Quite a bit committed
5- Extremely committed

How supportive is your partner regarding your work?
1- Not at all supportive
2- Slightly supportive
3- Moderately supportive
4- Quite a bit supportive
5- Extremely supportive

If Single:

Do you plan to get married/be in a committed relationship?
_____ Yes   _____ No

Do you have children? _____ Yes   _____ No
(If Yes) How many? _____
What are their ages?
_____
_____
_____
_____
_____
_____
(If No) Do you plan on having children? _____ Yes   _____ No

LOCATION OF YOUR GRADUATE SCHOOL
_____East Coast
_____Midwest
_____South
_____West Coast

PROGRAM TYPE: STATUS IN SCHOOL: EMPHASIS:
                           _____First Year   _____Clinical
_____PhD   _____Second Year   _____Counseling
_____PsyD   _____Third Year
                           _____Forth Year
                           _____Fifth Year
                           _____Sixth Year
                           _____Seventh Year
                           _____Eighth Year
                           _____Beyond eighth year

How would you describe the focus of your graduate program?
_____Adapted Scholar Practitioner
_____Clinical-Scientist
_____Clinician-Researcher
_____Practitioner
_____Practitioner- Scholar
_____Practitioner-Scientist
_____Scientist-Practitioner
_____Scientist-Professional
_____Research-Practitioner

Please indicate where you are in your graduate program (check all that apply):
_____Course work in progress
_____Course work completed

_____Comprehensive exams completed
_____Dissertation proposal accepted
_____Dissertation completed
_____On internship

Which of the following do you plan to pursue as a career after graduation from your program?
_____Consultant
_____Professor at a community college
_____Professor at a liberal arts university
_____Professor at a Research 1 university
_____Therapist in community clinic setting
_____Therapist in a hospital
_____Therapist in a private practice
_____Therapist in a university counseling center
_____Therapist in a Veterans Medical Center
_____Other, please specify _____

How possible would it be for a psychologist to manage both family and work in each of the following careers?

1 = Not at all possible
2 = Slightly possible
3 = Moderately possible
4 = Quite possible
5 = Extremely possible

Consultant	1	2	3	4	5
Professor at a community college	1	2	3	4	5
Professor at a liberal arts university	1	2	3	4	5
Professor at a Research 1 university	1	2	3	4	5
Therapist in community clinic setting	1	2	3	4	5
Therapist in a hospital	1	2	3	4	5
Therapist in a private practice	1	2	3	4	5
Therapist in a university counseling center	1	2	3	4	5
Therapist in a Veterans Medical Center	1	2	3	4	5

Please indicate your degree of confidence in your ability to succeed in the following:
1 = Not at all confident
2 = Slightly confident
3 = Moderately confident
4 = Quite confident
5 = Extremely confident

Research	1	2	3	4	5

Clinical Work	1	2	3	4	5
Leadership Roles	1	2	3	4	5

I plan to be a member of the APA throughout my career.
_____Not at all true of me
_____Slightly true of me
_____Moderately true of me
_____Quite a bit true of me
_____Very true of me

I plan to seek a leadership position in my APA division (e.g., Division 17 or Division 12).
_____Not at all true of me
_____Slightly true of me
_____Moderately true of me
_____Quite a bit true of me
_____Very true of me

My work will include leadership roles in the APA.
_____Not at all true of me
_____Slightly true of me
_____Moderately true of me
_____Quite a bit true of me
_____Very true of me

Being active in the work of the APA is important to me.
_____Not at all true of me
_____Slightly true of me
_____Moderately true of me
_____Quite a bit true of me
_____Very true of me

Appendix G

Demographics Form- Study 2

AGE: GENDER:
                                     _____Female
_____   _____Male

COLLEGE MAJOR?

_____

YEAR IN COLLEGE:
_____First Year
_____Second Year
_____Third Year
_____Forth Year
_____Fifth Year
_____ beyond fifth year

SEXUAL IDENTITY: RACE/ETHNICITY:
_____ Bisexual   _____African American
_____ Gay/Lesbian   _____Asian/Asian American
_____ Queer   _____American Indian
_____ Straight   _____Biracial/Multiracial
_____Transgender   _____ Hispanic, Latina
                             _____White, non-Hispanic
                             _____Other (Please Specify)

RELATIONSHIP STATUS:
_____Single (never-married)
_____Single (divorced)
_____Single (widowed)
_____Living with partner
_____Married
_____Married (separated)

Are you in a committed romantic relationship? _____ Yes   _____ No

If in a relationship:

How long have you been romantically involved with your current partner? _____ Years

How committed are you to your romantic relationship with ____?

1	2	3	4	5
Not at all committed	slightly	moderately	quite a bit	extremely committed

How much does your partner support your desires to work?

1	2	3	4	5
Not at all supportive	slightly	moderately	quite a bit	extremely supportive

Do you plan to get married/be in a committed relationship? _____Yes _____ No

Appendix H

Demographics- Study 3

FIRST NAME: FIRST INITIAL OF LAST NAME:

_____   _____

AGE: GENDER:
                                  _____Female
_____   _____Male

                                  COLLEGE MAJOR?

                                  _____

SEXUAL IDENTITY: RACE/ETHNICITY:

_____ Bisexual   _____African American
_____ Gay/Lesbian   _____Asian/Asian American
_____ Queer   _____American Indian
_____ Straight   _____Biracial/Multiracial
_____Transgender   _____ Hispanic, Latina
                                  _____White, non-Hispanic
                                  _____Other

YEAR IN COLLEGE:
_____First Year
_____Second Year
_____Third Year
_____Forth Year
_____Fifth Year
_____Sixth Year or beyond

ARE YOU CURRENTLY IN A
COMMITTED RELATIONSHIP?
_____No _____Yes

HAVE YOU DECIDED ON A CAREER?
_____No _____Yes

        If, YES which career will you pursue? _____
        If, NO which careers are you considering?
        1_____
        2_____
        3_____

Please check the statement that is closest to your own feeling regarding the relative importance of career and family:

_____Career pursuits are far more important than family

_____Career pursuits are more important than family pursuits but family is important too
_____Career and family pursuits are equally important

_____Family pursuits are more important than career pursuits but career is important too

Appendix I

The Family and Career Scale (FCS) (Battle & Wigfield, 2003).

In the space next to the statements below please circle a number from "1" (strongly disagree) to "5" (strongly agree).

1 = Strongly Disagree
2 = Somewhat Disagree
3 = Not Sure
4 = Somewhat Agree
5 = Strongly Agree

1. I believe that women can manage the combining of a career   1 2 3 4 5
outside the home with the responsibility of taking care of a family.

2. I plan to continue working outside the home when I have kids.   1 2 3 4 5

3. I think women should have a career whether they have children   1 2 3 4 5
or not.

4. I think women who have a career make better mothers.   1 2 3 4 5

5. I feel that having children stay with a caring person other than 1 2 3 4 5
their mother for part or most of the day (day-care) is a good
experience for them.

6. I think that fathers should spend just as much time raising   1 2 3 4 5

children as mothers.   1 2 3 4 5

7. I think that a working mother sets a good example for children.   1 2 3 4 5

8. I think that women should earn money, and contribute to the   1 2 3 4 5
family income, even after they have children.

9. I believe that spending shorter periods of "quality time" with   1 2 3 4 5
your kids is better than spending all your time with them.

10. I believe that women who try to work outside the home and   1 2 3 4 5
care for a family have too much to handle.

11. I think women should put their careers "on hold" when they   1 2 3 4 5

begin to have a family.

12. I think that families are better off when mothers stay at home.   1 2 3 4 5

13. I think a woman should decide to be either a career-person or a   1 2 3 4 5
homemaker, but not both at the same time.

14. I think mothers need to be there when their children get home   1 2 3 4 5
from school.

15. I think families suffer when the mother works outside the   1 2 3 4 5
home.

16. I believe there is too much stress in a marriage when both   1 2 3 4 5
husband and wife have careers.

*Reverse Scored items: 10-16

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