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## **“Leaving Before She Leaves”: Considering Future Family When Making Career Plans**

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## BRIEF REPORT

# “Leaving Before She Leaves”: Considering Future Family When Making Career Plans

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An instrument was developed to measure the extent to which people consider future children and romantic partners when planning for a career (i.e., the PLAN scale). Two independent factor-analytic studies of a total of 726 college women were conducted to assess the factor structure and psychometric properties of this measure. Results suggested that the PLAN represents a general Considering Future Family When Making Career Plans factor and 2 domain-specific factors: Considering Children and Prioritizing and Compromising for Partner. Suggestions for future research and practice using the PLAN scale are provided.

*Keywords:* women’s career development, vocational development, multiple roles

In a recent TED Talk, Facebook chief operating officer Sheryl Sandberg encouraged women to lean into their careers, noting that many women “leave before they leave,” opting out of the workplace and leadership positions long before they are faced with the challenges of managing work and family (Sandberg, 2010). This contemporary commentary reflects what vocational psychologists have known for years. When planning for careers, the vast majority of women take into consideration how their work will fit with having children and a romantic relationship, and many women limit their career options in anticipation of future family responsibilities (Betz, 2008; Walsh & Heppner, 2006). Despite the powerful influence of consideration of family on women’s vocational development, little is known about the strength and malleability of this process during adolescent and college years, in part because no scale exists to measure contemplation of future family when making career plans. An instrument to assess this construct could assist researchers to advance knowledge regarding the circumscription of

women into low-paid, low-status positions and aid vocational psychologists and career counselors in developing interventions to maximize vocational opportunities for young women.

Several theories highlight the influence of gender role socialization in career consideration and choice. Eccles and her colleagues (Eccles, 2009, Eccles, 2011; Eccles et al., 1983) articulated a model of achievement-related choices to advance understanding regarding the gendered nature of educational and occupational decisions. Eccles (2011) noted, “Occupational choices are not made in isolation of other life choices, such as the decision to marry and have children, and the decision to balance one’s occupational behaviors with one’s other life roles” (p. 200). Discrimination and gender role socialization, in connection with expectations for success and value connected to the available options are hypothesized to relate to women’s educational and occupational plans. Moreover, Abele (2000) proposed a dual-impact model on gender and career-related choices. She posited that outside and inside perspectives regarding gender (i.e., societal expectations and gender self-concept) influence career decisions and success. These theories propose that socialization processes lead heterosexual girls and women to prioritize the careers of their partners and to expect to have primary responsibility for future children, resulting in fewer occupational options being considered.

The process of limiting career options to allow for marriage and motherhood occurs early. Gottfredson (1981) proposed that children begin to select and eliminate potential careers on the basis of, in large part, which occupations are perceived to be appropriate for women and men. Many of the careers thought to be appropriate for women are those that appear to be amenable to marriage and motherhood (e.g., education, nursing, administrative assistant).

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This research was based, in part, on the thesis of Heather V. Ganginis Del Pino, completed under the direction of Karen M. O’Brien.

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Although women have made gains in reducing gender segregation in several occupations (i.e., lawyers, judges, physicians, and management), there are many more jobs that remain segregated or have become increasingly segregated in the last 30 years (Cotter, Hermesen, & Vanneman, 2012). For example, women continue to comprise 98% of dental hygienists; 97% of secretaries; 91% of registered nurses; 80% primary-school teachers; and 89% of housekeepers, maids, butlers, and hotel cleaners (Cotter et al., 2012).

Research supports the theoretical proposition that the vocational development of girls and women is influenced by their consideration of future family. One longitudinal study found that women, at a very young age, may decide to pursue less prestigious and less lucrative occupations because they are anticipating the responsibilities that accompany marriage and children (O'Brien, Friedman, Tipton, & Linn, 2000). The education and career plans of a sample of adolescent women were influenced by their anticipated role as a mother and their perception of social pressure to leave work to care for their children (Marks & Houston, 2002). Women who aspire to male-dominated careers in high school often change their occupational aspirations to female-dominated fields or neutral careers to manage work and family (Frome, Alfeld, Eccles, & Barber, 2006).

It is understandable that young women engage in this process of consideration and compromise as gender role socialization and societal constructions of what it means to be a wife and mother powerfully influence the process of career decision making (Abele & Spurk, 2011; Betz, 2008; Gottfredson, 1981, 2005). Heterosexual women's careers are considered secondary to their male partners (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005), and primary responsibility for children and housework continues to reside with women (Betz, 2008; Sayer & Fine, 2011). A recent study found that young unmarried women reported a desire for egalitarian distribution of household chores and child care in their future families, but expected to do more than their share in their future relationships (Askari, Liss, Erchull, Staebell, & Axelson, 2010). Moreover, in a longitudinal study of over 1,000 professionals, parenthood had negative effects on women's work hours and career achievements (Abele & Spurk, 2011). Betz aptly noted that women who are employed are termed "working mothers," whereas men are expected to have a career and never are referred to as "working fathers" (Betz, 2006).

To summarize, several theorists (Abele, 2000; Betz, 2006, 2008; Eccles, 2009, 2011; Gottfredson, 1981, 2005) asserted that consideration of future family plays a salient role in women deciding not to pursue a wide variety of careers (including those that are male-dominated and high in prestige). To date, no instrument exists to measure the degree to which young women consider future family when making career plans. Thus, the purpose of this study was to create and evaluate a measure (i.e., the PLAN) to assess this construct.

### Study 1: Assessing the Factor Structure and Psychometric Properties of the PLAN

First, the construct of interest was defined as the degree to which an individual is willing to consider (and compromise career plans for) a future romantic partner or children. This definition is consistent with theories highlighting the influence

of gender role socialization (specifically, the roles associated with being a wife and mother) in heterosexual women's occupational choices and achievements. For example, in commenting on how gender roles shape our expectations to engage in and value certain activities, Eccles (2009) stated, "Traditionally, women are expected to support their husbands' careers and raise their children" (p. 85). We hypothesized that the measure would consist of two factors related to willingness to consider children and willingness to consider partner when planning for career. The focus of this measure was not on managing work and family or anticipated work and family conflict but rather the process by which individuals take into account the relationship or children they may have in the future when engaging in career planning.

Second, items assessing the two dimensions of willingness to consider partner or children were generated by the first two authors after reviewing the theoretical and empirical literature in the areas of women's career development using PsycINFO and PsycARTICLES and studying instruments assessing related constructs (e.g., multiple-role self-efficacy). These items were reviewed by a counseling psychologist specializing in assessment and six doctoral students in counseling psychology. Modifications were made to the items created by the first two authors based on the feedback received; the initial measure consisted of 26 items related to considering future children when making career plans (e.g., "I will find a career where I do not have to work full time after I have children") and 26 items that reflected considering future partner when making career plans (e.g., "When selecting a career, I will take a lesser paying job if it means I am able to prioritize my relationship").

Third, we planned two studies to assess the factor structure, reliability, and validity of the PLAN measure with two samples of college women. In the first study, consistent with our definition of two dimensions underlying our construct, two factors were hypothesized: the PLAN: Considering Children subscale and the PLAN: Considering Partner subscale. Convergent validity was investigated by examining correlations with the PLAN subscale scores and a measure of attitudes toward women's career orientation (i.e., beliefs about the appropriateness of women engaging in careers while having families). Individuals who considered future family when making career choices were hypothesized to score low on attitudes toward career orientation because they were expected to prioritize children and partner. Likewise, women who endorsed positive attitudes toward women having careers and families would seem less willing to compromise their career plans for future children and partner. These hypotheses are consistent with theoretical propositions by Eccles (Eccles, 2009, Eccles, 2011; Eccles et al., 1983) and Abele (2000), who describe how gender role expectations and gendered self-concept can lead to valuing and prioritizing family-related pursuits while limiting career orientation and achievement.

### Method

**Procedure.** E-mail messages were sent to 455 professors and instructors in Architecture, Arts and Humanities, Education, Family Science, Human Development, Information Studies, Journalism, Public Health, Public Policy, Psychology, and Women's Studies at a large mid-Atlantic university. They were asked to

forward an invitation to participate in the study with the online link to the survey to their students. It is not known how often the link was distributed to students. Participants had the opportunity to win a \$100 American Express gift card.

**Participants.** Four hundred fourteen people accessed and completed the survey online. Thirteen surveys having more than 10% missing data were removed from further analyses (Schlomer, Bauman, & Card, 2010), thus the final sample was composed of 401 college women. We imputed missing values using expectation maximization, and imputed values were rounded to the nearest ordinal category (cf. Demirtas et al., 2009).

The participants ranged in age from 18 to 46 years old ( $M = 21$ ,  $SD = 2.78$ ), and had a mean grade point average (GPA) of 3.45 ( $SD = .41$ ). Their racial diversity was consistent with the student body at the university where data were collected (i.e., White [60.4%], Asian/Asian American [13.0%], African American [7.4%], Hispanic/Latina [6.6%], biracial/multiracial [5.3%], Middle Eastern [1.1%], American Indian [0.3%], and "other" [3.7%]; 2.1% did not report race). Participants were mostly single (80.9%), heterosexual (92.0%), and planned to have children (88.0%).

Regarding class levels, 7.7% were first-year students, 16.5% sophomores, 27.9% juniors, and 44.7% seniors (3.2% did not report). Almost all of the participants had chosen a major (97.1%), 1.6% had not, and 1.3% did not report. A total of 63 majors were listed for those who were decided, with the top five being psychology (25.0%), education (13.0%), aerospace engineering (6.1%), biology (4.8%), and civil engineering (4.3%). Plans for degrees included undergraduate only (16.2%), master of science/master of arts (41.2%), doctorate (22.9%), medical (7.4%), and law (4.8%), with 5.3% "other" educational plans and 2.1% not reporting. More than half the participants had chosen a career (67.8%), 30.6% had not, and 1.6% did not answer the question. Over 90 careers were listed, with the top

being teacher (14.6%), psychologist (6.9%), space science (4.0%), physician (3.2%), and researcher (2.7%).

#### Measures.

**Planning for career and family.** The 52 items on the PLAN scale were scored on a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*).

**Attitudes toward women's career orientation.** The Family and Career Scale is a 16-item scale developed to measure beliefs about women's orientation to career while having a family (Battle & Wigfield, 2003). The items were scored on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) (e.g., "I think that women should put their careers 'on hold' when they begin to have a family"). High scores represented positive attitudes toward women being oriented to career, and previous research found adequate internal consistency (.89) and relationships in the expected directions with measures of intentions to attend graduate school and values (Battle & Wigfield, 2003).

**Demographic questionnaire.** A demographic questionnaire inquired regarding the age, race, gender, sexual orientation, relationship status, and career plans of the participants.

## Results

The means, standard deviations, ranges, and reliability estimates for the scales and their correlations can be found in Table 1. Exploratory factor analysis using principal axis factoring extraction and oblique rotation in SPSS 18.0 was conducted on the basis of best practice guidelines (Fabrigar, Wegener, MacCallum, & Strahan, 1999). The Kaiser-Meyer-Olkin value of .94 and the Bartlett's test of sphericity approximate  $\chi^2(1326) = 10,418.816$ ,  $p < .001$  suggested that the data were factorable. Theoretical consistency, interpretability, and parallel analysis were considered to determine the number of factors to retain and interpret (Fabrigar et al., 1999).

Table 1  
Means, Standard Deviations, Actual and Possible Ranges, Internal Consistency Estimates, and Bivariate Correlations

Measures	1	2	3	4
1. PLAN: Considering Children	1	.49*	.88*	-.51*
2. PLAN: Prioritizing and Compromising Partner	.57*	1	.84*	-.39*
3. PLAN: Total Scale	.90*	.87*	1	-.52*
4. Career Orientation	.42*	.36*	-.44*	1
Study 1				
<i>M</i>	30.30	29.96	60.26	63.67
<i>SD</i>	6.59	5.76	10.66	9.39
Actual range	12-48	13-46	28-91	26-80
Possible range	12-48	12-48	24-96	16-80
$\alpha$	.91	.89	.92	.89
Study 2				
<i>M</i>	31.68	30.96	62.64	61.92
<i>SD</i>	6.85	6.12	11.51	9.21
Actual range	12-48	12-48	24-96	33-80
Possible range	12-48	12-48	24-96	16-80
$\alpha$	.89	.86	.91	.87

Note. Results for Study 1 appear above the diagonal; results for Study 2 appear below the diagonal.

\*  $p < .01$ .

Although parallel analysis with 1,000 randomly generated data sets identified eight factors for retention, solutions ranging from two to eight factors were analyzed to examine the factor structure. We sought to include items that had strong loadings ( $\lambda > .50$ ) to increase the variance accounted for in PLAN items by latent factors and those that did not load ( $\lambda \geq .30$ ) on more than one factor to increase measurement clarity. The eight-factor solution was problematic (e.g., 32 items failed to load at the specified .50 cutoff, and three factors failed to meet the commonly accepted minimum requirement of three items per factor; Tabachnick & Fidell, 2007). Similar to the eight-factor solution, three-, four-, five-, six-, and seven-factor solutions had numerous items that failed to load at the specified .50 cutoff and factors comprised of one or two items.

The initial theory-consistent two-factor solution accounted for approximately 38% of the variance in PLAN items. The two-factor solution had 20 items that failed to load at the .50 level and were therefore eliminated sequentially, starting with the lowest loading until every factor loading met the .50 cutoff; the resulting solution consisted of 18 items on Factor 1 and 12 items on Factor 2. Next, to optimize scale length (e.g., reduce number of items to decrease participant burden), we eliminated six items from Factor 1 sequentially, starting with the lowest loading. The final 24-item two-factor solution accounted for approximately 49% of the variance in PLAN items (with Factor 1 accounting for approximately 37%), and the mean communality value was .43 ( $SD = .09$ ; min = .25; max = .57). The first factor was titled the PLAN: Considering Children subscale, and the second factor was labeled the PLAN: Prioritizing and Compromising for Partner subscale (see Table 2).

There was a moderate relationship between observed scores on the factors (see Table 1). As hypothesized, both subscales related moderately and negatively to attitudes toward career orientation. On average, participants scored in the moderate range on the PLAN subscales and exhibited moderate levels of attitudes toward career orientation.

## Study 2: Additional Exploration of the PLAN Factors and Psychometric Properties

The previous study was replicated with an additional independent sample of college women. In addition to testing the hypothesized two-factor measurement model (i.e., PLAN: Considering Children and PLAN: Prioritizing and Compromising for Partner), we tested competing one-factor and bifactor models to investigate alternative hypotheses regarding PLAN factor structure. The one-factor model assumed that variance in PLAN items was accounted for by one underlying latent factor, whereas the bifactor model posited a general factor assessing consideration of future family when making career plans that accounted for variance in all PLAN items and domain-specific factors that accounted for variance in considering children and prioritizing and compromising for partner items, respectively. We identified these competing models after observing Study 1 findings that 37% of the 49% of the variance in PLAN items was accounted for by the first factor (Chen, West, & Sousa, 2006). In addition, we felt that it was possible that PLAN items reflected a general consideration of future family when making career plans that was not specific to children or partner. Regarding construct validity, we hypothesized that the PLAN

factors would be associated negatively with attitudes toward career orientation.

## Method

**Procedure.** At a large mid-Atlantic university, instructors of psychology and education courses were asked to invite their students to participate in this study. The data were collected 3 years apart, making overlap with participants in Study 1 extremely unlikely. Students enrolled in Psychology 100 courses were informed about the study through listings of research projects. In addition to collecting data through courses, research assistants e-mailed and met with sorority and women's club members to request participation. All participants had the opportunity to enter a lottery to win one of six \$50 awards, and some were given course credit for participation. Counterbalanced measures were completed in small groups.

**Participants.** Three hundred seventy-one surveys were distributed, and 340 were completed. Fifteen surveys were not included (nine had more than 10% missing data, four had the same response to all items, two were completed by men), resulting in a sample of 325 college women. Missing values were imputed using the same imputation approach as Study 1.

The participants ranged in age from 17 to 30 years old ( $M = 19$ ,  $SD = 1.40$ ) and had a mean GPA of 3.35 ( $SD = .44$ ). Data were collected from sororities (38.2%), the Psychology 100 subject pool and Psychology courses (36.9%), and University 100 courses (14.5%), with the remaining 10.4% obtained from student groups. Participants were White (65.8%), Asian/Asian American (13.8%), African American (8.6%), Hispanic/Latina (4.6%), biracial/multi-racial (1.8%), Indian (1.5%), and "other" (2.7%); 0.9% did not report race. Participants were mostly single (83.4%), heterosexual (95.4%), and planned to have children (90.8%).

Regarding class levels, 22.8% were first-year students, 27.4% sophomores, 31.1% juniors, and 17.2% seniors (1.5% did not report). Almost all of the participants had chosen a major (90.8%), 8.9% had not, and 0.3% did not specify. A total of 117 majors and combination of majors were listed for those who decided, with the top five being psychology (12.9%), communications (5.2%), psychology/criminal justice (3.7%), hearing and speech science (3.4%), and neurobiology/psychology (3.1%). Participants listed 41 different degree plans; the top were master of science/master of arts (37%), undergraduate only (15.1%), doctorate (8.6%), and medical degree (6.5%). More than half the participants had chosen a career (56.3%), 42.5% indicated they had not, and 1.2% did not respond. The participants who had chosen a career listed 105 careers, with the top being lawyer (3.4%), teacher (3.1%), medical doctor (2.8%), speech/language pathologist (2.8%), and physical therapist (2.5%).

**Measures.** Descriptions of the measures (i.e., PLAN, Family and Career Scale, and demographic questionnaire) are provided previously in the Method section for Study 1.

## Results

The means, standard deviations, ranges reliability estimates, and correlations among the observed scores can be found in Table 1. On average, participants scored in the moderate range on the PLAN subscales and had moderate levels of attitudes toward women's career orientation.



Table 2  
Final Items Retained on the PLAN Scale for Study 1 and Study 2

PLAN item	Study 1		Study 2		
	EFA factor loadings		CFA factor loadings		
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 3
<b>FACTOR 1: PLAN: Considering Children Scale</b>					
8. Any career that I will select must enable me to be home when my children come home from school.	.780	-.132	.364	.611	
11. I will have a career with flexible hours so that I can be home for the children I plan to have.	.754	-.044	.332	.626	
22. Having quality time for raising children will be the most important consideration in my career choice.	.704	.059	.534	.534	
14. I will select a career that can be put on hold when my children are young.	.702	.005	.522	.526	
10. 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.	.677	-.051	.401	.562	
13. When planning for my career, I will think about how much energy I will have for my children.	.657	.166	.586	.489	
24. Future parenting responsibilities will be an important factor in making my career plans.	.653	.217	.639	.461	
18. My future career will allow me to have time off in the summer so I can be with my children.	.615	-.111	.251	.489	
16. I will select a career that allows me to slow down after I have children.	.603	.170	.507	.477	
20. I will not plan my career around future parenting responsibilities.*	.601	.228	.615	.247	
1. I will find a career where I do not have to work full-time after I have children.	.591	-.015	.378	.611	
12. When choosing a career, I will think about whether the work load will hinder my ability to care for my children.	.583	.137	.530	.413	
<b>FACTOR 2: PLAN: Prioritizing and Compromising for Partner Scale</b>					
23. Any relationship that I am in will need to realize that my career plans come first.*	-.045	.764	.722		.364
15. I will make my career plans independently of what my partner might need.*	.059	.699	.576		.427
9. I will give up some of my career goals for my relationship.	.023	.692	.716		-.085, <i>ns</i>
21. I will never change my career plans for a relationship.*	-.025	.653	.579		.289
7. I will take a job that I find less satisfying if it means having more time for my partner.	-.132	.643	.748		-.414
5. When selecting a career, I will take a lesser paying job if it means I am able to prioritize my relationship.	.099	.624	.797		-.289
2. Taking a less demanding job to have more energy for my partner will not be an option.*	-.027	.600	.620		.180
3. My career choice will be based on my goals, not on my ability to balance work and love.*	.092	.579	.623		.311
17. The wishes of my partner will not figure into my career plans.*	.020	.570	.328		.483
19. Having a fulfilling career will be very important to me, even at the expense of future responsibilities to my partner.*	.143	.557	.498		.275
6. When selecting a career, I will consider the needs of my partner.	.076	.539	.665		-.011, <i>ns</i>
4. Having a satisfying relationship is not as important as picking a career I love.*	-.008	.523	.525		.285

*Note.* Asterisks represent items that are reverse scored. For administration of this measure, items are numbered in the order that they should be presented. For scoring, reverse score items with asterisks. For the total score, sum scores on all items. For the subscale scores, sum scores of items on each subscale. To obtain mean item ratings on the subscales, divide the sum by the number of items on each subscale. Researchers and therapists have permission to use this measure at no cost. *ns* = factor loading *p* value > .05. Study 1 Factor 1 = Considering Children; Study 1 Factor 2 = Prioritizing and Compromising for Partner; Study 2 (General) Factor 1 = Considering Future Family When Making Career Plans; Study 2 (Domain-specific) Factor 2 = Considering Children; Study 2 (Domain-specific) Factor 3 = Prioritizing and Compromising for Partner. EFA = exploratory factor analysis; CFA = confirmatory factor analysis.

We conducted a confirmatory factor analysis to examine the 24-item two-factor model of the PLAN. Because the PLAN uses an ordinal rating scale, we analyzed polychoric correlations and asymptotic covariance matrices in LISREL 8.54 (Jöreskog & Sörbom, 2001) using robust diagonally weighted least squares estimation procedures (Flora & Curran, 2004). The root-mean-square error of approximation (RMSEA), standardized root-mean-square

residual (SRMR), and comparative fit index (CFI) were selected a priori to assess model fit. Using a single-index strategy (Hu & Bentler, 1999), SRMR values less than or equal to .09, RMSEA values less than .10, and CFI values greater than or equal to .90 would be considered indicative of adequate model fit (Hu & Bentler, 1999). As an alternative to the single-index strategy, Hu and Bentler (1999) suggested a robust two-index “combination

rule” for assessing model fit. They suggested a CFI cutoff value close to .95 in combination with an SRMR cutoff value close to .09 for evaluating model fit. Both the single- and two-index approaches were used to evaluate model fit.

The 24-item two-factor PLAN model exhibited adequate to good model fit, Satorra–Bentler (SB)  $\chi^2(251, N = 325) = 837.375, p < .05, CFI = .979, SRMR = .084, \text{ and } RMSEA = .084 (.078; .091)$ . All of the factor loadings, factor covariance, and uniqueness terms were significant (see Table 2). The relationship between the two factors was .57. To rule out rival hypotheses regarding the PLAN factor structure, we also tested two theoretically derived competing models. First, we tested a one-factor

model, which assumed that only one underlying factor accounted for variance in the 24 PLAN items. In addition, we tested a bifactor model (Chen et al., 2006), which assumed one general factor that accounted for variance in all PLAN items and two domain-specific factors that accounted for variance in subsets of PLAN items (see Figure 1). The 24-item one-factor PLAN model exhibited mixed results regarding model fit, SB  $\chi^2(252, N = 325) = 1283.867, p < .05, CFI = .952, SRMR = .108, \text{ and } RMSEA = .112 (.106; .119)$ . Although the CFI suggested good fit, the SRMR and RMSEA values were indicative of model misspecification. All factor loadings and uniqueness terms were significant, and the standardized factor loadings ranged from .31 to .77.

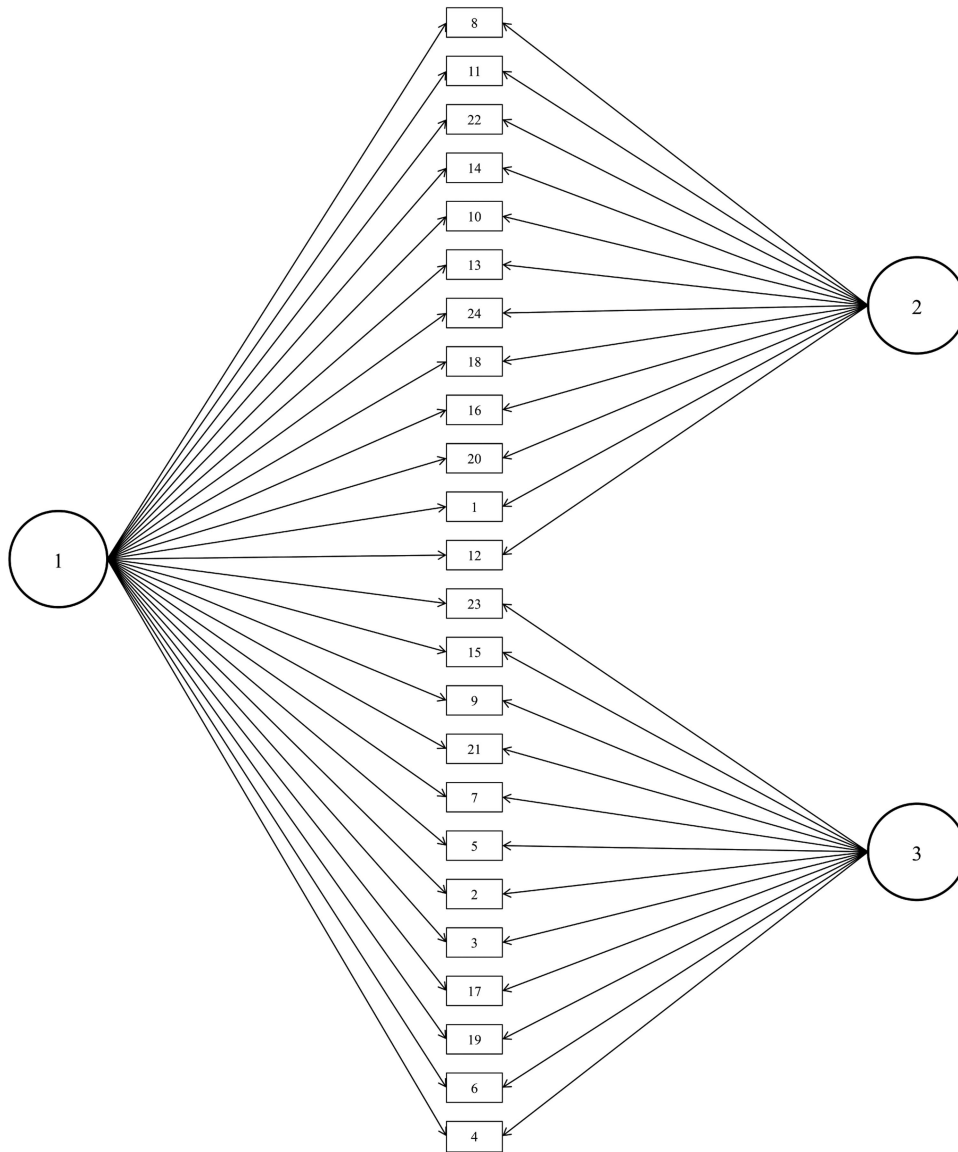


Figure 1. The PLAN bifactor conceptual model. 1 = Planning for Career and Family general factor; 2 = Planning for Children domain-specific factor; 3 = Planning for Partner domain-specific factor. The bifactor model suggests that PLAN items all share common variance (Planning for Career and Family) and that subsets of items share common variance (Planning for Children or Planning for Partner) that is unique to the general factor.

The 24-item bifactor PLAN model exhibited good model fit,  $SB \chi^2(228, N = 325) = 545.683, p < .05$ , CFI = .993, SRMR = .057, and RMSEA = .065 (.058; .072). All factor loadings for the general factor and all but two domain-specific factor loadings were significant (see Table 2); one uniqueness term was nonsignificant. Likelihood ratio testing with the scaled chi-square difference test ( $T_d$ ; Satorra & Bentler, 2001) indicated that the bifactor model exhibited a statistically significant improvement in model fit compared with the two-factor model,  $T_d(23) = 291.601, p < .0001$ , and the one-factor model,  $T_d(24) = 1305.051, p < .0001$ .

To examine the utility of the domain-specific PLAN factors in the bifactor model, we tested whether these factors predicted attitudes toward career orientation beyond the general Considering Future Family factor. Planning for Children accounted for additional variance ( $\gamma = -.35, < .05$ ) above and beyond the general factor ( $\gamma = -.38, < .05$ ). However, Prioritizing and Compromising for Partner did not predict attitudes toward career orientation ( $\gamma = -.09, > .05$ ) above and beyond the general factor ( $\gamma = -.49, < .05$ ). This finding highlights the differential validity of the domain-specific factors in predicting attitudes toward career orientation.

### General Discussion

This study contributes to our field by providing support for a reliable and valid measure of considering future children and partner when planning for careers. The bifactor model exhibited superior model fit compared with one- and two-factor models. This structure suggested that the PLAN items represent general consideration of family when planning for career as well as two domain-specific factors focused on considering future children and willingness to prioritize and compromise for a future partner.

Interestingly, the domain-specific factors in the second study demonstrated differential relationships to attitudes toward career orientation such that the Considering Children factor predicted career orientation above and beyond the general Considering Future Family When Making Career Plans factor, whereas the Prioritizing and Compromising for Partner factor did not. In both studies, the observed scale correlations were in the expected directions, with willingness to consider children and partner in career planning being negatively related to positive attitudes regarding women being career oriented when they have families. However, when the variance associated with the general consideration of future family factor was removed from consideration in the second study, only the Considering Children subscale was inversely related to attitudes toward career orientation. This is not surprising, as the items on the Attitudes Toward Career Orientation scale largely focus on perceptions regarding managing career and motherhood (e.g., "I think that a working mother sets a good example for children" and "I think that families are better off when mothers stay home"). The Prioritizing and Compromising for Partner subscale seemed to provide a unique contribution to the literature as it taps variance not associated with either the general consideration of future family factor or the consideration of children factor.

On average, participants scored in the moderate range on the observed scores on the PLAN scales, indicating that they fell between agree and disagree on most items. It is salient to note that many of the PLAN items reflect a willingness to not only consider but also actually compromise one's career choices to prioritize

future children's needs and partner's career (e.g., "Any career that I will select must enable me to be home when my children come home from school" and "I will give up some of my career goals for my relationship." Young women are endorsing these items prior to having committed relationships and children. Many college students may not yet be certain about the role of future family in their career choice, as they have been described as inhabiting a new development stage, "emerging adulthood," where they postpone committed relationships and parenthood to explore love and work possibilities (Arnett, 2000). The degree to which scores on the PLAN would change over time (in direction and magnitude) as family becomes a reality is of great interest as is the degree to which consideration of future family contributes to the circumscription of career choice among young women.

Although strengths of our study were the diversity in our samples (consistent with the student body at the university where data were collected) and the collection of data across all 4 years in college, the participants were mostly White heterosexual college women, thus generalizability is limited. Knowledge of the representativeness of the sample is limited due to our inability to calculate return rates for the first study. Moreover, planning for career and family would be expected to differ among individuals across time in varied developmental stages beyond those associated with the college years.

In addition, the PLAN may not adequately represent the entire domain associated with compromising career for family, as we operationalized the construct as consisting of two dimensions and then measured these two dimensions. Additional items could have assessed the degree to which women plan to earn enough money to afford to pay for childcare, enlist family members in caring for the children, or select a career that facilitates work-family management.

### Future Research

Prior to use, the PLAN must be administered to additional and more diverse samples, including men, to assess the stability of the factor structure and the psychometric properties of the measure. Also, a longitudinal study that administers the PLAN scales over time beginning with high school students and ending after the participants are established in careers and in committed relationships would provide information regarding the process by which consideration of future family influences career choice and success at work and in relationships. Future research also should examine the differential predictive utility of the general and domain-specific factors with other relevant career outcomes.

Furthermore, consideration of future family, although hypothesized to be a salient factor in the circumscription of women into low-paid, low-status occupations, has not been empirically investigated. Administration of the PLAN scale would enable researchers to determine whether considering future family is contributing to the concentration of women in female-dominated occupations. Researchers could attempt to differentiate the degree to which women are independently choosing to consider future family in career decisions versus being influenced by gender role stereotypes and societal constructions of motherhood and romantic relationships.



## Counseling Implications

After further validation, this instrument has excellent potential for use with individuals, couples, and groups in a wide variety of settings. Given that the educational and career plans of young women in college often are influenced by their anticipated role of being a parent (Marks & Houston, 2002; O'Brien et al., 2000), psychologists in counseling centers could use the scale to help young women make informed career decisions. If psychologists hypothesized that clients were choosing careers because they wanted to have a family, the PLAN scale could be administered to better understand the extent to which the client was considering future family responsibilities when making career choices. Students who are limiting their career options due to future family responsibilities might be encouraged to examine a wide range of careers that allow for flexibility and management of multiple roles. In conjunction with other measures, this scale could help counselors and clients explore careers that clients might not have considered.

Counseling psychologists also may use the PLAN when working with college-age couples who are planning dual-career relationships. The measure also could be administered to individuals involved in premarital programs to illuminate the ways in which one or both partners may be limiting career options. Alternatively, interventions may address partners who have no intentions of considering future family responsibilities when planning for their careers.

Finally, the PLAN could be administered in college classes to aid in understanding the degree to which students are limiting their career choices due to planning for children and partner. Discussion regarding this process and identifying careers that are amenable to family (beyond those commonly pursued) could expand career directions for young women.

To conclude, the serious problem of women "leaving before they leave" (Sandberg, 2010) needs to be a focus of research and intervention. This study provided support for an instrument that assesses the degree to which individuals consider future children and partners when making career plans. Counseling psychologists in research and practice may use this scale to identify the degree to which planning for future family plays a role in career choice and to confront perceptions that only a few careers allow for engagement in multiple roles. It is our hope that use of the PLAN scale will contribute to broadening the vocational, relational, and familial dreams of young women.

## References

- Abele, A. E. (2000). A dual impact model of gender on career related processes—And the reciprocal impact of career on gender. In T. Eckes & H. M. Trautner (Eds.), *The developmental social psychology of gender* (pp. 361–388). Mahwah, NJ: Lawrence Erlbaum.
- Abele, A. E., & Spurk, D. (2011). The dual impact of gender and the influence of timing of parenthood on men's and women's career development: Longitudinal findings. *International Journal of Behavioral Development, 35*, 225–232. doi:10.1177/0165025411398181
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist, 55*, 469–480. doi:10.1037/0003-066X.55.5.469
- Askari, S. F., Liss, M., Erchull, M. J., Staebell, S. E., & Axelson, S. J. (2010). Men want equality, but women don't expect it: Young adults' expectations for participation in household and child care chores. *Psychology of Women Quarterly, 34*, 243–252. doi:10.1111/j.1471-6402.2010.01565.x
- Battle, A., & Wigfield, A. (2003). College women's value orientations toward family, career, and graduate school. *Journal of Vocational Behavior, 62*, 56–75. doi:10.1016/S0001-8791(02)00037-4
- Betz, N. (2006). Basic issues and concepts in the career development and counseling of women. In W. B. Walsh & S. H. Osipow (Eds.), *Handbook of career counseling for women* (pp. 45–74). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Betz, N. E. (2008). Women's career development. In F. L. Denmark & M. A. Paludi (Eds.), *Psychology of women: A handbook of issues and theories* (2nd ed., pp. 717–752). Westport, CT: Praeger Publishers/Greenwood Publishing Group.
- Chen, F. F., West, S. G., & Sousa, K. H. (2006). A comparison of bifactor and second-order models of quality of life. *Multivariate Behavioral Research, 41*, 189–225. doi:10.1207/s15327906mbr4102\_5
- Cotter, D. A., Hermsen, J. M., & Vanneman, R. (2012). *Still stalled? Occupational gender desegregation 1950–2010*. Paper presented at the Annual Convention of the American Sociological Association, Denver, CO.
- Demirtas, H., Amatya, A., Pugach, O., Cursio, J., Shi, F., Morton, D., & Doganay, B. (2009). Accuracy versus convenience: A simulation-based comparison of two continuous imputation models for incomplete ordinal longitudinal clinical trials data. *Statistics and Its Interface, 2*, 449–456.
- Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. (2005). Work and family research in IO/OB: Content analysis and review of the literature (1980–2002). *Journal of Vocational Behavior, 66*, 124–197. doi:10.1016/j.jvb.2003.11.003
- Eccles, J. (2009). Who am I and what am I going to do with my life? Personal and collective identities as motivators of action. *Educational Psychologist, 44*, 78–89. doi:10.1080/00461520902832368
- Eccles, J. (2011). Gendered educational and occupational choices: Applying the Eccles et al. model of achievement-related choices. *International Journal of Behavioral Development, 35*, 195–201. doi:10.1177/0165025411398185
- Eccles [Parsons], J., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J. L., & Midgley, C. (1983). Expectations, values and academic behaviors. In J. T. Spence (Ed.), *Perspective on achievement and achievement motivation* (pp. 75–146). San Francisco, CA: W. H. Freeman.
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods, 4*, 272–299. doi:10.1037/1082-989X.4.3.272
- Flora, D. B., & Curran, P. J. (2004). An empirical evaluation of alternative methods of estimation for confirmatory factor analysis with ordinal data. *Psychological Methods, 9*, 466–491. doi:10.1037/1082-989X.9.4.466
- Frome, P. M., Alfeld, C. J., Eccles, J. S., & Barber, B. L. (2006). Why don't they want a male dominated job? An investigation of young women who changed their occupational aspirations. *Educational Research and Evaluation, 12*, 359–372. doi:10.1080/13803610600765786
- Gottfredson, L. S. (1981). Circumscription and compromise: A developmental theory of occupational aspirations. *Journal of Counseling Psychology, 28*, 545–579. doi:10.1037/0022-0167.28.6.545
- Gottfredson, L. S. (2005). Applying Gottfredson's theory of circumscription and compromise in career guidance and counseling. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 71–100). Hoboken, NJ: Wiley.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55. doi:10.1080/10705519909540118
- Jöreskog, K., & Sörbom, D. (2001). *LISREL 8: User's reference guide*. Lincolnwood, IL: Scientific Software International.

- Marks, G., & Houston, D. M. (2002). The determinants of young women's intentions about education, career development and family life. *Journal of Education and Work, 15*, 321–336. doi:10.1080/1363908022000012085
- O'Brien, K. M., Friedman, S. M., Tipton, L. C., & Linn, S. G. (2000). Attachment, separation, and women's vocational development: A longitudinal analysis. *Journal of Counseling Psychology, 47*, 301–315. doi:10.1037/0022-0167.47.3.301
- Sandberg, S. (2010, December). Why we have too few women leaders. *Ted Talk*. Retrieved from [http://www.ted.com/talks/sheryl\\_sandberg\\_why\\_we\\_have\\_too\\_few\\_women\\_leaders.html](http://www.ted.com/talks/sheryl_sandberg_why_we_have_too_few_women_leaders.html)
- Satorra, A., & Bentler, P. M. (2001). A scaled difference chi-square test statistic for moment structure analysis. *Psychometrika, 66*, 507–514. doi:10.1007/BF02296192
- Sayer, L. C., & Fine, L. (2011). Racial-ethnic differences in U.S. married women's and men's housework. *Social Indicators Research, 101*, 259–265. doi:10.1007/s11205-010-9645-0
- Schlomer, G. L., Bauman, S., & Card, N. A. (2010). Best practices for missing data management in counseling psychology. *Journal of Counseling Psychology, 57*, 1–10. doi:10.1037/a0018082
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Allyn & Bacon.
- Walsh, W. B., & Heppner, M. J. (Eds.). (2006). *Handbook of career counseling for women* (2nd ed.). Hillsdale, NJ: Erlbaum.

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