

A Comparison of Responses on the Attitudes Toward Women Scale and Attitudes Toward Feminism Scale: Is There a Difference Between College-Age and Later-Life Adults With the Original Norms?

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Abstract

Responses from college-age students and those 50 years and older were compared using the Attitudes Toward Women Scale and the Attitudes Toward Feminism Scale. Results from a multigroup confirmatory factor analysis showed groups differed on each scale, suggesting unidimensional scales no longer represent attitudes toward women or feminism.

Keywords

Attitudes Toward Feminism Scale (FEM), Attitudes Toward Women Scale (AWS), multigroup analyses, college age, later life

Although political and social progress for women has been on the rise for decades, present-day discussions about feminism and attitudes toward women exploded when a woman emerged as a presidential front-runner and another as a nominee for vice president in the 2008 U.S. presidential election. The 1970s witnessed a surge of discussions about feminism, and accordingly, measures of attitudes toward women were in high demand (Thistle, 2006). In response, researchers developed two of the most widely used scales to assess attitudes toward women, their roles in society, the feminist movement, and feminist ideology.

In 1972, the Attitudes Toward Women Scale (AWS; Spence & Helmreich, 1972) was designed to measure attitudes toward women's rights, roles, privileges, and responsibilities within society. A few years later, the Attitudes

Toward Feminism Scale (FEM; E. R. Smith, Ferree, & Miller, 1975) was created, focusing on perceptions of prejudice, sexism, and authoritarian attitudes toward women. Although numerous measures of feminist attitudes have been introduced in more recent history (e.g., Liberal Feminist Attitude and Ideology Scale; Morgan, 1996), the AWS was described as one of the most commonly used measures of gender-related attitudes toward women (McHugh & Frieze, 1997; Spence & Hahn, 1997). The AWS and FEM continue to enjoy

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great popularity and ongoing use (Peterson & Zurbriggen, 2010), with little suggestion of decreased use in the future.

However, the continued use of the AWS and FEM is not without criticism. For example, although the longevity of the AWS and FEM encouraged the tracking of societal changes in attitudes toward women over the decades (McHugh & Frieze, 1997; Spence & Hahn, 1997; Twenge, 1997), conclusions from such research may not be accurate. Specifically, older individuals typically hold more traditional attitudes than younger respondents (Dambrot, Papp, & Whitmore, 1984; Daughtry & Dambrot, 1986), yet research with the AWS and FEM to date has failed to examine the perceptions of older adults separate from younger adults.

In addition, the measures themselves warrant review given the vast number of social changes over the past 40 years. For example, in the United States the increase of women in the workplace (Bianchi & Spain, 1996; Cohen & Bianchi, 1999), as well as the proportion of women in managerial roles (Powell, 2001), attests to society's changing gender roles and stereotypes, no doubt affecting attitudes toward gender roles (Looney, Kurpius, & Lucart, 2004). However, the items included on the ASW and FEM remain the same as they were in the 1970s.

Questions arise, therefore, about whether the scales accurately reflect perceptions of current issues for women and their efforts to achieve equality, including issues such as abortion, sexual assault, and comparable pay (Bailey, 1993; Loo & Thorpe, 1998; McHugh & Frieze, 1997).

Additionally, concerns exist regarding the validity of the use of the measures beyond college age samples. That is, like many other psychological measures, the AWS and FEM were originally normed and most often used with samples of college students (e.g., Collins, 1974; McKinney, 1987; E. R. Smith et al., 1975; R. L. Smith & Bradley, 1980; Swim & Cohen, 1997). Hence, interpreting the scores from the measures on samples other than college-age respondents is questionable. Although the AWS has been used to measure older adults' attitudes toward women's rights

and roles, reliability scores for this population have remained virtually unexplored (Dambrot et al., 1984; Daughtry & Dambrot, 1986). Likewise for the FEM, reliability estimates with older populations are scarce, as studies have tended to assess college students (Fassinger, 1994; E. R. Smith et al., 1975).

In bridging across concerns of respondents' ages and the current views of society, another critique of the AWS and FEM arises due to the possibility of change in perceptions of the members of the cohort group with which these instruments were originally normed. Birth cohort or generational cohort can be thought of as the aggregate of persons born in the same time interval (Ryder, 1965), with the rationale that attitudes are shaped in youth and remain stable after a certain age. Thus, a cohort is a birth-year defined group "socialized into certain abilities, beliefs, attitudes . . ." that distinguishes them from other age groups (Laidlaw & Knight, 2008, p. 61). Because historical forces and social norms of the times are influential, the cohort group provides a framework for variations in education, nuances in word meanings, and usages, values, social norms, and role expectations (Laidlaw & Knight, 2008).

Cohort differences can be understood by considering the cohort's normative role expectations and life trajectories, with the specific historical period as a significant background. Based on the premise that attitudes are meshed with historical events occurring during the time in which one grows up, cohort differences have been identified in beliefs of activists (Duncan & Stewart, 2000), as well on the identification of major events in the advancement of women (Zucker & Stewart, 2007). Thus, one can logically conclude that older adults (specifically, those who were of college age in the 1970s) most likely have attitudes toward women's rights and roles that are consistent with those originally used for developing the AWS and FEM. In contrast, attitudes of today's college-age individuals may be very different given social circumstances during their lifetime. In fact, the scale items may not capture the issues that today's young adults face, which were not visible issues of the early 1970s.

Another concern exists regarding the overall structure of these instruments. That is, other than the original construction, no additional studies examining the factorial structure of the AWS and FEM have been reported. Given the concerns identified above, as well as the need to reassess construct evidence of the AWS and FEM for use with cross-sectional data, we explored the conceptualization of present-day attitudes toward women and feminism in both college-age and later-life adult samples as captured in the AWS and FEM.

Developing Hypotheses

Using current literature to derive specific hypotheses for comparing college-age adults' responses with later-life adults' responses on the AWS and FEM, we encountered a well-known identification problem. That is, the relationship between age, period, and cohort results in the variables being intertwined (Yang & Land, 2006) such that isolating the effects of any one variable is extremely difficult. Thus, we struggled to pinpoint what would best explain possible differences in construct conceptualization (i.e., attitudes toward feminism or women's rights) should they exist, such as birth groups (cohort effects), age-related changes in the views of each cohort (developmental or age effects), or societal changes that alter the views of all cohorts simultaneously (period effects). Differing expectations of results can be hypothesized based on which viewpoint or aspect of the literature one chooses to use or ignore. We offer three different competing hypotheses based on each of the identification problems: age, period, and cohort.

Competing Hypothesis 1: Age Effects

Age effects refer to the variation in responses across different age groups, resulting from physiological, developmental, or social changes that are specific to that particular age. For example, researchers have long debated whether attitudes change over time, suggesting that levels of susceptibility may be particular to a certain age group (Wang & Chen, 2006).

Given that the AWS and FEM were originally constructed using college students (E. R. Smith et al., 1975; R. L. Smith & Bradley, 1980; Spence, Helmreich, & Stapp, 1973), based on age effects we could assume that today's college-aged respondents (e.g., 17 to 26 years of age) would conceptualize attitudes toward women's rights and roles similarly to the participants in the original development of the AWS and FEM. That is, both groups were surveyed in their late teens or early 20s.

Original references to the AWS and FEM indicated that the authors determined them to be unidimensional scales (E. R. Smith et al., 1975; Spence et al., 1973). Therefore, we can expect that today's college-age students will also conceptualize attitudes toward women's rights and roles as a unidimensional construct. When turning to consider the later-life adult population, no studies to date have reported an estimation of conceptualization of construct using older adults. Thus, it is unclear how later-life adults will respond to the AWS and FEM as a result of age effects.

Competing Hypothesis 2: Period Effects

Period effects refer to the variation in responses that result from changes in social, cultural, or political environment over time that affect all age groups equally (Miller & Nakamura, 1997). Thus, turning to focus on the extent of change in economic factors, family structure, political landscape, and in the area of women rights over the past 40 years, one can anticipate that women of any age or cohort might conceptualize the construct differently than that originally identified during the AWS and FEM construction. For example, Axinn and Thornton (2000) noted significant changes in relationships with authority figures, as well as the structure of marriage, that had an impact on attitudes toward women's rights. As a result, traditional gender roles shifted over time (Lease, 2003), and men and women both place different values on work and family roles (Gordon & Whelan-Berry, 2005). In addition, the percentage of dual career households

has increased, as has the percentage of women who are the primary breadwinners (Perrone, Wright, & Jackson, 2009).

Such significant changes could render the conceptualization of the construct of attitudes toward feminism different from when it was originally modeled in the FEM and AWS, such that items from the original scales may no longer be endorsed by either college-age or later-life adult cohort groups. Thus, based on period effects, one could argue that the current conceptualization of attitudes toward women's rights and roles reflects the complexity of life today, with neither the college-age nor the later-life adults endorsing a single, unidimensional conceptualization of attitudes toward women's rights and roles. That is, a multidimensional conceptualization may better capture the attitudes of rights and roles in flux.

Competing Hypothesis 3: Cohort Effects

Finally, in contrast to both perspectives above, using a line of reasoning based on cohort effects one might expect later-life adults to hold similar attitudes as those originally reported in the AWS and FEM, thus representing a unidimensional conceptualization. Given that today's later-life adults would have been college students during the AWS and FEM scales construction studies, their responses should represent the same conceptualization of the construct as the original college-age sample from 1972. That is, those currently 50 years and older (the minimum age that the youngest of the original participants would be today) may continue to embrace their values and role identity within the context of the period of their upbringing.

In contrast, college-age samples today should report a conceptualization reflective of their times, as these young adults were born after the initial Women's Movement. From their perspective, women have always enjoyed equality, economic and sexual freedom, and flexible role identities (Gerrard, 1987; Twenge & Campbell, 2010). Thus, later-life adults would be expected to report a similar

conceptualization to the original samples on the AWS and FEM, and college-age respondents may or may not report the same.

Study's Main Hypotheses

The literature, as well as logical reasoning, suggests that the age effects, period effects, and cohort effects, all play important roles in shaping attitudes toward women and feminism. By embracing the literature, as noted above, there is no clear prediction as to whether the AWS and FEM adequately capture today's college-age respondents or later-life adults' attitudes toward women and feminism. Based on the arguments presented above, we offer three competing hypotheses as to how college-age versus later-life adults may respond to the AWS and FEM:

Hypothesis 1: College-age and later-life respondents will respond similar to each other and indicate that the AWS and FEM are unidimensional scales.

Hypothesis 2a: College-age respondents will indicate that the AWS and FEM are multidimensional scales.

Hypothesis 2b: Later-life adults will indicate that the AWS and FEM are multidimensional scales.

Method

Participants

Participants in the college-age group included 374 college students ranging in age from 17 to 26 years ($M = 19.02$, $SD = 1.36$). Of the college-age group, 64% were females ($N = 238$) and 36% were males ($N = 136$); 86.1% identified as White/non-Hispanic, 5.6% as Hispanic American, 3.2% Multiracial or Other, 2.9% Asian American, 1.1% African American, and 0.8% Native American. Most students (98%, $N = 367$) reported having some college education but no degree yet as their highest level of completed education. Of the

remaining seven students, one reported having an associate degree, five reported having completed a 4-year degree, and one chose not to disclose educational level.

Participants in the later-life age group included 327 adults, ranging in age from 50 to 87 years, with a mean age of 64.3 years ($SD = 10.33$). Overall, 73% of the sample were women ($N = 240$) and 27% were males ($N = 87$), and 89% of the participants identified as White/non-Hispanic, 5.2% Hispanic/Mexican American, 1.8% African American, 1.8% Multiracial, 1.2% Native American, and 0.6% identified as Asian American. In total, 22% ($N = 72$) of later-life participants reported having high school or middle school education as their highest level of completed education, 21% ($N = 69$) reported some college education but no degree, and 42% ($N = 137$) reported having completed a college degree or higher.

Measures

Attitudes Toward Women Scale. The AWS consists of 25 items that use a 7-point Likert-type response scale ranging from 1 = *strongly disagree* to 7 = *strongly agree* (Spence et al., 1973). Low scores indicate an endorsement of feminine sex-role stereotypes (e.g., sensitive, affectionate), whereas high scores indicate an endorsement of masculine sex-role stereotypes (e.g., assertive, rational). The Cronbach alpha reliability coefficients obtained in this study for the college-age and later-life groups were .87 and .89, respectively.

Attitudes Toward Feminism Scale. The FEM consists of 20 items using a 7-point Likert-type response scale ranging from 1 = *strongly disagree* to 7 = *strongly agree* (E. R. Smith et al., 1975). Lower scores indicate liberal, feminist attitudes, whereas high scores indicate conservatism and antifeminist attitudes. The Cronbach alpha reliability scores obtained in this study were .87 for the college-age sample and .75 for the later-life sample.

Demographic information. Participants responded to questions about their age, gender, ethnicity, and highest education level.

Procedure

The current study was part of a larger one examining attitudes toward women, religiosity, and political affiliation. Participants were students (college-age group) at a Midwestern university in the United States who completed the instruments to earn credit for an undergraduate psychology course. The students received additional credit for the return of an older adult's survey. Of the 374 students who originally participated in the study, 327 (87%) provided surveys that were completed by an adult 50 years and older (later-life adult-age group). It should be noted that age 50 was chosen as the cutoff for the older adult group as this represents the minimum age of those today who would have been appropriate to complete either the AWS or FEM when these instruments were originally normed.

Data Analyses

To test Hypothesis 1, we conducted a multi-group confirmatory factor analysis (CFA) on the AWS and FEM, using EQS 6.1 (Bentler, 2005; Bentler & Wu, 1995). Multigroup CFA allows for simultaneously testing the equivalence of the measurement instrument for both age groups. This analysis determines if the scale is measuring a similar construct across age groups by examining (a) if the same number of factors represents the data and (b) if the factor loadings are the same for both groups (Vandenberg & Lance, 2000). Four goodness-of-fit indices were used to assess model fit (Sun, 2005): (a) the chi-square (χ^2) test where a significant value in a multigroup CFA indicates that the two models are not equal, (b) normed fit index (NFI) where a value of .90 or higher represents a good fit, (c) comparative fit index (CFI) where a value of .90 or higher represents a good fit, and (d) root mean square error of approximation (RMSEA) where a good fit is noted by a value of .05 or less (Browne & Cudeck, 1993; Hu & Bentler, 1999).

We specified a priori that the factor structure of the scale would be unidimensional for

Table 1. Fit Statistics for Multigroup Confirmatory Factor Analyses

Model		χ^2 (df)	NFI	CFI	Δ CFI	$\Delta\chi^2\Delta df$	RMSEA	RMSEA 90% CI
FEM	Constrained	844.36 (360)	.76	.84	-.01		.06	.057-.067
	Free	795.90 (340)	.77	.85		48.46 (20)	.06	.056-.067
AWS	Constrained	3053.16 (575)	.56	.60	-.10		.12	.111-.119
	Free	2413.45 (550)	.65	.70		639.71 (25)	.10	.098-.106

Note: FEM = Attitudes Toward Feminism Scale; AWS = Attitudes Toward Women Scale. χ^2 = chi-square; NFI = normed fit index; CFI = comparative fit index; Δ CFI = change in CFI; $\Delta\chi^2\Delta df$ = change in chi-square, change in degrees of freedom; RMSEA = root mean square error of approximation; RMSEA 90% CI = 90% confidence interval for the RMSEA. All χ^2 and $\Delta\chi^2\Delta df$ are significant at $p < .001$.

each sample, consistent with Hypothesis 1. Both a constrained model (the items were restricted for invariance across age groups) and an unconstrained model (the items were allowed to vary across groups) were evaluated for a thorough assessment (Dimitrov, 2010). A negative change in CFI greater than .01 indicates that the unconstrained model fits the data better than the constrained model (Vandenberg & Lance, 2000). We did not constrain errors across groups (i.e., forcing error loadings on items to be identical across groups) because such constraint is considered the most stringent test of measurement invariance (Dimitrov, 2010), which most scales are unable to achieve (Vandenberg & Lance, 2000), and we have no theoretical or empirical reason to expect the AWS or FEM to meet this standard.

To test Hypotheses 2a and 2b, we used a number of decision rules and evaluated a few different solutions to factor analysis procedures (Ford, MacCallum, & Tait, 1986). First, we conducted exploratory factor analyses (EFAs) using principal component extraction with varimax rotation to examine the factor structure of the scales for each age group independently. To determine factor extraction, we used eigenvalues greater than 1.00 (Kaiser, 1974) and items with loadings greater than .30 as substantial (Floyd & Widaman, 1995), as well as the scree test to estimate number of factors. To further determine the number of factors, we ran parallel analysis (O'Connor, 2000), a technique that uses the existing data set to construct a number of randomly

generated samples, which it then uses for factor analyses.

Results

Multigroup Confirmatory Factor Analysis

The results of the multigroup CFA for each scale are presented in Table 1. The χ^2 statistic was statistically significant for both the AWS multigroup CFA and the FEM multigroup CFA, indicating that a one-factor model did not fit equally for both groups and that the groups were not the same on either measure. For the AWS, the fit indices demonstrated a poor fit even in the unconstrained model, $\chi^2(550) = 2413.45$, $p < .05$; NFI = .65; CFI = .70; RMSEA = .10, which allowed item loadings to vary across college-age and later-life adult groups. Similarly, for the FEM, the fit of the unconstrained model was poor, $\chi^2(340) = 795.90$, $p < .05$; NFI = .77; CFI = .85; RMSEA = .06. These results further suggested that a unidimensional factor structure does not adequately represent respondents' attitudes toward women or feminism. To test our Hypotheses 2a and 2b, we followed the measurement invariance tests with an EFA on each scale for each group.

Exploratory Factor Analysis

In looking at the FEM first, results from an EFA indicated that the 20-item scale was composed of four factors for the college-age

Table 2. FEM Scale Items and Factor Loadings for College-Age Adults

Item No.	FEM Scale Item	F1	F2	F3	F4
1	Women have the right to compete with men in every sphere of activity.	.77			
16	It is desirable that women be appointed to police forces with the same duties as men.	.71			
19	A woman should not expect to go to the same places or have the same freedom of action as a man.	.57			
6	Women should not be permitted to hold political offices that hold great responsibility.	.55		.43	
18	It is all right for women to work, but men will always be the basic breadwinners.	.45			
7	A woman should be expected to change her name when she marries.	.39	.38		
15	One should never trust a woman's account of another woman.		.76		
20	Profanity sounds worse generally coming from a woman.		.66		
14	Realistically speaking, most progress so far has been made by men and we can expect it to continue that way.		.49		
17	Women are basically more unpredictable than men.		.46		
4	A woman who refuses to give up her job to move with her husband would be to blame if the marriage broke up.		.44		
11	A woman, to be truly womanly, should gracefully accept chivalrous attention from men.		.38		
8	Whether or not they realize it, most women have been exploited by men.			.66	
9	Women who join the Women's Movement are typically frustrated and unattractive people who feel they lose out by the current rules of society.			.61	
3	The unmarried mother is morally a greater failure than the unmarried father.	.44		.49	
10	A working woman who sends her 6-month-old baby to a day care center is a bad mother.			.45	
5	A woman who refuses to bear children has failed in her duty to her husband.			.43	
12	It is absurd to regard obedience as a wifely virtue.				.81
13	The "clinging vine" wife is justified provided she clings sweetly enough to please her husband.				.54
2	As head of the household, the father should have final authority over his children.				.51

Note: F = factor; FEM = Attitudes Toward Feminism Scale. Bold font indicates highest factor loading.

group (Table 2) and three factors for the later-life adult group (Table 3). When examining items and factor loadings shown in both tables, it appears that items were grouped differently

in each age group; the difference between structures across groups was not just the addition of one factor. To facilitate comparison across groups, we selected labels for the factors

Table 3. FEM Scale Items and Factor Loadings for Later-Life Adults

Item No.	FEM Scale Item	F1	F2	F3
7	A woman should be expected to change her name when she marries.	.66		
13	The “clinging vine” wife is justified provided she clings sweetly enough to please her husband.	.61		
20	Profanity sounds worse generally coming from a woman.	.60		
15	One should never trust a woman’s account of another woman.	.60		
18	It is all right for women to work, but men will always be the basic breadwinners.	.59		
6	Women should not be permitted to hold political offices that hold great responsibility.	.49		
9	Women who join the Women’s Movement are typically frustrated and unattractive people who feel they lose out by the current rules of society.	.47		
3	The unmarried mother is morally a greater failure than the unmarried father.	.46	.44	
17	Women are basically more unpredictable than men.	.44		
19	A woman should not expect to go to the same places or have the same freedom of action as a man.	.44		
14	Realistically speaking, most progress so far has been made by men and we can expect it to continue that way.	.17		
4	A woman who refuses to give up her job to move with her husband would be to blame if the marriage broke up.		.67	
10	A working woman who sends her 6-month-old baby to a day care center is a bad mother.		.64	
11	A woman, to be truly womanly, should gracefully accept chivalrous attention from men.		.59	
5	A woman who refuses to bear children has failed in her duty to her husband.	.44	.53	
2	As head of the household, the father should have final authority over his children.		.50	
8	Whether or not they realize it, most women have been exploited by men.		.41	
12	It is absurd to regard obedience as a wifely virtue.		.27	
1	Women have the right to compete with men in every sphere of activity.			.84
16	It is desirable that women be appointed to police forces with the same duties as men.			.79

Note: F = factor; FEM = Attitudes Toward Feminism Scale. Bold font indicates highest factor loading.

based on the content of the majority of items clustered within that factor. For college-age respondents, factors shown in Table 2 could be labeled (F1) rights, (F2) women relative to men, (F3) work roles, and (F4) family roles. For later-life adults, factors shown in Table 3 could be labeled (F1) women relative to men, (F2) identity, and (F3) rights. Though the FEM was originally constructed to assess

perceptions of prejudice, sexism, and authoritarian attitudes toward women (E. R. Smith et al., 1975), the results of the EFA suggest that respondents’ current view of the FEM is that it captures perceptions of rights and women’s position relative to men’s.

Turning to the AWS, EFA results show that the 25-item AWS is composed of five factors for the college-age sample (Table 4) and four

Table 4. AWS Scale Items and Factor Loadings for College-Age Adults

Item No.	AWS Scale Item	F1	F2	F3	F4	F5
10	Women should worry less about their rights and more about becoming good wives and mothers.	.78				
19	Women should be concerned with their duties of childbearing and house tending rather than with desires for professional and business careers.	.77				
20	The intellectual leadership of a community should be largely in the hands of men.	.74				
16	In general, the father should have greater authority than the mother in the bringing up of children.	.65				
22	On the average, women should be regarded as less capable of contributing to economic production than are men.	.64				
23	There are many jobs in which men should be given preference over women in being hired or being promoted.	.59				
13	A woman should not expect to go to exactly the same places or to have quite the same freedom of action as a man.	.56				
14	Sons in a family should be given more encouragement to go to college than daughters.	.55	.41			
6	Under modern economic conditions with women being active outside the home, men should share in the household tasks such as washing dishes and doing the laundry.	.49	.44			
24	Women should be given equal opportunity with men for apprenticeship in the various trades.	.49	.42			
15	It is ridiculous for a woman to run a locomotive and for a man to darn socks.	.47				
2	Women should take increasing responsibility for leadership in solving the intellectual and social problems of the day.		.61			
8	There should be strict merit system in job appointment and promotion without regard to sex.		.60			
17	Women should be encouraged not to become sexually intimate with anyone before marriage, even their fiancés.		-.46		.41	
18	The husband should not be favored by law over the wife in the disposal of family property or income.		.39			
12	Women should assume their rightful place in business and all the professions along with men.		.38			
1	Swearing and obscenity are more repulsive in the speech of a woman than of a man.			.72		
4	Telling dirty jokes should be mostly a masculine prerogative.			.67		
5	Intoxication among women is worse than intoxication among men.			.64		
11	Women earning as much as their dates should bear equally the expense when they go out together.				.72	
9	A woman should be as free as a man to propose marriage.				.62	
7	It is insulting to a woman to have the "obey" clause remain in the marriage service.	.45			.48	
25	The modern girl is entitled to the same freedom from regulation and control as is given to the modern boy.					.71
21	Economic and social freedom is worth far more to women than acceptance of the ideal of femininity which has been set up by men.					.55
3	Both husband and wife should be allowed the same grounds for divorce.					.50

Note: F = factor; AWS = Attitudes Toward Women Scale. Bold font indicates highest factor loading.

factors for the later-life adults (Table 5). Like the FEM, differences between structures across groups were not just because of an additional factor for the college-age sample. These results suggest that each age group perceives and interprets the scale items uniquely. As shown in Table 4, college-age respondents perceive women's (F1) rights, (F2) position relative to men, (F3) freedom to act, (F4) family roles, and (F5) legal rights, as separate factors. That is, they endorsed a multidimensional conceptualization of women's rights, roles, and privileges. As shown in Table 5, later-life responses perceive women's (F1) rights, (F2) position relative to men, (F3) freedom to act, and (F4) family roles, as separate factors. Interestingly, these factors are very similar to those identified by the college-age sample, with the only missing factor, one that captures legal rights as a separate factor. Thus, like the FEM, respondents in both age groups endorse a multidimensional conceptualization of women's rights and roles. The combined EFA results, therefore, demonstrate support for Hypotheses 2a and 2b; both college-age and later-life adults report that the AWS and FEM capture a multidimensional conceptualization of their attitudes toward women and feminism.

Table 6 presents correlations between all factors across college-age and later-life adult samples on both the FEM and AWS, and Table 7 shows means and standard deviations on all factors. Correlations were low to moderate, with only one factor correlating substantially with another (.79 between Factors 1 and 2 on the AWS for college-age adults), most likely due to cross-loading of items referring to opportunity relative to economic status (i.e., education, job). These low-to-moderate correlations suggest that the factors are related but not so much that they should be considered the same concept. The correlations provide further evidence of a multidimensional conceptualization for both the AWS and FEM, indicating a lack of support for the original unidimensional conceptualization put forth during scale construction in the 1970s. The means and standard deviations shown in Table 7 are relatively low, indicating a relatively traditional attitude about women's roles.

Discussion

The focus of our study was on the AWS and FEM, two popular scales created to assess attitudes toward women's roles and acceptance of feminism. We sought to understand potential differences between college-age (individuals between 19 and 26 years of age) and later-life adults (individuals 50 years of age and older) in their conceptualization of attitudes toward women and feminism. Based on the literature, we generated three justifiable competing hypotheses, two of which we directly tested in the current study.

Overall, results showed that the original unidimensional conceptualization is an inadequate representation for both the AWS and the FEM, and that the two age groups differ in their views for what a multidimensional conceptualization should look like. Additionally, the correlations between dimensions were low to moderate, indicating that each factor captures a unique aspect of the focal construct. Conceptualizations between the two age groups on the FEM displayed greater discrepancy than on the AWS, where groups seemed to differ by only one factor. Notably in both scales, college-age respondents viewed women's position relative to men's as a separate factor from family roles, women's rights in general, and women at work. This difference may suggest a new focus of today's generation—one not driven by the push for absolute rights in society, which seemed to be a driving force for the Women's Movement. Instead, respondents (both males and females) of college-age today notice how women are perceived in comparison with men. The underlying assumption may be that women are already equal to men, whereas at the time of scale construction, attention to equality was embedded with rights, roles, and work.

Results show that conceptualizations on the AWS between college-age and later-life adults were not that different in terms of factor configurations of items. College-age respondents appeared to place unique emphasis on legal rights, resulting in a separate factor. Additionally for the FEM, like the AWS, the college-age respondents conceptualized more

Table 5. AWS Scale Items and Factor Loadings for Later-Life Adults

Number	AWS Scale Item	F1	F2	F3	F4
24	Women should be given equal opportunity with men for apprenticeship in the various trades.	.87			
6	Under modern economic conditions with women being active outside the home, men should share in the household tasks such as washing dishes and doing the laundry.	.87			
3	Both husband and wife should be allowed the same grounds for divorce.	.86			
2	Women should take increasing responsibility for leadership in solving the intellectual and social problems of the day.	.83			
8	There should be strict merit system in job appointment and promotion without regard to sex.	.82			
12	Women should assume their rightful place in business and all the professions along with men.	.82			
25	The modern girl is entitled to the same freedom from regulation and control as is given to the modern boy.	.74			
18	The husband should not be favored by law over the wife in the disposal of family property or income.	.72			
9	A woman should be as free as a man to propose marriage.	.47			
21	Economic and social freedom is worth far more to women than acceptance of the ideal of femininity which has been set up by men.	.40			
16	In general, the father should have greater authority than the mother in the bringing up of children.		.71		
20	The intellectual leadership of a community should be largely in the hands of men.		.70		
14	Sons in a family should be given more encouragement to go to college than daughters.		.68		
23	There are many jobs in which men should be given preference over women in being hired or being promoted.		.68		
15	It is ridiculous for a woman to run a locomotive and for a man to darn socks.		.68		
22	On the average, women should be regarded as less capable of contributing to economic production than are men.		.67		
13	A woman should not expect to go to exactly the same places or to have quite the same freedom of action as a man.		.56		
10	Women should worry less about their rights and more about becoming good wives and mothers.	.55			.46
5	Intoxication among women is worse than intoxication among men.			.84	
4	Telling dirty jokes should be mostly a masculine prerogative.			.81	
1	Swearing and obscenity are more repulsive in the speech of a woman than of a man.			.74	
11	Women earning as much as their dates should bear equally the expense when they go out together.				.64
17	Women should be encouraged not to become sexually intimate with anyone before marriage, even their fiancés.				.63
7	It is insulting to a woman to have the "obey" clause remain in the marriage service.				.62
19	Women should be concerned with their duties of childbearing and house tending rather than with desires for professional and business careers.	.54			.54

Note: F= factor; AWS = Attitudes Toward Women Scale. Bold font indicates highest factor loading.

Table 6. Correlations Between Factors on the FEM and AWS for College-Age and Later-Life Samples

	College-Age FEM			Later-Life FEM	
	F1	F2	F3	F1	F2
F2	.63**			.56**	
F3	.72**	.55**		.22**	.22**
F4	.54**	.46**	.51**	—	—

	College-Age AWS				Later-Life AWS		
	F1	F2	F3	F4	F1	F2	F3
F2	.79**				.33**		
F3	.50**	.47**			.22**	.36**	
F4	.50**	.53**	.31**		.35**	.67**	.24**
F5	.44**	.44**	.28**	.27**	—	—	—

Note: FEM = Attitudes Toward Feminism Scale; AWS = Attitudes Toward Women Scale.

** $p < .01$

Table 7. Means and Standard Deviations on All Factors for AWS and FEM

	Factor Label	Mean	SD
AWS college-age adults			
F1	Rights	2.31	0.92
F2	Relative to men	2.33	0.72
F3	Freedom to act	3.08	1.28
F4	Family roles	3.44	1.17
F5	Legal rights	2.59	0.82
AWS later-life adults			
F1	Rights	2.63	1.30
F2	Relative to men	2.27	0.95
F3	Freedom to act	3.59	1.60
F4	Family roles	3.50	1.20
FEM college-age adults			
F1	Rights	2.59	1.02
F2	Relative to men	3.35	1.01
F3	Work	2.42	0.87
F4	Family roles	3.09	1.15
FEM later-life adults			
F1	Relative to men	2.79	1.03
F2	Identity	2.86	1.02
F3	Rights	3.20	2.00

Note: AWS = Attitudes Toward Women Scale; FEM = Attitudes Toward Feminism Scale. Both AWS and FEM are scored on a 1 to 7 Likert-type scale, with lower scores indicating more traditional attitudes about women's roles.

separate factors than the later-life respondents. Overall, these aggregated results indicate that attitudes toward women's rights and

roles are not unidimensional and not the same across age groups, when assessed using the AWS and FEM. These findings offer a significant contribution to the construct evidence of the FEM and AWS, indicating that researchers should update their use of and conceptualization of what the FEM and AWS convey.

Our findings further suggest that perceptions of women's roles may have changed sufficiently to alter attitudes and beliefs, regardless of age or period effects, as captured by the AWS and FEM. The implications of our findings are that since the creation of these two instruments, societal changes may have occurred to the extent that there is more variation in beliefs regarding appropriate roles for women and acceptance of feminist ideas.

Average endorsement of scale items on both measures suggests, however, that attitudes toward women's rights and roles may still be somewhat conservative. Means were relatively low, with only a few factors (i.e., family roles, freedom to act, position relative to men) indicating a response close to the median. Thus, the AWS and FEM may assess how one views traditional and conservative conceptualizations of attitudes toward feminism, regardless of time period. After all, the scales were constructed during more conservative times in the history of women's equality, perhaps forever capturing the focus

of that era. It may be that newer measures, such as the Liberal Feminist Attitude and Ideology Scale (Morgan, 1996) should be considered to understand more contemporary and liberal attitudes.

A possible explanation for our findings may lie within the period, age, and cohort effects. However, the degree to which each of these effects contributed is not clear. The women's liberation movement was under way when these scales were developed in 1972 (AWS) and 1975 (FEM), and significant shifts in attitudes toward women and values continued over the first 20 years since scale construction (Twenge, 1997). Those born prior to the mainstream adoption of feminist values may have been affected differently by recent societal changes than current young adults who were not exposed to Women's Movement ideals. It is possible that ideas and attitudes can be influenced throughout the lifespan (Danigelis, Hardy, & Cutler, 2007), or that attitudes are developmental in nature. In a recent study focusing on change in middle-aged women's personality and the role of generativity, rather than anchoring changes to a cohort framework, Newton and Stewart (2010) found support for the developmental aspects of Erickson's personality theory. Similar to our study, although there may be cohort differences, additional influences would seem to be at play.

The AWS and the FEM were developed when the later-life cohort were in their late teens or slightly older and, therefore, the older adults in our study may be more familiar with the colloquial language used in some of the items (e.g., "to darn socks") than current young adults. Today's college-age adults may not have understood the phrasing in some of the items, which could have led them to answer differently than the original samples during scale construction, as well as differently than the later-life adults in the present study. Our results give us no insight into the validity of this explanation; however, our findings do suggest that further research is warranted, further examining the items of the AWS and FEM to explore the accuracy of representation of today's language and attitudes.

Limitations of the Study

One limitation of the present study is the sampling methodology. The college-age and later-life samples were samples of convenience, limiting the generalizability of the results to the general population. Although college-age students provide perspective on current views of societal norms, such as the focal attitudes for this study, the college-age students were all from one university in the midwest. It is possible that their views differ from students on the east or west coasts of the United States in some measurable way that matters with regard to assessing attitudes toward feminism or attitudes toward women in general. Likewise, we only sampled those living in America, providing no conclusions for cross-cultural interests. Both samples would have been improved with increased diversity, including gender and ethnic background. Although none of the younger adults lacked college experience, one fifth of the later-life adults reported having high school or middle school education as their highest level of completed education.

Additionally, the later-life adults were known to the college-age students, and in some cases related, which might suggest some attenuation of the sample to some degree. However, one could conclude that given some familiarity between samples, differences between measures would be less likely across groups. Instead, we still found differences in factor structures and item configurations within factors, suggesting that even if sample participants had some indirect influence over each other's perceptions, that influence did not result in the same attitudes toward women.

Finally, one could criticize our inability to directly assess a cohort effect because of our study methodology; we were only able to adequately test two of our three competing hypotheses. Though our study makes a significant contribution to the literature by having tested both age and period effects, future research is needed to test and tease out cohort effects. Given that our later-life adults reported multidimensional structures on both the AWS and FEM, we might speculate that direct tests of a

cohort effect would be unsupported. That is, cohort effects argue for later-life adults reporting a unidimensional conceptualization, which was not supported in our study. However, our samples did not include actual cohorts; therefore, future research is needed to directly test this hypothesis.

Contributions of the Study

Despite the limitations, the present study has strengths that provide confidence in the findings. First, our sample sizes were large enough to make between-group comparisons. Second, we compared college-age participants with later-life adults aged 50 years and older, a delineation in the samples that provides insight into using developmental stage or changes in society to explain differences in the results. Although statistical tests cannot reliably distinguish between age, period, and cohort effects (Glenn, 1976), some conclusions might be possible. That is, by examining perceptions of attitudes toward women's roles and feminism for a newer generation versus an older generation (and those who would have been of college age at the time of the original scale development), we ruled out the possibility that a different factor structure was only a result of changes in norms and views because of generational advances. Instead, we found that both age groups perceived of the factor structure of the measures differently than the original studies, suggesting that the results are not strictly because of cohort differences—our older group also perceived the scales differently than what was reported in original studies. Thus, we make a significant contribution to the construct validity of the two measures.

Implications for Practice and Future Research

Our findings suggest caution in using the original norms to interpret present-day responses on the FEM and AWS. Although views toward women's rights remain relatively conservative according to our results, the original instruments no longer adequately represent attitudes today. Those using the AWS and FEM should

strongly consider that the measures are more complex to interpret than a single overall score of an attitude toward women or feminism. Given that we found both scales to be better described as multidimensional, the implications for clinicians and researchers alike are that interpretations must follow suit to explore the additional complexity. Future uses of the measures may be facilitated by separate factor scores or reports on the individual factors, allowing one to segment out aspects of the measures for further exploration or discussion. Counseling professionals must also remain aware of the potential differences for younger clients, in comparison with clients aged 50 years and older, particularly when using the FEM. College-age clients are more likely to view women's roles as increasingly varied, with emphasis on legal rights, as well as equality to men. It will be beneficial to understand each client within his or her cohort and age at the time of completing the instrument.

The results of the present study indicate that future research should focus on developing a contemporary measure of attitudes toward women that assesses attitudes equally across ages. An updated scale could include issues such as women's reproductive health, women's role in politics, work–family balance, shared child rearing and domestic responsibilities, and caregiver roles and expectations, just to name a few contemporary issues. Such a contribution would allow for later-life adult attitudes to not only be measured but also included in the research literature regarding social issues. If researchers continue to use the AWS or the FEM in their research, the multiple component structures identified in this study should be examined thematically to determine the relevance of such components in contemporary society, and more specifically, to the sample being studied. Further work such as this could contribute further to the construct validity of the measures, and expand their accuracy and applicability.

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References

- Axinn, W. G., & Thornton, A. (2000). The transformation in the meaning of marriage. In L. Waite, C. Bachrach, M. Hindin, E. Thomson, & A. Thornton (Eds.), *Ties that bind: Perspectives on marriage and cohabitation* (pp. 147–165). Hawthorne, NY: Aldine de Gruyter.
- Bailey, W. T. (1993). College student's attitudes toward abortion. *Journal of Social Behavior and Personality*, 8, 749–756.
- Bentler, P. M. (2005). *EQS 6 structural equations program manual*. Encino, CA: Multivariate Software.
- Bentler, P. M., & Wu, E. J. C. (1995). *EQS for Windows user's guide*. Encino, CA: Multivariate Software.
- Bianchi, S., & Spain, D. (1996). Women, work and family in America. *Population Bulletin*, 51(3), 2–49.
- Browne, M. W., & Cudeck, R. (1993). Alternate ways of expressing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 445–455). Newbury Park, CA: Sage.
- Cohen, P. N., & Bianchi, S. M. (1999). Marriage, children, and women's employment: What do we know? *Monthly Labor Review*, 122(12), 22–31.
- Collins, A. M. (1974). The Attitudes Toward Women Scale: Validity, reliability, and sub-score differentiation (Doctoral dissertation, University of Maryland). *Dissertation Abstracts International*, 34, 7325.
- Dambrot, F. H., Papp, M. E., & Whitmore, C. (1984). The sex-role attitudes of three generations of women. *Personality and Social Psychology Bulletin*, 10, 469–473.
- Danigelis, N. L., Hardy, M., & Cutler, S. J. (2007). Population aging, intracohort aging, and sociopolitical attitudes. *American Sociological Review*, 72, 812–830.
- Daughtry, C. G., & Dambrot, F. H. (1986). Reliability of the Attitudes Towards Women Scale. *Educational and Psychological Measurement*, 46, 449–453.
- Dimitrov, D. M. (2010). Testing for factorial invariance in the context of construct validation. *Measurement and Evaluation in Counseling and Development*, 43, 121–149.
- Duncan, L. E., & Stewart, A. J. (2000). A generational analysis of women's rights activists. *Psychology of Women Quarterly*, 24, 297–308.
- Fassinger, R. E. (1994). Development and testing of the attitudes toward feminism and the women's movement (FWM) scale. *Psychology of Women Quarterly*, 18, 389–402.
- Floyd, F. J., & Widaman, K. F. (1995). Factor analysis in the development and refinement of clinical assessment instruments. *Psychological Assessment*, 7, 286–299.
- Ford, J. K., MacCallum, R. C., & Tait, M. (1986). The application of exploratory factor analysis in applied psychology: A critical review and analysis. *Personnel Psychology*, 39, 291–314.
- Gerrard, M. (1987). Sex, sex guilt, and contraceptive use revisited: The 1980s. *Journal of Personality and Social Psychology*, 52, 975–980.
- Glenn, N. D. (1976). Cohort analysts' futile quest: Statistical attempts to separate age, period and cohort effects. *American Sociological Review*, 41, 900–904.
- Gordon, J. R., & Whelan-Berry, K. S. (2005). Contributions to family and household activities by the husbands of midlife professional women. *Journal of Family Issues*, 26, 899–923.
- Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structural analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6, 1–55.
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39, 31–36.
- Laidlaw, K., & Knight, B. (2008). *Handbook of emotional disorders in later life: Assessment and treatment*. New York, NY: Oxford University Press.
- Lease, S. H. (2003). Testing a model of men's non-traditional occupational choices. *Career Development Quarterly*, 51, 244–258.
- Loo, R., & Thorpe, K. (1998). Attitudes towards women's roles in society: A replication after 20 years. *Sex Roles*, 39, 903–912.

- Looney, J., Kurpius, S. E. R., & Lucart, L. (2004). Military leadership evaluations: Effects of evaluator sex, leader sex, and gender role attitudes. *Consulting Psychology Journal: Practice and Research*, 56, 104–118.
- McHugh, M. C., & Frieze, I. H. (1997). The measurement of gender role attitudes: A review and commentary. *Psychology of Women Quarterly*, 21, 1–16.
- McKinney, K. (1987). Age and gender differences in college students' attitudes toward women: A replication and extension. *Sex Roles*, 17, 353–358.
- Miller, A. S., & Nakamura, T. (1997). Trends in American public opinion: A cohort analysis of shifting attitudes from 1972–1990. *Behavior-metrika*, 24, 179–191.
- Morgan, B. L. (1996). Putting the feminism into feminism scales: Introduction of a liberal feminist attitude and ideology scale (LFAIS). *Sex Roles*, 34, 359–390.
- Newton, N., & Stewart, A. J. (2010). The middle ages: Change in women's personalities and social roles. *Psychology of Women Quarterly*, 34, 75–84.
- O'Connor, B. P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instrumentation, & Computers*, 32, 396–402.
- Perrone, K. M., Wright, S. L., & Jackson, Z. V. (2009). Traditional and nontraditional gender roles and work-family interface for men and women. *Journal of Career Development*, 36, 8–24.
- Peterson, B. E., & Zurbriggen, E. L. (2010). Gender, sexuality, and the authoritarian personality. *Journal of Personality*, 78, 1801–1826.
- Powell, G. N. (2001). *Handbook of gender and work*. Thousand Oaks, CA: Sage.
- Ryder, N. B. (1965). The cohort as a concept in the study of social change. *American Sociological Review*, 30, 843–861.
- Smith, E. R., Ferree, M. M., & Miller, F. D. (1975). A short scale of attitudes toward feminism. *Representative Research in Social Psychology*, 6, 51–56.
- Smith, R. L., & Bradley, D. W. (1980). In defense of the Attitudes Towards Women Scale: An affirmation of validity and reliability. *Psychological Reports*, 47, 511–522.
- Spence, J. T., & Hahn, E. D. (1997). The Attitudes Toward Women Scale and attitude change in college students. *Psychology of Women Quarterly*, 21, 17–34.
- Spence, J. T., & Helmreich, R. L. (1972). The Attitudes Toward Women Scale: An objective instrument to measure attitudes toward the rights and roles of women in contemporary society. *JSAS: Catalog of Selected Documents in Psychology*, 2, 667–668.
- Spence, J. T., Helmreich, R. L., & Stapp, J. (1973). A short version of the Attitudes Towards Women Scale (AWS). *Bulletin of Psychonomic Society*, 2, 219–224.
- Sun, J. (2005). Assessing Goodness of Fit in Confirmatory Factor Analysis. *Measurement and Evaluation in Counseling and Development*, 37, 240–256.
- Swim, J. K., & Cohen, L. L. (1997). Overt, covert, and subtle sexism: A comparison between the Attitudes Towards Women Scale and Modern Sexism Scales. *Psychology of Women Quarterly*, 21, 103–118.
- Thistle, S. (2006). *From marriage to the market: The transformation of women's lives and work*. Berkeley: University of California Press.
- Twenge, J. M. (1997). Attitudes toward women, 1970–1995: A meta-analysis. *Psychology of Women Quarterly*, 21, 35–51.
- Twenge, J. M., & Campbell, S. M. (2010). Generation me and the changing world of work. In P. A. Linley, S. Harrington, & N. Garcea (Eds.), *Oxford handbook of positive psychology and work* (pp. 25–35). New York, NY: Oxford University Press.
- Vandenberg, R. J., & Lance, C. E. (2000). Review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods*, 3, 4–70.
- Wang, M., & Chen, Y. (2006). Age differences in attitude change: Influences of cognitive resources and motivation on responses to argument quality. *Psychology and Aging*, 21, 581–589.
- Yang, Y., & Land, K. C. (2006). A mixed models approach to the age period-cohort analysis of repeated cross-section surveys, with an application to data on trends in verbal test scores. *Sociological Methodology*, 36, 75–97.

Zucker, A. N., & Stewart, A. J. (2007). Growing up and growing older: Feminism as a context for women's lives. *Psychology of Women Quarterly*, 31, 137–145.

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