

**GENDER ROLE ATTITUDES  
COMPARING WOMEN WITH EGALITARIAN  
AND CONSERVATIVE  
ATTITUDES IN THE UNITED STATES, INDIA, AND JAPAN**

**Priya Kannan-Irene Hanson Frieze,**  
University of Pittsburgh,  
Pittsburgh, United States

**Yuko Takechi-Yasuko Morinaga**  
Kobe College  
Nishinomiya, Japan

**Atsuko Aono**  
Fukuyama University  
Fukuyama, Japan

**Mamoru Fukutomi**  
Tokyo Gakugei University  
Tokyo, Japan

**Aneetha Sreekumar**  
M.E.S College  
Bangalore, India

**ABSTRACT**

Correlates of gender-role attitudes were examined in samples of university women in the United States (N=289), India (N=88), and Japan (N=193). As predicted, women in the United States held significantly more egalitarian attitudes than women in India and Japan. Women with more frequent religious service attendance held significantly less egalitarian attitudes in the U.S, but not in India. Indian and Japanese women with more egalitarian attitudes had significantly higher self-esteem. Egalitarian attitudes correlated significantly with higher educational aspiration, and intention to work full-time for women in the U. S and India, but not in Japan. Women who desired more children held significantly less egalitarian attitudes in the U.S and Japan, but not in India.

## INTRODUCTION

Gender-role attitudes are opinions about the ways work and family roles should differ based on gender. These attitudes range on a continuum from conservative to egalitarian (Harris & Firestone, 1998). Egalitarian attitudes are those that do not uphold the culturally prescribed gender division of roles for men and women. Though women in general have been found to hold more egalitarian gender-role attitudes than men (e.g., Brewster & Padavic, 2000; Moya Exposito, & Ruiz, 2000; Seginer, Karayanni, & Mar'i, 1990; Spence & Hahn, 1997), considerable within gender variations still remain, making some women more egalitarian in their views than others (e.g., Anderson & Johnson, 2003; Bolzendahl & Myers, 2004; Brewster & Padavic, 2000; Harris & Firestone, 1998; Seginer, Karayanni, & Mar'i, 1990; Seginer & Mahajna, 2004).

Comparing egalitarian and conservative attitudes among women might be important today in the United States given the recent emphasis on conservative roles by some Senators such as Rick Santorum (Santorum, 2005). Santorum, in his book "It takes a family.." Argues for a return to conservative gender roles. Media too, is now portraying a shift back towards conservative attitudes among some U.S. College women (Story L., N.Y. Times, September 20, 2005). Several women pursuing education in elite colleges seem to be reporting intentions of being full-time homemakers and wanting more children. This new wave of return to conservatism is almost creating two distinct classes of women: while there are a section of women who hold egalitarian, even feminist attitudes; there is an increasing section of women (even highly educated women at times), who seem to be drawn by the conservative roles of marriage and motherhood.

Though still not as egalitarian as women in the United State, women in countries like India and Japan seem to be increasingly asserting egalitarian gender role attitudes. In India, rapid changes in the social structure due to factors such as globalization, the influx of technology (Ghosh & Roy, 1997; Madon, 1997), and outsourcing from the United States (Patibandla & Petersen, 2002) appear to be encouraging increasing number of women to explore novel career opportunities. In Japan too, changes have been taking place since world War II. More and more women with university education now are increasingly seeking employment (Madan, 2004). Of late it is also not uncommon in Japan to see women choosing not to marry and remain single so that they can become more dedicated to their careers (Madan, 2004)

Given that some women do ascribe to conservative roles and attitudes, while at the same time there are women across different countries today who are becoming increasingly egalitarian in the attitudes, the following questions become relevant to researchers interested in gender-role attitudes: Who are these women that hold more egalitarian attitudes? Are there some distinguishing characteristics that make some women more conservative or egalitarian than other women? Are these distinguishing characteristics similar across the different countries experiencing varied socio-economic changes?

Previous studies within the United States have explored limited variables, such as education aspirations (Farmer, 1985), and religious service attendance (e.g., Bolzendahl & Myers, 2004; Brewster & Padavic, 2000; Bryant, 2003; Frieze, Ferligoj, Kogovsek, Renner, Horvat & Sarlija, 2003) that correlate with having conservative or egalitarian attitudes. However, other variables that might relate to egalitarian attitudes such as intentions to participate

in the labor force full time, desired number of kids and self-esteem have been less investigated. In addition, with the exception of a few cross-cultural investigations (e.g., Frieze et al., 2003; Seginer & Mahajn, 2004) that look at correlates of gender-role attitudes in other countries, there seems to be a dearth of studies investigating correlates of gender-role attitudes in non-US samples. In this study, we compare college women who hold egalitarian or conservative gender-role attitudes in three countries, to determine how such attitudes relate to future career and family plans.

### Measuring Gender Role Attitudes

Measurement of gender-role attitudes became a part of many studies in Psychology and other disciplines after the feminist movements in the 1960s (e.g., Spence & Hahn, 1997; Twenge, 1997). The Attitudes Toward Women Scale (Spence & Helmreich, 1972) was one of the first scales developed to measure gender-role attitudes and still remains one of the most popularly used scales in the United States (McHugh & Frieze, 1997; Spence & Hahn, 1997; Twenge, 1997), and in other countries (Chia, Allred, & Jerzak, 1997; Diwan & Menezes, 1992; Gibbons, Hamby, & Dennis, 1997; Moya, Exposito & Ruiz, 2000; Seginer & Mahajna, 2004; Wall, Frieze, Ferligoj, Jarasova, Pauknerova, Horvat & Sarlija, 1999). Spence and Hahn (1997), report that well over 400 studies in the United States have used the AWS in the years since 1972.

The AWS was developed to assess people's beliefs about the rights, roles, and responsibilities of women in several spheres that were traditionally divided along gender lines (McHugh & Frieze, 1997; Spence & Hahn, 1997). Some specific issues dealt with in this scale are related to women's opportunities for and encouragement to receive higher education, women's rights in economic and financial

decisions within the household, sharing of household chores, women's employment rights, suitability to specific professions, and rights to propose marriage. The AWS is, therefore, not a general measure of beliefs about women, but as Spence and Hahn point out, it specifically measures attitudes toward women's rights and responsibilities. The original AWS contained 55 items, but was later modified into a shorter version containing 15 items, which is most frequently used (McHugh & Frieze, 1997; Spence & Hahn, 1997). However, in the current study we have chosen a list of 15 items from the original 55 item scale, which seemed most appropriate to use in a cross-cultural context (Further clarification is provided in the methods section).

Since the 1970s several papers studying the correlates of gender-role attitudes in the United States (especially sociological studies) have used items from the General Social Survey (GSS), a questionnaire annually given by the National Opinion Research Center of Chicago to a cross section of the population over 18 years of age that lives in non-institutionalized settings in the United States (Bolzendahl & Myers, 2004; Brewster & Padavic, 2000; Harris & Firestone, 1998; Mason & Lu, 1988; Thornton, Alwin & Camburn, 1983). Though the GSS items were not originally conceptualized as a scale (McHugh & Frieze, 1997), repeated and frequent use of these national survey items allow for comparisons across multiple studies. To our knowledge however, these items have not been used for cross-cultural comparisons in the past.

The GSS items used in past studies typically address attitudes about the following issues: division of labor in the home, negative effects of maternal employment, equal rights in the workplace, and gender roles in the public and political spheres. Studies frequently use specific items from GSS that seem most relevant to their specific

hypotheses. Nevertheless items concerning attitudes about the negative effects of maternal employment (e. g., Bolzendahl & Myers, 2004; Brewster & Padavic, 2000; Harris & Firestone, 1998; Mason & Lu, 1988), and attitudes about division of labor in the home (e. g., Bolzendahl & Myers, 2004; Brewster & Padavic, 2000; Bryant, 2003; Harris & Firestone, 1998; Mason & Lu, 1988) have been most frequently studied in the past. Items concerning attitudes about the negative effects of maternal employment are not tapped in the AWS items used in our study (though division of labor in the home is assessed by our AWS items), and therefore we chose to supplement the AWS items with three of the GSS items that specifically tap the attitudes about the negative effects of maternal employment, in order to broaden our understanding of attitudes toward women's gender roles (Further details about the specific items used are provided in the method section). Though the GSS items were not originally intended to be a scale, we are expecting the three GSS items used in our study to correlate significantly with the Attitude toward Women Scale so that the AWS items and GSS items used in our study will load on a single scale.

Some correlates of egalitarian gender-role attitudes found in previous studies

The above review demonstrates how several studies in the past have used the AWS and GSS items to measure gender-role egalitarianism in the United States. Most previous studies report a gender difference in these attitudes. Though men's attitudes have been changing towards more egalitarian views over the years, in general women and girls continue to be more egalitarian in their gender-role attitudes than men and boys (e. g., Brewster & Padavic, 2000; Moya, Exposito, & Ruiz, 2000; Seginer, Karayanni, & Mar'i, 1990; Spence & Hahn, 1997). However, considerable within gender

variations still remain, making some women more egalitarian in their views than others (e.g., Anderson & Johnson, 2003; Bolzendahl & Myers, 2004; Brewster & Padavic, 2000; Harris & Firestone, 1998; Seginer & Mahajna, 2004). Who are these women? How do these women holding egalitarian gender-role attitudes differ from the conservative women in terms of future work and family aspirations?

Several correlates of gender-role attitudes among samples of adult women in the United States have been investigated in previous studies. Higher educational attainment has been consistently found among women who hold more egalitarian attitudes (e. g., Bolzendahl & Myers, 2004; Brewster & Padavic, 2000; Harris & Firestone, 1998; Moya, Exposito, & Ruiz, 2000). Women in the labor force and those with previous job experiences have also been found to hold more egalitarian attitudes (e. g., Bolzendahl & Myers, 2004; Harris & Firestone, 1998; Thornton, Alwin, & Camburn, 1983). Women with egalitarian attitudes were found to be higher on career salience and work centrality (Moya, Exposito, & Ruiz, 2000), while conservative attitudes in both sexes were found to correlate with higher religious service attendance (Bolzendahl & Myers, 2004; Brewster & Padavic, 2000; Bryant, 2003; Thornton, Alwin, & Camburn, 1983).

Gender-role egalitarianism as assessed by the AWS has been found to correlate with certain attitudes in younger women as well. Higher educational and career aspirations have been found to correlate with egalitarian gender role attitudes in studies with high-school students (Farmer, 1985). Farmer (1985) in her study, measured attitudes of 9th and 12th grade high school boys and girls towards women's work and family roles using several items adapted from the GSS to apply to high school students.

Gender-role attitudes as measured by GSS items also seem to correlate with religious service attendance, such that women with higher religious service attendance had less egalitarian attitudes (e. g., Bolzendahl & Myers, 2004; Brewster & Padavic, 2000). Similar findings have been obtained using other measures of gender egalitarianism. Bryant (2003) measured gender role attitudes among college men and women in the United States using a single item measure dealing with women's roles in the home and family. She found that higher religious service attendance was significantly correlated with less egalitarian attitudes among college women (Bryant, 2003). Thornton, Alwin, and Camburn (1983) measured gender-role attitudes in married women (in 1962, 1977 and 1980) and their sons and daughters in 1980 using a sex-role index which consisted of items similar to the GSS items. They found that higher religious service attendance among the mothers predicted less egalitarian attitudes among mothers and their daughters.

Some previous studies have looked at the correlates of conservative and egalitarian attitudes for women in other countries using the AWS (Frieze, Ferligoj, Kogovsek, Renner, Horvat & Sarlija, 2003; Seginer & Mahajna, 2004). Seginer and Mahajna (2004) measured attitudes towards women's roles using an Arabic version of the AWS in Israel (Seginer, Karayanni, & Mar'i, 1990). This scale loaded on several factors, and they used 10 items from the traditionalism factor (Seginer, Karayanni, & Mar'i) to measure gender role attitudes among Israeli Palestinian high school girls and their fathers. Seginer and Mahajna (2004) found that girls with higher educational aspirations had more egalitarian attitudes, while conservative attitudes were correlated with higher family aspirations (such as getting married earlier and having more kids). Frieze et al. (2003) sought to predict the determinants of gender role attitudes in



samples of university students from the United States, Slovenia, and Croatia. They found that men and women with more frequent attendance at religious services held less egalitarian attitudes.

With the exception of these few cross-cultural investigations, empirical research investigating correlates of gender-role egalitarianism in non-US samples seems to be sparse. Again, past studies on college women within the United States have explored limited variables (such as educational aspirations and religious service attendance) that correlate with gender-role attitudes. Other variables such as intentions to participate in the labor force full time, desired number of kids and self-esteem have not been investigated.

### Women's gender roles in the United States

Based on some of the recent changes in women's attitudes reported in the mass media, we wanted to explore some of the correlates of conservative and egalitarian gender-role attitudes in college women in the United States. We expected that women in the United States who attend religious services more frequently will hold less egalitarian gender-role attitudes than women who do not attend religious services as often (Bolzendahl & Myers, 2004; Brewster & Padavic, 2000; Bryant, 2003; Thornton, Alwin & Camburn, 1983). We also expected that women who seek higher levels of post-baccalaureate education will hold significantly more egalitarian attitudes (Farmer, 1983; Seginer & Mahajna, 2004). We further expected that women with egalitarian gender-role attitudes will prefer to work full-time after marriage significantly more than women with less egalitarian attitudes. Lastly, we expected that women with egalitarian gender role attitudes will desire significantly lesser numbers of kids than less egalitarian women.

No prediction is made for self esteem in the United States. Women with conservative and egalitarian attitude in the United States were not expected to differ in their self-esteem, since no such difference in self-esteem can be predicted on the basis of findings from previous studies (Farmer, 1985; Spence & Helmreich, 1978). In all of these studies, women's self-esteem and the attitudes they held toward appropriate gender-role did not seem to be related. In addition, with recent public debate about the importance of women being full time homemakers, there is no reason to expect self esteem to be related to egalitarian or to non-egalitarian attitudes in the United States.

### **Women's gender roles in India**

#### *Conservative roles of Hindu Women.*

Hinduism is the dominant religion in India; accepted roles for the Hindu woman include being a dutiful daughter, a faithful wife, a submissive daughter-in-law, a caring and nurturing mother, and a loving grandmother (Bhogle, 1999). Traditionally in India, women were not expected to develop a sense of autonomy (economically, or even over their own bodies), and were never encouraged to gain a sense of self-esteem or worth of their own (Bhogle, 1999). They were meant to achieve their sense of satisfaction and worth from dutifully carrying out the responsibilities of their interpersonal roles, such as those of a daughter, wife and mother to their fullest abilities. Marriage and motherhood (especially mothering a son) were said to bring a woman the highest glory and give her a sense of completion of her womanhood (Bhogle, 1999; Madan, 2004). If a woman wanted to broaden the boundaries of her conservative role as a homemaker, whether this was due to economic reasons, or from a psychological need for self-fulfillment, she came into severe conflicts with her prescribed gender roles (Bhogle, 1999). Based on these Hindu ideals,

few girls received higher education in India before the 1950s. Other customs such as child marriage, and purdah (veiling of the face in public), also restricted the activities of women to the domestic sphere (Madan, 2004).

The Constitution of India that was passed in 1950 assured women equal status, and guaranteed them equal position and opportunities in education and employment (Madan, 2004). This has led to gradual changes in women's roles, whereby female literacy rates and employment rates began to slowly increase. Forty percent of the women in India were literate by 1991. However, the number of women receiving higher education by 1994 was still only around 8.1% of all women in India although percentages were higher in urban than rural areas (Madan, 2004). By 1994, almost 1.7 million Indian women (primarily urban) were college educated and almost 9% of these women continued on to receive post-graduate degrees and diplomas (Madan, 2004). However, not all college educated women in India participate in the labor force; almost 25% of the college educated women remained unemployed in 1994 (Madan, 2004). College education for many Indian women was and is still a key to better marriage prospects and does not necessarily indicate career orientation (Madan, 2004).

*Effect of globalization in India.*

The liberalization of the Indian economy in 1991 opened up the global market to India (Ghosh & Roy, 1997; Madon, 1997) which led many trans-national and multi-national companies to enter the Indian market, especially the south Indian city of Bangalore (Patibandla & Petersen, 2002). Since 1991, several global leaders in Information Technology (e.g., Texas Instruments, Hewlett Packard, Oracle, Microsoft, Motorola, Nortell, and Cisco) have opened up

branches in Bangalore, employing more than four thousand highly skilled workers each (Patibandla & Petersen, 2002). Each of these organizations has been expanding and is projected to further increase their operations in Bangalore in the next three to five year (Patibandla & Petersen, 2002). Most of these ITES (Information Technology Enabled Services) and BPO (Business Process Outsourcing ) organizations are now increasingly employing college educated women (Business Standard, 2003, June 18, 2003). The female staff ranges between 45 to 60 percent of the entire labor force in these companies (Business Standard, June 18, 2003; CIOL:IT Unlimited, March 30, 2005).

Such changes in job opportunities for women resulting from these changes in India (especially in cities like Bangalore) are opening up new venues for women. In a country like India, where women were never encouraged to gain a sense of self-esteem or worth of their own (Bhogle, 1999), and where education and employment had been considered out of bounds for them, new opportunities due to the IT revolution may encourage a group of modernized urban women to hold highly egalitarian attitudes toward women's roles in the domestic and occupational spheres.

Despite these recent changes in India however, we expected that overall Indian women would still report more conservative attitudes than women in the United States. We also explored some of the correlates of egalitarian attitudes among the Indian women. Women who attend more religious services have been found to hold more conservative attitudes toward women's roles in the United States and other European countries (Bolzendahl & Myers., 2004; Frieze , et al. 2003). Hindu ideals advocate that women should focus on the home as does Christianity. We therefore expected that Indian women who attend religious services more frequently will hold less

egalitarian gender-role attitudes than women who do not attend religious services as often. Since women were never encouraged to develop a sense of self worth in India in the recent and distant past (Bhogle, 1999), we expected women's egalitarian gender-role attitudes to correlate with higher self-esteem in India. Traditionally in India, women were not encouraged to receive higher education and employment outside the home (Bhogle, 1999; Madan, 2004). Therefore, we expected that women who seek higher levels of post-graduate education and women who seek full-time paid employment after marriage will hold significantly more egalitarian attitudes than women who do not have such aspirations. Marriage and motherhood were supposed to bring a woman the highest glory (Bhogle,1999), and therefore we expected that women with less egalitarian attitudes would desire more kids than women with egalitarian gender role attitudes.

### Women's gender role in Japan

The constitution written for Japan in 1947 guaranteed equal rights for women and men. But, in practice, there continued to be inequalities between the sexes, as there had been before World War II, especially in terms of employment. By the 1990s, both sexes had very high rates of high school graduation and more than 40% enrolled in post-secondary educational institutions. By 2001, nearly 50% of women were employed outside the home. Highest rates of labor force participation are found for young [often unmarried] women. Women with a university education are also especially likely to be employed (Madan, 2004). However, despite the fact that women were being encouraged to seek employment, attitudes towards appropriate gender roles has not appeared to have changed much. Even as recently as in 2002, the idea that husbands should work outside the home, while the wife should stay at home was accepted by

29% of unmarried women and 40% of unmarried men (National Institute of Population and Social Security Research, 2002).

It has also been found that women having a strong desire to be married, have often been less motivated to work after marriage in Japan (Katurada & Sugihara, 2002). When Japanese women marry and have children, it has been very common for them to drop out of paid employment or to work part time while children are in the home, and then to return to the part time labor force when the children are grown (Madan, 2004). The Ministry of Welfare and Labor statistics found that in 2004 around 69% of Japanese women between the ages of 20 and 24 years participated in the labor force and around 75% of women between the ages of 25 and 30 years were reported to participate full-time in the labor force. However, it was found that the proportion of working women dropped to 61% for women between the ages of 30 and 35 (Ministry of Welfare and Labor, 2004). It was also found that almost 73% of married working women in Japan quit their jobs after having the first child (Ministry of Welfare and Labor, 2004). Therefore, child-rearing responsibilities seem to greatly influence Japanese women's decision to continue in the labor force.

In recent years there have been a growing percentage of women deciding to remain single and continuing as full time workers. The care of children is seen as the mother's responsibility in Japan. It has been reported that, the husbands in Japan spent close to 1/9<sup>th</sup> of the time on housework, when compared to wives (National Institute of Population and Social Security Research, 2002). Therefore, by not marrying and not having children, women have been choosing to be more dedicated to their careers (Madan, 2004). In 2002, almost 37% of single women in Japan agreed that one's ideal life course was to keep one' job, regardless of responsibilities such as marriage and child-bearing (Ministry of welfare and Labor, 2002). Despite this fact,

in reality it was found that most of these women quit their jobs for several reasons. Thus, it almost seems like there is a disparity between reality and the ideal life course Japanese women would like to follow.

In Japan, religion plays a very unique role. Most Japanese men and women do not have a strong religious belief, and their ideas of religion are very vaguely defined. It has been found that majority of young Japanese men and women ascribe to no special religion. In one specific study, more than 80% of university students, (both young men and women) ascribed to no specific religion (Yamagata, 1999). This does not however imply that the Japanese do not believe in God, but is a result of the polytheistic faith predominant in Japan due to which people do not believe in one religion or one God (Yamagata, 1999). Furthermore, the Japanese do not seem to distinguish between religious rituals and family rituals. Although, traditional gender roles are reinforced by religious teaching in Buddhism, Confucianism, and Shintoism, that are popular religions in Japan (Nakamura, 1999), frequency of religious service attendance is not applicable as an item in the Japanese society. Therefore, the religious service attendance item has been left out while collecting the Japanese data.

Despite some of the recent changes in the Japanese society we just discussed, we still expected the Japanese women to be less egalitarian in their attitudes toward women's roles than the U. S. women. we also explored some of the correlates of egalitarian gender-role attitudes in Japanese women. Given that women appear to see themselves as making a choice to work or marry and have children (Madan, 2004), we expect that women who choose not to work for work part-time will have less egalitarian attitudes than women who choose to work full-time even after marriage. By the same token since

child-rearing responsibilities seem to greatly influence Japanese women's decision to continue in the labor force, we expected that women who choose to have more kids will have significantly less egalitarian attitudes. We further expected that women with egalitarian gender-role attitudes in Japan will have higher educational aspirations than women with less egalitarian gender-role attitudes. We wanted to explore the relationship between self-esteem and gender-role attitudes in the Japanese women, and expected that (similar to India) women with egalitarian attitudes would report higher level of self-esteem in the Japanese society.

*Predictions for conservative and egalitarian women in the United state, India, and Japan*

**Hypothesis 1:** Women in the United States will be significantly more egalitarian in their attitudes toward women's roles than women in Japan and India.

**Hypothesis 2:** Religious service attendance will be positively correlated with conservative gender-role attitudes in India and the United States.

**Hypothesis 3:** For the Indian and Japanese women, higher self-esteem will be negatively correlated with less egalitarian gender-role attitudes. [ *No such prediction of self-esteem is made for the US women*].

**Hypothesis 4:** In all three countries, women who have higher educational aspirations will have significantly more egalitarian gender-role attitudes than women with lower educational aspirations.

**Hypothesis 5:** In all three countries, women who intend to work full-time after marriage will have significantly more egalitarian gender-role attitudes than women who don't intend to work or intend working part-time.



**Hypothesis 6: Women who have more egalitarian attitudes will desire significantly lesser number of children than women with less egalitarian attitudes, in all three countries.**

## METHODS

### Participants and Procedures

Participants for this study were female college students recruited from college in Bangalore, India, Pittsburgh, United States, and Nishinomiya, Japan. Data was collected from male and female college students in India, Japan, and the United States. However only data from female college students has been analyzed for the current study, since we were interested in looking at the within gender differences in gender-role attitudes in these countries. Descriptions of the samples and data collection procedures are discussed separately for the Indian, American and Japanese sample.

### U.S. Sample

Four hundred male and female undergraduate students were recruited for the study from the participant pool of a large North Eastern University in the United States. The participants received credits in partial fulfillment of course requirements for an Introductory Psychology class. Data collection was completed in the United States during the Fall of 2001. Participants were signed up to arrive at a lab in groups of 10 to 12. They were informed that they were free to decline from participating in this project, and/or free to skip any question that they might be uncomfortable with. The researcher left the room after giving them brief instructions about completing the survey. Students were allowed to complete the survey anonymously, leave it in the room, and contact the researcher for a brief debriefing statement. The survey packet contained

demographic items and a questionnaire. Of the 400 surveys completed, 289 usable surveys from the female student were retained for final analysis in this study.

### **Indian Sample**

The data collection procedure in Bangalore, India was completed between June and August 2004. The survey packets were handed out to male and female under-graduate students in the Arts, Science, and Commerce disciplines during class hours after obtaining special permission from the instructors of these classes. The completed surveys were returned directly to the professor in charge of the project. The survey packet contained a demographic data sheet and the questionnaires. Surveys were completed and returned anonymously. The purpose and a brief description of the study was announced prior to asking for voluntary participation, and the professor made sure that those not interested in filling out the survey were given the chance to leave the class. This procedure allowed for voluntary participation. Overall, out of around 150 students contacted in this college, 120 interested students remained in the classrooms to complete the survey. They completed and returned the surveys to the professor at the end of the class period. Of these 120 students, 90 were women. and their data was considered for analysis in the current study. Two of the surveys from this data were dropped either because of incorrect answering (marking gender = 5) or because more than one-third of the data was missing, and were therefore considered unusable. The final sample size for India was 88.

### **Japanese Sample**

The data collection in Japan was completed between Fall 2004 and Spring 2005, The Survey packets were handed out to male and

female undergraduate students by psychology professors in two universities located in Matsuyama city and Tokyo, and by the third author in a university located in Kobe city. The purpose and a brief description of the study were announced prior to asking for voluntary participation. Overall, 194 female and 79 male participants volunteered to complete the survey; gender of two of the volunteers was unknown. Students completed and returned the surveys to the professors at the end of the class period. One hundred and ninety three usable surveys from the female participants were retained from the Japanese sample for final analysis.

### Sample Characteristic

The U.S. women ranged in age from 18 to over 30 years of age. However, majority (91%) of these women ranged from 18 to 20 year of age. They were predominantly college freshman (78%) with some sophomores (18%), and less than 2% each were Juniors or Seniors in college. The American women ascribed to the following religions: 32% of the women were Catholics, 35% followed other forms of Christianity, 10% of these women followed religions other than Christianity, and 23% of these women ascribed to no specific religion.

The women in the Indian sample ranged from 18 to 22 years of age, with more than 80% of the women being 18 to 20 years old. Twenty eight percent of these women were in the third year of college, 34 % of the women were in the fourth year of college, and 31 % of the women had spent five or more years in college (*NOTE: Students proceed to college after their tenth grade in Bangalore, India; 11th and 12 th grades are considered part of college education and therefore someone in the Second year of undergraduate education would have already spent 4 years in college*). These women predominantly

majored in the Humanities or Arts disciplines (56% of the women) such as Psychology, Economic, Sociology and History; 11% majored in the Sciences; and 33% of these women majored in fields of Commerce or Business such as Finance, Accounting, and Management. Of the 88 Indian women, 60 women reported their current religion as Hindu (almost 70% of the sample), 7 women followed Christianity, 2 women followed Islam, 2 belonged to other religious sects such as Buddhism and Jainism, and 17 of these women (almost 20% of the sample) reported that they ascribed to no special religion.

The Japanese women ranged in age from 18 to 22, with the median age being 20, 85% of these women were between 18-20 years of age, and 15% were 21 years or older. These women were mostly in the first (38%) or second (37%) year of college, with only around 20% of these women being in the third year of college. The women in our Japanese sample majored in subjects such as economics, law, humanities, education, and other such social science (arts) majors. Very few of the participants majored in natural or physical sciences. Majority of the Japanese women (86%) reported that they ascribe to no predominant religion, 10% of these women reported their predominant religion as Buddhism, and less than 2% of these women followed Christianity.

## Measures

### Demographics

Demographic Variables included personal information such as age, number of years spent in college, current religion (options varied depending on the country), religious service attendance (on a scale from never to once a week or more).

### **Future Plans**

Questions about these college women's future educational, work and family related plans were included in the survey, since they were related to the predictors of gender-role attitudes that we were interested in investigating. These questions included educational aspirations (with the following 4 answer options: probably won't complete college, graduate with a Bachelor's degree, complete some post-graduate work, will graduate with Master's degree or PhD or advanced degree), future work plans after getting married (to work full time, part time, or not at all), and desired number of kids (with the following answer options: don't know, none, one, two, three or more).

### **Gender-role Attitudes Scale.**

The items from Attitudes toward Women Scale-AWS (1972) and General Social Survey-GSS were combined into one scale. Fifteen items from the AWS that seemed most relevant from a cross-cultural context were used in the current study (see Table 1). Items such as "Telling dirty jokes should be mostly a masculine prerogative", "If both husband and wife agree, there is no reason why both should not have extramarital affairs if they want to" did not seem relevant to use in the Japanese and Indian cultural contexts. Further, since the AWS items do not tap attitudes toward maternal employment, three of the items from the National Opinion Research Center's General Social Survey related to attitudes toward maternal employment were added to the AWS items. The responses to all items were made on a 5-point Likert-type scale (disagree strongly to agree strongly). Items were averaged to create a total score, such that higher values were less egalitarian. The Cronbach's alphas for this scale ranged from .76 in India, .79 in the U.S. and .80 in Japan.

### Self-esteem scale

The 10-item Rosenberg Self-Esteem scale (Rosenberg, 1979) was used to measure the young women's self-esteem. An example item from this scale is "I feel that I am a person of worth, at least on an equal basis with other". Responses were made on a 5-point Likert-type scale (disagree strongly to agree strongly). Items were averaged to create total scores, such that higher score indicated a more positive self-esteem. The co-efficient alphas ranged from .77 for India to .87 for the US (alpha for the Japanese sample was .82).

## RESULTS

### Comparisons across countries

One-way analyses of variance were performed to compare the means for women from the three countries on the major scaled variables for the study as shown in Table 2. Results indicated that the over all country effect for the gender-role egalitarianism scale was significant,  $F(2, 567) = 94.567, p < .0001$ . Overall scores were strongly egalitarian for all three countries. However, Tukey post hoc tests indicated that all three countries was significantly different from each other, with U.S. women having the most egalitarian attitudes and Indian women having the least egalitarian attitudes. Thus, Hypothesis 1 which states that women in the United States will be more egalitarian than women in Japan and India was supported. Descriptive data is presented for other major variables in the study (see Table 2) in order to make the overall pattern of results clearer. First, a one-way analysis of variance was performed to compare the mean for self-esteem. Result indicated that the overall country effect for self-esteem was significant,  $F(2, 567) = 118.463, p < .0001$ . Tukey post hoc tests indicated that all three countries were significantly

different from each other, with U.S. women having the highest self-esteem and Japanese women having the lowest self-esteem. In general, self-esteem scores were moderate for women from all three countries. No hypothesis about country differences in self-esteem had been made.

An independent samples t-test was performed for the service attendance item to compare mean service attendance in the United States and India. (This item was not administered in Japan). Mean service attendance was not significantly different for women from the two countries. Women from both countries reported attending religious services less than once a month on average. No prior prediction had been made regarding country differences in service attendance.

Cross-tabulations across the three countries were computed for the three categorical variables, educational aspirations, desired number of children and intention to work after marriage as shown in Table 2. In order to compare educational aspirations across countries, the first two response categories were combined since the number of women who did not intend to complete their college was so low. The chi-square for the combined response categories was significant,  $\chi^2(4) = 293.551, p < .0001$ . Inspection of the cells indicated that the Japanese women were most likely to stop with a Bachelor's degree or less, while the U.S. and Indian women were highly likely to pursue some kind of post graduate education, including Master's and PhD degrees.

Cross-tabulations across country and response category were also computed for future work plans after marriage. The overall chi-square was significant,  $\chi^2(4) = 47.3, p < .0001$ . Inspection of the cells indicated that U.S. women were most likely to want to work

full-time after marriage and the Japanese women were most likely not to want to work at all after marriage. In order to compare the desired number of children for women in the three countries cross-tabulations were computed. The last two response categories were combined, since none of the women in India desired three or more children. The chi-square for the combined response categories was significant ( $\chi^2 = 100.887, p < .0001$ ). Inspection of the cells indicated that the Indian women were most likely to want one child, while the American and Japanese women were more likely to desire two or more children.

#### Predictors of Gender-role attitudes

We used a correlation analysis within each country to test hypotheses 2 and 3. Correlations between the scales for the U.S., Indian and Japanese samples are reported in Tables 2. Hypothesis 2 stated that religious service attendance would be positively correlated with non-egalitarian gender-role attitudes in India and the United States. This hypothesis cannot be tested for Japan, since the service attendance item was not used in Japan. This hypothesis was supported for the United States. For the U.S. women, the gender-role egalitarianism scale was positively correlated with religious service attendance ( $r = 0.17, p < .005$ ), but the correlation was not significant for Indian women.

Hypothesis 3 stated that for the Indian and Japanese women, higher self-esteem will be negatively correlated with non-egalitarian gender-role attitudes. [No such prediction for self-esteem was made for the US women]. As predicted, higher self-esteem was negatively correlated with non-egalitarian attitudes for the Indian ( $r = -0.33, p < .005$ ) and Japanese women ( $r = 0.20, p < .005$ ), and there was no relationship between self-esteem and gender-role attitudes in the United States. Hypothesis 3 was supported for all three countries.



Hypothesis 4 stated that women who have higher educational aspirations will have significantly more egalitarian gender-role attitudes than women with lower educational aspirations in all three countries. A 3 x 3 factorial analysis of variance was performed for the three countries and three response categories in order to test hypothesis 4 (see Table 3). Univariate effects for country was significant,  $F(2, 560) = 53.574, p < .0001$ . This just reiterates the one-way findings for hypothesis 1 that gender-role attitudes differ by country. Univariate effects for educational aspirations was also significant,  $F(2, 560) = 5.611, p < .005$ . The overall interaction effect was not significant. Tukey post-hoc tests were conducted for each country separately. For the U. S, women who wanted a Bachelor's degree or less were significantly less egalitarian than women who wanted to pursue a Master's or a PhD degree. However, women who just wanted to pursue some post-graduate work did not significantly differ from either of the other groups. For India, Tukey post-hoc test indicated that women who wanted to pursue a Masters or a PhD degree were significantly more egalitarian than both women who wanted to do some post-graduate work and women who wanted only a Bachelor's degree (these two groups of women did not significantly differ from each other). For Japan, post-hoc comparisons revealed that gender-role attitudes did not significantly differ based on educational aspirations.

Hypothesis 5 stated that, in all three countries, women who intend to work full-time after marriage will have significantly more egalitarian gender-role attitudes than women who don't intend to work or intend working part-time A 3 x 3 factorial analysis of variance was performed for the three countries and three response categories in order to test hypothesis 5 (see Table 3). Univariate effects for country was significant,  $F(2, 561) = 26.572, p < .0001$ . This again reiterates the one-way findings for hypothesis 1 that

gender-role attitudes differ by country. Univariate effects for work plans after marriage was also significant,  $F(2, 561) = 15.050, p < .0001$ . The overall interaction effect was significant,  $F(4, 561) = 4.093, p < .005$  (see Figure 1). Tukey post-hoc tests were conducted for each country separately. For the comparisons indicated that women who wanted to work full time were significantly more egalitarian than women who wanted to work part-time and women did not intend to work (these two groups of women did not significantly differ from each other). For India, the Tukey post-hoc tests indicated that women who did not want to work at all were significantly less egalitarian than both women who wanted to work full-time and part-time (these two groups of women did not significantly differ from each other). For Japan, post-hoc comparisons revealed that gender-role attitudes did not significantly differ based on work plans.

Hypothesis 6 stated that, in all three countries, women who have more egalitarian gender-role attitudes will desire significantly lesser number of children than women with less egalitarian attitudes. A  $3 \times 4$  factorial analysis of variance was performed for the three countries and four response categories in order to test hypothesis 6 (see Table 3). Univariate effects for country was significant,  $F(2, 558) = 55.788, p < .0001$ . This just reiterates the one-way findings for hypothesis 1 that gender-role attitudes differ by country. Univariate effects for desired number of children was also significant,  $F(3, 558) = 4.841, p < .005$ . The overall interaction effect was not significant. Tukey post-hoc tests were conducted for each country separately. For the U.S and Japan, post-hoc comparisons indicated that women who wanted two or more children were significantly less egalitarian than women who wanted one child, those who wanted no children, and those who were unsure about the number of children they desired (these three groups of women did not significantly differ from each other). For India, post-hoc comparisons indicated that gender-role

attitudes did not differ based on desired number of children.

## DISCUSSION

The purpose of this study was to compare women with egalitarian and non-egalitarian gender-role attitudes in three countries. We used several item from the Attitudes toward Women Scale (AWS) and a few items from the National Opinion Research Center's General Social Survey (GSS). The GSS items added a new dimension (of attitudes toward maternal employment) to the Attitudes toward Women Scale, and its addition provides more complete information about gender-role attitudes. These items have not been used together as a scale in previous studies. However, when used as a scale in our investigation, the gender-role attitude scale produced fairly high Cronbach's alpha for all three samples (.76 in India, .79 in the U.S., and .80 in Japan). We therefore recommend that future investigators try and use the AWS in association with the GSS items, since they do produce reliable scales. Moreover, they also give the investigator information about attitudes towards maternal employment, in addition to telling us about attitudes toward division of labor in the home, women's rights roles and responsibilities in the educational and occupational realms, and suitability to specific professions that the AWS items seem to tap. A country-wise comparison was first conducted to compare the gender-role attitudes of the women in the three countries. As predicted, women in the United States were found to hold more egalitarian attitudes than women in India and Japan. This supports finding from previous studies where gender-role attitudes were compared between the United States and other countries (Chia, Allred, & Jerzak, 1997; Chia, Moore, Lam, Chuang, & Cheng, 1994; Morinaga, Frieze & Ferligoj, 1993). In all of these studies, the men and women in the United States were found to hold more egalitarian attitudes than men and women in other countries.

In addition we found that, women in the United States had significantly higher self-esteem than women in India and Japan. No hypothesis about country differences in self-esteem was made in this study. However future researchers might be interested in further investigating the nature and cause for these differences in the levels of self-esteem in these countries.

The religious service attendance item was not used in Japan because previous studies indicated that more than 80% of Japanese men and women did not ascribe to any specific religion (Yamagata, 1999). This finding was also confirmed in our study, almost 86% of the Japanese women in our study reported that they ascribed to no special religion. The religious service attendance item was, however, administered in India and the United States, and we expected that higher religious service attendance would be positively correlated with non-egalitarian gender-role attitudes. For women in the United States, we found that higher religious service attendance was positively correlated with non-egalitarian gender-role attitudes and this confirms findings from several previous studies (Bolzendahl & Myers, 2004; Brewster & Padavic, 2000; Bryant, 2003; Frieze, Ferligoj, Kogovsek, Renner, Horvat, & Sarlija, 2003).

Religious service attendance was not correlated with gender-role attitudes for the Indian women in our study. We attribute this finding to the nature of the Hindu religion, which is the predominant religion in India, and of our Indian participants. The Hindu religion does not require someone to frequently attend temple services and events in order to be devout. A Hindu can be devout, and at the same time not have visited a temple in his/her lifetime. Similar to the Japanese (Yamagata, 1999), the Hindus in general do not seem to distinguish between family rituals, religious rituals at home, and religious services in temples. Therefore, an item such as "How often

do you attend religious services”, might have been vague and ambiguous for the Indian respondents, and might not have elicited appropriate responses in terms of their religiosity. We therefore recommend that future investigations in countries like India include an item such as: “How would you rate your degree of religious feelings now?” with the following answer options (Extremely devoted, Devoted, Mild religious feelings, No religious feelings, Opposed to religious feelings - Atheist); which might give one a better understanding of the religious feelings of participants in these countries.

As expected, we found that self-esteem was negatively correlated with gender-role attitudes for the Indian and Japanese women. That is, women who had higher self-esteem were found to hold more egalitarian attitudes in both countries. This is to be expected in India, since traditionally in India, women were not expected to develop a sense of autonomy and were never encouraged to gain a sense of self-esteem or worth of their own (Bhogle,1999). Therefore women who hold conservative (non-egalitarian) attitudes could also be expected to have a lower sense of self-esteem in the Indian society. We also expected a similar relationship in Japan, since the women were not encouraged to develop a sense of autonomy or self-esteem in traditional Japan either (Madan, 2004). However, as expected, self-esteem was not correlated with gender-role attitudes in the United States. This corroborates findings in previous studies (Farmer, 19985; Spence & Helmreich,. 1978). Additionally, with the recent public debate about the importance of women being full-time homemakers, and propagation of these values by several U. S Senators (Santorum, 2005), there was no reason to expect that self-esteem would be related to gender-role attitudes in the United States.

As expected, we found that women who had higher educational aspirations in the United States and India also held significantly more egalitarian attitudes. This finding is in lieu with our expectations, and also supports findings from some past investigations that looked at gender-role attitudes of college men and women (Farmer, 1985; Seginer & Mahajna, 2004). However, this hypothesis was not supported for the Japanese women in our sample. We attribute this finding to the nature of the sample in Japan.

Close to 93% of the women in our Japanese sample chose to either not complete their education or stop with a Bachelor's degree. Therefore, with less than 7% of the sample that intended to pursue some form of post-Baccalaureate education, a comparison of gender-role attitudes by educational aspiration was not warranted due to the unequal distribution among the cells in our Japanese sample. One way of overcoming this drawback is to sample sufficient numbers of women from institutes for higher education, and/or graduate programs, and compare their gender-role attitudes with the attitudes of women by their educational aspirations in under-graduate programs or high-schools in Japan.

We also found that U. S and Indian women who intended to work after marriage held significantly more egalitarian attitudes than women who did not intend to work after marriage. Gender-role attitudes did not vary by work-plans for the Japanese women. In a survey conducted by the National Institute of Population and social security Research (2002), almost 74% of Japanese women reported that in their ideal life-course they would like to be employed in some form or fashion; either seeking re-employment after children are raised, combining work and family, married and employed with no kids, or pursuing a career without marriage. Less than 20% of the women reported wanting to be full-time homemakers.

Though in reality many Japanese women do have to give up their employment after child-birth, since 80 to 90% of the household chores become a woman's responsibility in Japan (National Institute of Population and Social security Research, 2002). Therefore, seeking either full-time or part-time employment, or choosing to drop out of the work-force after marriage does not seem to be a result of one's gender-role attitudes in Japan.

We, however, also found a significant interaction between country and work plans with respect to the gender-role attitudes held by women in these three countries. The Indian women who intended to work after marriage (whether full-time or part-time) had significantly more egalitarian gender-role attitudes than women who did not intend to work .Whereas in the United States women who intended to work full-time had significantly more egalitarian attitudes than women who either intended to work part time or not work at all. This could be attributed to the nature of job opportunities in the two countries. In the U.S, part-time jobs are valued much less than full-time career oriented jobs, whereas in India, given the nature of the Indian culture, any woman who intends to step out of the home and work would have to be significantly more egalitarian in her gender-role attitudes than a woman who chooses not to work, and ascribes to the traditional roles of a Hindu woman as a homemaker, wife and mother (Bhogle, 1999).

Lastly, we also found that women who intended to have two or more children in the U. S and Japan had significantly less egalitarian attitudes than women who desired fewer or no children. Several previous studies in the United States have found that women who have more children hold significantly less egalitarian attitudes (Bolzendahl & Myers, 2004; Harris & Firestone, 1998; Moya, Exposito, & Ruiz, 2000). This finding also corroborates with previous

research findings and labor statistics reported in Japan. The care of children is seen as the mother's primary responsibility in Japan, and women spend a significantly greater amount of time on housework and chores, almost 9 times greater than men (National Institute of Population and Social Security Research, 2002). Given this scenario, it is apparent that women who desire greater number of children in Japan would also hold more conservative (non-egalitarian) gender role attitudes. The desired number of children did not seem to relate to gender-role attitudes for the Indian women in our sample. This finding is attributed to condition of the Indian society and the over-population in India. Given the over-population and over-crowding in India, most urban couples do not desire more than one child (or at the most two children), due to issues of affordability. Our data was collected in a cosmopolitan urban Indian city, and in our sample as well, majority of the women desired one (36%) or two children (37%), with no one desiring more than two children.

Therefore desiring fewer children in urban India is not a function of one's gender-role attitudes, but a result of the economic and social conditions of the country. Thus, an urban Indian women could hold non-egalitarian attitudes when it comes to having lower educational aspirations, and not intending to work after marriage, but would still desire fewer children mainly because people cannot afford to have many children in urban India. It therefore appears that egalitarian women are more similar than different in three very different countries. Though, women in the U.S were found to be more egalitarian in their attitudes than women in India and Japan, it is important to note that women in all three countries were in general strongly egalitarian in their attitudes. This study therefore has implications for cross-cultural similarities, rather than differences, in the distinguishing characteristics of women who hold more egalitarian attitudes toward gender-appropriate roles.



REFERENCES

- Anderson, S.J., & Johnson, J. T. (2003). The who and when of “gender-blind” attitudes: Predictors of gender-role egalitarianism in two different domains. Sex Roles, 49, 527 - 532.
- Bhogle, S. (1999). Gender roles: The construct in the Indian context. In T. S. Saraswathi (Eds.), Culture, socialization and human development: Theory, research and applications in India (pp. 278-300). New Delhi: Sage Publications India Pvt. Ltd.
- Bolzendahl, C. I. , & Myers, D. J. (2004). Feminist attitudes and support for gender equality: Opinion change in women and men, 1974-1998. Social Forces, 83, 759-790
- Brewster, K. L., & Padavic, I. (2000). Change in gender-ideology, 1977-1996: The contributions of intracohort change and population turnover. Journal of Marriage and the Family, 62, 477-487
- Bryant, A. N. (2003). Changes in attitudes toward women’s roles: Predicting gender-role traditionalism among college students. Sex Roles, 48, 131-142
- Business Standard. (2003, June 18). Calling on women, more and more. (n.d.) Retrieved April 14, 2005, from [http://www.tracmail.com/news\\_detail.asp?id=35](http://www.tracmail.com/news_detail.asp?id=35)
- Chia, R. C., Allred, L. J. , & Jerzak, P. A. (1997). Attitudes towards women in Taiwan and China: Current status, problems, and suggestions for future research. Psychology of Women Quarterly, 21, 137-150

KANNAN - FRIEZE ET AL

- Chia, R. C., Moore, J. L. Lam, K. N., Chuang, C. J. & Cheng, B. S. (1994). Cultural differences in gender role attitudes between Chinese and American students. Sex Roles, 31, 23-30.
- CIOL: IT Unlimited. (2005, March 30). Women can now 'officially' work in night shifts. (n.d.). Retrieved April 14, 2005, from <http://www.ciol.com/content/news/2005/105033004.asp>
- Diwan, N., & Menezes, L. (1992). Attitudes toward women as a function of the gender and gender-role identity of Indian college students. The Journal of Social Psychology, 132, 791-793.
- Farmer, H. S. (1985). Model of career and achievement motivation for women and men. Journal of Counseling Psychology, 32, 363-390.
- Frieze, I. H., Ferligoj, A., Kogovsek, T., Renner, T., Horvat, J., & Sarlija, N. (2003). Gender-role attitudes in university students in the United States, Slovenia, and Croatia. Psychology of Women Quarterly, 27, 256-261.
- Ghosh, R. N., & Roy, K. C (1997). The changing status of women in India: Impact of urbanization and development. International Journal of Social Economics, 24, 902-917.
- Gibbons, J. L., Hamby, B. A., & Dennis, W. D. (1997). Researching gender-role ideologies internationally and cross-culturally. Psychology of Women Quarterly, 21, 151-170.
- Harris, R. H., & Firestone, J. M. (1998). Changes in predictors of gender role ideologies among women: A multivariate analysis. Sex Roles, 38, 239-252.

- Katurada, K., & Sugihara, Y. (2002). Gender-role identity, attitudes toward marriage, and gender-segregated school backgrounds. Sex Roles, 47,249-258.
- Madan, R. (2004). Women in India and Japan: A comparison. New Delhi: Manak Publications Pvt. Ltd.
- Madon, S. (1997). Information-based global economy and socioeconomic development: The case of Bangalore. The Information Society, 13, 227-243.
- Mason, K.O., & Lu, Y-H. (1988). Attitudes towards women's familial roles: Changes in the United States, 1977-1985. Gender & Society, 2, 39-57.
- McHugh, M.C., & Frieze, I. H. (1997). The measurement of gender-role attitudes. Psychology of women Quarterly, 21, 1 - 16.
- Ministry of Welfare and Labor . (2002). Jyosei roudou hakusho [White paper of Women's working]. Tokyo: Ministry of Welfare and Labor.
- Ministry of Welfare and Labor. (2004), Hataraku jyosei no jitsujyo [The actual situation of working women]. Tokyo: Ministry of Welfare and labor.
- Morinaga, Y., Frieze, I. H., & Ferligoj, A. (1993). Career plans and gender-role attitudes of college student in the United States, Japan, and Slovenia. Sex Roles, 29, 317-334.
- Moya, M., Exposito, F., & Ruiz, J. (2000). Close relationships, gender and career salience. Sex Roles, 42, 825-846.

KANNAN - FRIEZE ET AL

- Nakamura, K. (1999). Religious consciousness and practice of contemporary Japanese women. In Wakita H., Bouchy, A., & Ueno C. (Eds.), Gender and Japanese history religion and customs / the body and sexuality vol.1. Osaka: Osaka University Press
- National Institute of Population and Social Security Research. (2002). The fourth national survey on household changes report: Synopsis. Retrieved December 02, 2005 from <http://www.ipss.go.jp/index-e.html>.
- Patibandla, M., & Petersen, B. (2002). Role of transnational corporations in the evolution of a high-tech industry: The case of India's software industry. World Development, 30, 1561-1577.
- Rosenberg, M. (1979). Rosenberg Self-Esteem Scale (RSES). In K. Corcoran, & J. Fischer. (Eds. 2000). Measure for clinical practice: A sourcebook: Vol. 1. (3rd ed., pp. 610-611) NY: Free Press.
- Santorum, R. (2005). It takes a Family: Conservatism an the common good. Wilmington, DE: ISI Books.
- Seginer, R., Karayanni, M., & Mar'i, M. M. (1990) Adolescents' attitudes toward women's roles: A comparison between Israeli Jews and Arabs. Psychology of Women Quartely, 14, 119 - 133.
- Seginer, R., & Mahajna, S. (2004). How the future orientation of traditional Palestinian girls links beliefs about women's roles and academic achievement. Psychology of Women Quarterly, 28, 122-135.

## BAHRIA JOURNAL OF PROFESSIONAL PSYCHOLOGY

- 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. (1972). The attitudes toward women scale: An objective instrument to measure the attitudes toward the rights and roles of women in contemporary society. JSAS: Catalog of Selected Documents in Psychology, 2, 66-67 (Ms. No. 153).
- Spence, J. T., & Helmreich, R. (1978). Masculinity and femininity: Their psychological dimensions, correlates and antecedents. Austin, TX: University of Texas Press.
- Story, L. (2005, September 20) . Many women at elite colleges set career path to motherhood. New York Times. Retrieved September 20, 2005, from:  
<http://www.nytimes.com/2005/09/20/national/20women.html>.
- Thornton, A., Alwin, D. F, & Camburn, D. (1983). Causes and Consequences of sex-rele attitudes an attitude change. American Sociological Review, 48, 211-227
- Twenge, J. T. (1997). Attitudes toward women, 1970-1995: A meta-analysis. Psychology of Women Quarterly, 21, 35-51.
- Wall, S. N., Frieze, I. H., Ferligoj, A. Jarasova, E., Pauknerova, D., Horvat, J., & Sarlija, N. (1999). Gender role and religion as predictors of attitude toward abortion in Croatia, Slovenia, the Czech Republic, and the United States. Journal of cross-cultural psychology, 30, 443-465.
- Yamagata, K. (1999). Gendai jyosei no ikikata: Shuukyoteki / rinriteki kachiisiki to shinjyo [ The life style of contemporary women: Religious / ethical worth and feelings]. Kyoto: Minerva Shobo.

**Table 1**  
**The Gender-role Attitude Scale:**  
**(AWS and GSS items used in the current study)**

<b>Attitudes toward women Scale Items Used in the Current Study</b>	
1	Under modern economic, with women being active outside the home, men should share in household task such as washing dishes and doing the laundry.
2	There should be a strict merit system in job appointment and promotion without regard to sex.
3	The initiative in dating should come from the man.
4	A women should be as free as a man to propose marriage.
5	Parental authority and responsibility for discipline of the children should be equally divided between husband and wife.
6	women should worry less about their rights and more about becoming good wives and mothers.
7	A women should not expect to go to exactly the same places or to have quite the same freedom of action as a man.
8	sons in a family should be given more encouragement to go to college than daughters.
9	It is ridiculous for a woman to drive a truck and for a man to dust furniture.
10	It is childish for a woman to assert herself by retaining her maiden name after marriage.
11	It is only fair that male workers should receive more pay than woman, even for identical work.

**BAHRIA JOURNAL OF PROFESSIONAL PSYCHOLOGY**

12	<b>In general, the father should have greater authority than the mother in bringing up the children.</b>
13	<b>There are some professions and types of businesses that are more suitable for man than women.</b>
14	<b>The intellectual leadership of a community should be largely in the hands of men</b>
15	<b>The intellectual equality of women with men is perfectly obvious.</b>
<b>General Social Survey Items Used in the Current Study</b>	
16	<b>A working mother can establish as warm and secure a relationship with her children as a mother who does not work</b>
17	<b>Women are much happier if they stay at home and take care of their children</b>
18	<b>Preschool Children are likely to suffer if their mother works</b>

**Note:**

**\* Items reversed so higher values on all items would indicate less egalitarianism.**

**Measured on a scale from 1 = Strongly Disagree to 5 = Strongly Agree**

KANNAN - FRIEZE ET AL

Table 2

Comparisons across countries and correlations between scales

	United States	India	Japan		
Gender-role Attitudes Scale **	1.8 (0.4)a	2.4 (0.4) b	2.2 (0.4)c		
Self-esteem **	3.8 (0.7)a	3.3 (0.5) b	3.0 (0.5)c		
Service Attendance	3.1 (1.2)	3.1 (1.4)	–		
<b>Correlations between the scales</b>					
	Self-esteem	Service	Self-esteem	Service	Self-esteem
Gender-role Attitudes Scale	-0.05	0.17*	-0.33*	-0.09	-0.20*
Service Attendance	0.07	--	0.17	--	--
<b>[Educational Aspirations] Response Category</b>					
Probably won't complete college	0	0	3 (1.6%)		
Graduate with a Bachelor's Degree	68 (23.5%)	12 (13.6%)	176 (91.6%)		
Complete some post-graduate work	44 (15.2%)	33 (37.5%)	4 (2.1%)		
Graduate with Master's or PhD degree	177 (61.2%)	43 (48.9%)	9 (4.7%)		
<b>[Work Plans after marriage] Response Category y</b>					
Full-time	201 (69.6%)	46 (52.3%)	86 (44.6%)		
Part-time	79 (27.3%)	19 (21.6%)	72 (37.3%)		
Not at all	9 (3.1%)	23 (26.1%)	35 (18.1%)		
<b>[Desired number of children] Response Category z</b>					
Don't know	49 (17%)	17 (19.3%)	15 (7.8%)		
None	15 (5.2%)	6 (6.8%)	8 (4.1%)		
One	17 (5.9%)	32 (36.4%)	8 (4.1%)		
Two	120 (41.5%)	33 (37.5%)	122 (63.2%)		
Three or more	88 (30.4%)	0 (0%)	40 (20.7%)		
Sample size	289	88	193		



**Note:**

Gender-role attitudes and self-esteem were measured on a scale from 1 = strongly disagree to 5 = Strongly agree such that higher scores indicate less egalitarian attitudes and higher self esteem.

Standard deviation are in Parentheses.

\*\* Univariate effects for country,  $p < .0001$ ,

\* Correlations,  $p < .0005$

For each row, means with different subscripts are significantly different from each other.

Service attendance measured on the following 5-point scale: 1 = Never, 2 = Once a year or less, 3= Less than once a month, 4= Less than once a week, and 5 = Once a week or more. (Service Attendance was not available for the Japanese dataset).

$\chi^2$  Chi Square (Educational Aspirations) = 293.551,  $p < .0001$  (df = 4);

First two categories were combined.

$\chi^2$  Chi-Square (Work plans after marriage) = 59.790,  $p < .0001$  (df = 6)

$\chi^2$  Chi-Square (Desired number of children) = 100.887,  $p < .0001$  (df = 4); Last two categories were combined.

**Table 3**  
**Mean Gender-role Attitudes by response category**  
**for all three Countries**

	United States	India	Japan
<b>[Educational Aspirations]</b>			
Bachelor's degree or less	2.0 (0.4) a	2.6 (0.4) a	2.3 (0.4)
Complete some post-graduate work	1.9 (0.5) b, a	2.5 (0.3) a	1.9 (0.3)
Graduate with Master's or PhD degree	1.7 (0.4) b	2.3 (0.5) b	2.0 (0.3)
<b>[Work Plans after marriage]</b>			
Full-time	1.7 (0.4) a	2.3 (0.4) a	2.2 (0.4)
Part-time	2.0 (0.5) b	2.3 (0.4) a	2.3 (0.3)
Not at all	2.2 (0.4) b	2.8 (0.4) b	2.2 (0.3)
<b>[Desired number of children]</b>			
Don't know	1.7 (0.4) a	2.5 (0.5)	2.0 (0.3) a
None	1.6 (0.4) a	2.4 (0.3)	2.0 (0.3) a
One	1.6 (0.4) a	2.4 (0.5)	2.0 (0.6) a
Two or more	1.9 (0.4) b	2.5 (0.4)	2.3 (0.4) b
Sample size	289	88	193

**Note:**

Gender-role attitudes was measured on a scales from 1 = strongly disagree to 5 = strongly agree.

Gender-role attitude items were scored such that higher scores indicate less egalitarian attitudes.

Mean scores presented in the table (Standard Deviations are in Parentheses)

**For each column:** under each response category, means with different subscripts are significantly different from each other.

Univariate effects for country (in all three analyses),  $p < .0001$

Univariate effects for educational aspirations,  $p < .005$ .

Univariate Interaction between country and educational aspirations was not significant.

Univariate effects for work plans,  $P < .0001$

Interaction effect between country and work-plans,  $p < .005$

Univariate effects for desired number of children,  $p < .005$ .

Interaction between country and desired number of children was not significant.

**Figure 1**  
**Mean gender-role attitudes by work aspirations**  
**(after marriage) for all three countries**

**Mean Gender-role Attitudes by work aspirations**  
**(after marriage)**

