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Attitudes towards women managers: Development and validation of a new measure with Turkish samples

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This study reports the development of a new instrument measuring attitudes towards women managers (ATWoM). To test its reliability and validity data were collected from 456 Turkish employees from 23 organizations. Reliability and validity of ATWoM's final version were also tested with a separate sample comprised 312 students enrolled in junior–senior undergraduate and MBA programmes. ATWoM's psychometric properties were superior to one of the most widely used instruments measuring the same construct, Women as Managers Scale (WAMS). ATWoM was negatively correlated with traditional attitudes towards gender roles and positively correlated with respondents' report of quality in their interaction with women managers and general preference to work with women managers.

Keywords: Attitudes; Gender role stereotypes; Scale construction; Women as Managers Scale; Women managers.

“Think manager, think male” persists as a global theme (Schein, 2001; Schein, Mueller, Lituchy, & Liu, 1996) along with the phenomena of the glass ceiling (e.g., Morrison, White, & van Velsor, 1987; Powell, 1999) and glass escalator (e.g., Williams, 1992). A recent report in *The Economist* (2010) revealed that “within the next few months women will cross the 50% threshold and become the majority of the American workforce” (p. 7). Even

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though women's participation in the labour force and in the front-line managerial positions is increasing worldwide, the percentage of women in the upper echelons of the organizations has been more or less stable over the years (e.g., Davidson & Burke, 2004; Eagly, 2007; Lyness & Terrazas, 2006). On the other hand, recent findings suggest that there is a positive correlation between the number of women in top executive positions and the financial performance of organizations (Catalyst, 2004). This holds true even when women find themselves on a "glass cliff" (Ryan, Haslam, & Postmes, 2007) where their position of leadership is associated with high risk of failure. Ryan and Haslam (2005) examined the performance of the top 100 companies in Britain and found that the appointment of women to positions of power in companies struggling with financial downturn resulted in a marked increase in share price. More recently, Ferrary (2010) reported a negative association between the percentage of women managers and decline of stock price following the economic crisis in CAC 40 list.

Despite their success in leadership positions, the chronic underrepresentation of women in positions of authority in both economic and political spheres of life makes it necessary to understand the roots of negative attitudes towards women in management. Without such understanding we cannot fully appreciate women's complex and treacherous path to power, nor can we begin to speculate on how negative attitudes towards women managers can be changed (Eagly, 2007; Lyness & Terrazas, 2006).

A reliable, valid and up-to-date measurement of attitudes towards women managers is necessary to guide research and policy-oriented activities. Our study aimed at developing and validating a new attitude scale assessing Attitudes Towards Women Managers (ATWoM), and to compare the psychometric properties of ATWoM with one of the most widely used instruments in the literature: "Women As Managers Scale" (WAMS; Peters, Terborg, & Taynor, 1974). As will be discussed later, despite its wide use, WAMS suffers from a number of reliability and validity problems. More importantly it has outlived its shelf life. Nearly half of its statements such as, "It is less desirable for women than men to have a job that requires responsibility", or "Society should regard work by female managers as valuable as work by male managers" reflect the way society perceived women's roles in late 1960s. Most of the items such as these have a floor or ceiling effect and fail to discriminate among people's attitudes towards women in management in today's business world. Statements such as "Women are less capable of learning mathematical and mechanical skills than are men" contradict research findings in recent years regarding women's high performance in mathematics (e.g., Guiso, Monte, Sapienza, & Zingales, 2008; Schmitt, Clause, & Pulakos, 1996).

ATTITUDES TOWARDS WOMEN MANAGERS

Many theorists argue that gender typing (cognitive matching) of managerial positions or the socially constructed expectations for fit between the presumed requirements of these positions and attitudes towards gender roles play a significant role in the underrepresentation of women in positions of power in the US (e.g., Gorman, 2005; Heilman, 1983; Powell & Butterfield, 1989; Yoder, 2001) and elsewhere (e.g., for Turkey, Aycan, 2004; for Spain, Cordano, Owen, Scherer, & Munoz, 2002; for India, Pereira, 1978; for Greece, Mihail, 2006). Managers are evaluated favorably or unfavorably depending on their match with the existing role schemas corresponding to their position requirements and level in the hierarchy (e.g., Lyness & Heilman, 2006). These shared conceptions of what kind of personal competencies are needed in a particular role (i.e., role schemas) and what the society consensually believes to be the attributes of men and women (i.e., gender roles; Eagly & Karau, 2002) are expected to influence attitudes towards women managers.

In a recent review, Lyness and Terrazas (2006) identified three theoretical frameworks focusing on barriers to women's advancement to management roles: (1) cognitive structures such as attitudes towards gender roles or related cognitive processes, (2) structural barriers in organizations such as male domination of organizational power structures (i.e., limiting exposure to and interaction with exemplary women managers), and (3) larger societal and institutional context such as shared values and norms. In the present study we focused on all of these factors to validate ATWoM by examining the nomological net of attitudes towards women managers as measured by our new scale. Specifically, we examine ATWoM's relationship with cognitive structures in the context of attitudes towards gender roles. Gender roles describe qualities or behavioural tendencies believed to be desirable for men and women (Eagly & Karau, 2002, p. 574). Consistent with Lyness and Terrazas we argue that individuals holding less traditional attitudes towards gender roles would also have positive attitudes for women in management positions. We also examine ATWoM's relationship with structural barriers in an indirect way by focusing on the quality of experiences with women managers (we assume the frequency of high quality experiences with women managers to be lower in male-dominated organizational power structures). We expect that having high-quality encounter with women managers is related to positive attitudes to women in management. Finally, we addressed issues about the larger societal and institutional context through discussion on whether or not cultural context (i.e., Turkey) influences the development of the measure and its use in other contexts.

The sociocultural context

As a cultural as well as a geographical “bridge” between the “East” and “West”, and as the only secular state and democratic republic in the Middle East, Turkey offers an interesting vantage point for studying attitudes towards women managers. The reforms led by Atatürk, the founder of the new nation state, had serious implications for modernization and emancipation of Turkish women (Arat, 1999; Gündüz-Hoşgör, 1997). Emphasizing women’s role in the modernization process, Atatürk is known to have declared that “Our women must be even more enlightened, more virtuous, and more knowledgeable than our men!” (cited in Inan, 1967, p. 118). The Educational Reform Act in 1924 granted women equal rights in education; the Dress Reform Act in 1928 modernized the dress codes for women and men; and the reform in 1935 allowed women to vote and to be voted in elections. Turkish women’s right to vote and to be voted has been granted earlier than women in some of the European countries, such as France who obtained this right in 1944.

In contemporary Turkey, the percentage of women in high status professions can be considered high even in comparison to industrialized western societies: 19% of physicians, 30% of dentists, 34% of lawyers, and 23% of professors are women in Turkey (cf. Kabasakal, Ayca, & Karakas, 2004). Several studies conducted in Turkey in the 1970s, 1980s, and 1990s indicate that the ratio of women senior executives does not exceed 4% in the private sector or 7.6% in the public sector (Kabasakal, Ayca, Karakas, & Maden, in press).

The institutional and sociocultural context of Turkey makes it an apt representative of the “majority world” (Kagitcibasi, 2007) that is economically “developing” and culturally “traditional”. We expect that ATWoM’s applicability would not be limited to Turkey and be generalized to countries that have similar sociocultural and economic context as Turkey (i.e., volatile sociopolitical and economic environment, and a cultural context characterized by ingroup collectivism, high power distance and paternalism, and low gender egalitarianism; Ayca, 2006; Emrich, Denmark, & Den Hartog, 2004; Kanungo & Jaeger, 1990; Punnett, 2004). We also expect that the demographic profile of the sample used to develop ATWoM (i.e., professionals in private sector organizations in Turkey: white collar, urban, educated, middle-upper socioeconomic class) allows for the applicability of ATWoM in countries that are economically developed. The majority of participants in the present study were highly educated and employed in three of the largest conglomerates in Turkey, one of which was ranked 358th among the Fortune 500 companies in 2006. That our study sample is highly educated is particularly significant, because a recent study of young people in İstanbul showed that education made the most important difference in

value priorities (Bolak-Boratav, 2009). Indeed, a comparison of mean scores on WAMS in the current study with recent studies conducted in other countries show similarities in attitudes. WAMS mean score in the present study was 5.17 on a 7-point scale (higher scores indicate positive attitudes). In comparison, the mean for a US sample of professionals was 5.52 (Tomkiewicz, Frankel, Adeyemi-Bello, & Sagan, 2004); for a Maltese sample of managers and business students, it was 5.55 (Cortis & Cassar, 2005); and for a Polish sample professionals, it was 5.14 (Tomkiewicz et al., 2004).

MEASURING ATTITUDES TOWARDS WOMEN MANAGERS

Four measures, all developed in the 1970s, have been used frequently by researchers to assess attitudes towards women in managerial roles. Among them, the most widely used instrument is WAMS (Peters et al., 1974). Despite its popularity, WAMS suffers from numerous reliability and validity problems. First, the development sample consisted of undergraduate students, which raises concerns about its applicability in the actual work settings. Second, studies showed that WAMS had different reliability estimates (test-retest reliability) for different samples (Crino, White, & DeSanctis, 1981; see Ilgen & Moore, 1983, for a response to this criticism, and Crino, White, & Looney, 1985, for a rebuttal). It appeared to be a more reliable measure for managers than students, and for females than males (Crino et al., 1981). Third, the construct validity of WAMS is suspect. Changing factor structure was observed not only on the basis of gender and employment status (Cordano, Scherer, & Owen, 2003), but also on the basis of culture (e.g., Aycan, 2004; Cordano et al., 2002; Eker, 1989; Mihail, 2006). Fourth, WAMS also suffers from poor content validity. The items are not directly related to women in managerial positions. Some items are about working women in general, whereas others are about general gender roles and competencies of women. This causes content contamination. WAMS fails to contain items tapping the advantages of female leadership such as being communal, creating a sense of community and empowerment, and communicating effectively (Eagly, 2007). Lack of such items results in content deficiency. Finally, as stated earlier, WAMS has outlived its usefulness, given the changing employment conditions of women since the early 1970s. This criticism has been made more than 25 years ago by Ilgen and Moore (1983). Most of the the items have floor or ceiling effects, as evident from the restricted range (item means range between 5.5 and 6.5 on a 7-point scale) in a recent study in US and Chile (Owen, Scherer, Sincoff, & Cordano, 2003).

In addition to WAMS, the Attitudes Towards Women As Managers scale (ATWAM; Yost & Herbert, 1985), and the Managerial Attitudes Towards

Women Executives scale (MATWES; Dubno, Costas, Cannon, Wankel, & Emin, 1979) are also used to capture attitudes regarding women in managerial positions. However, these measures also suffer from various development and psychometric problems and hence they have not been used nearly as much as WAMS. ATWAM is based on an ipsative measure and forces respondents to choose from alternatives; its reliability is based on a small sample and it is difficult to score (Sashkin, 1979). MATWES was designed to measure only males' attitudes towards women managers. Its item generation was based on a student sample. It contained statements that were not directly related to attitudes towards women managers and some items presented more than one statement (e.g., "Male subordinates feel inferior when their superiors are females and those feelings may lead to poor performance by the male subordinates"). Having been established more than 25 years ago, the shelf-lives of all these measures may have expired. Another frequently used measure, Schein's (1973) Descriptive Index (SDI) does not directly assess attitudes towards women managers, but rather assesses the similarity of feminine and masculine characteristics to managerial characteristics. Also, the size of the development sample of the scale is problematic (24 male and female students).

THE CURRENT STUDY: DEVELOPMENT OF A NEW SCALE

The present study aims to develop a more reliable and valid alternative to WAMS. To substantiate this claim, ATWoM and WAMS are compared on all relevant analyses. As a secondary objective, we explored whether or not ATWoM had subscales, without proposing an *a priori* theoretical factor structure.

ATWoM items were developed on the basis of interviews with employees and selected on the basis of a number of empirical criteria (e.g., normal distribution of scores; see Methods section). Item selection was also guided by role theories of management (e.g., Blake & Mouton, 1969; Yukl, 1998; for an overview, see Schriesheim, Cogliser, Neider, Fleishman, & James, 1998). Early theories suggested a two-dimensional model for leadership role behaviours: task-oriented and relationship-oriented roles (e.g., Blake & Mouton, 1969; Fleishman, 1953). However, this two-dimensional model has been criticized for its narrow perspective: "task and relationship behaviours are too abstract to provide basis for understanding how leaders handle ... specific role requirements" (Yukl, 1998, p. 258). Yukl (1998) proposed a taxonomy of specific behaviours that are associated with leadership effectiveness in varying degrees. In this taxonomy, role behaviours were classified in four categories: giving and seeking information (e.g., monitoring, informing), making decisions (e.g., problem solving,

planning, and organizing), influencing people (e.g., motivating, recognizing, and rewarding), and building relationships (e.g., managing conflict and team building, supporting). The first two roughly corresponded to task role behaviours, whereas the last two corresponded to relational role behaviour of leaders. Research on women's leadership utilized this taxonomy to compare male and female leadership effectiveness on specific role behaviours (e.g., Martell & DeSmet, 2001). The final version of ATWoM reflects leadership role behaviours in all four categories of Yukl's (1998) taxonomy. There are 27 statements in the final version of ATWoM, among which 14 are negatively worded. Respondents rated their level of agreement with each statement on a 7-point Likert scale ranging from 1 ("strong disagreement") to 7 ("strong agreement"). Higher scores from the scale indicated positive attitudes towards women managers.

Construct validity: Gender difference, relationship with WAMS, gender roles, and quality of experience with women managers

Based on previous research evidence on gender differences in attitudes towards women managers (e.g., Bowen, Wu, Hwang & Scherer, 2007; Terborg, Peters, Ilgen, & Smith, 1977; Tomkiewicz et al., 2004), it is expected that women will report more positive attitudes compared to men. Schein (2007) found that "think manager–think male" attitude held by males pervaded over the time and across national boundaries (e.g., USA, UK, Germany, China, Japan) (see also Deal & Stevenson, 1998; Powell, Butterfield, & Parent, 2002; Sczesny, 2003). Men have been found to object female agency and leadership more than women do (Deal & Stevenson, 1998; Eagly & Carli, 2003). Empirical studies show that compared to their female counterparts, male managers and management students perceive men as more likely than women to have characteristics for managerial success (Brenner, Tomkiewicz, & Schein, 1989; Schein, 1973, 2001; Schein & Mueller, 1992; Schein et al., 1996). This is in line with the findings of research on social cognition that stereotypical thinking is more characteristic of the powerful (Fiske & Dépret, 1996). It would also make sense that as members of a higher status group and given their stronger ingroup identification and emphasis on boundary maintenance from very early on (Leaper, 2000; Maccoby, 1998), men would be more invested in guarding what they see as "male/masculine prerogative" and hence hold more negative attitudes towards women who make a claim for the management position. Again, as members of a higher status group, men might be expected to be more opposed to the prospect of being directed by and subordinate to members of a lesser status group. Therefore, we expect that women, compared to men, will have more positive attitudes towards women managers.

Hypothesis 1a: Women will score significantly higher on ATWoM than men.

We expect that gender differences in ATWoM would be smaller than that in WAMS. ATWoM's items tap attitudes towards *women in managerial positions*, whereas WAMS' items mix these with items tapping *negative* attitudes towards *women in general*, such as "On the average, a woman who stays at home all the time with her children is a better mother than a woman who works outside the home at least half time" and "Women are less capable of learning mathematical and mechanical skills than are men". Items such as these (i.e., reflecting negative attitudes towards women in general) are more likely to be objected by women and increase the gap between male and female scores on WAMS.

Hypothesis 1b: Gender difference in ATWoM score will be smaller than that in WAMS score.

Validation phase involved an examination of ATWoM's nomological network. To test the convergent validity, we examined the relationship of ATWoM with WAMS, attitudes towards gender roles, and the quality of experience with women managers. Although validity of WAMS is poor, as discussed earlier, it is used in this study to validate ATWoM because WAMS still includes items that measure the target construct and is still the most frequently used measurement of attitudes towards women managers today in different countries (Cortis & Cassar, 2005; Mihail, 2006; Tomkiewicz et al., 2004). ATWoM was expected to correlate positively with WAMS. However, because the item content of WAMS includes gender roles and societal norms that are not included in the content of ATWoM, the size of this correlation is expected to be moderate.

Hypothesis 2: There will be a moderately positive correlation between ATWoM and WAMS.

One of the most important barriers to women's career advancement has been as attitudes towards gender roles (Brenner, Tomkiewicz, & Schein, 1989; Schein, 2001; Schein et al., 1996). In line with the traditional attitudes towards gender role, women are characterized as emotional, intuitive, and socially oriented, whereas men are characterized as rational, dominant, and instrumentally and task-oriented (Willemsen, 2002). Role congruity theory (Eagly & Karau, 2002) contends that prejudice against women results from the incongruence between the gender roles attributed to women and the requirements of leadership roles. According to the theory, the incongruity between the communal qualities that people associate with women and the

agentic qualities that people associate with successful leaders results in less favorable attitudes towards women managers for two reasons. The *descriptive* nature of gender roles (i.e., women are more communal and less agentic) lead to the perception that women are less qualified for leadership positions. The *injunctive* nature of gender roles (i.e., what women ought to do) lead to perception of women in leadership positions less desirable as their leadership behaviour would be inconsistent with the appropriate and desirable female behaviours (Eagly & Karau, 2002).

Indeed, women who deviate from gender roles are perceived negatively in most societies (Heilman, 2001), and this should be especially true for those holding traditional attitudes towards gender roles. It is, therefore, expected that those holding traditional attitudes towards gender roles would have unfavorable attitudes towards women in managerial roles.

Hypothesis 3a: There will be a negative correlation between ATWoM and traditional attitudes towards gender roles.

We expect the correlation of traditional attitudes towards gender roles with ATWoM to be significantly lower than with WAMS. This is because the content of WAMS is confounded by items capturing traditional gender roles, as we mentioned in our critique of WAMS. Such confounding would certainly inflate the correlation between WAMS and traditional attitudes towards gender roles.

Hypothesis 3b: Traditional attitudes towards gender roles will correlate more strongly with WAMS than with ATWoM.

Structural changes such as the increase in the number of females in positions of power are expected to lead the more frequent experiences with women managers. Previous work experience with women managers has been found to correlate positively with favorable perceptions of women managers' motivation to manage effectively (Ezell, Odewahn, & Sherman, 1981). The contact hypothesis proposes that frequency of contact with the member of a negatively stereotyped group changes attitude in a more positive direction (Allport, 1954). Research evidence shows that the quality but not necessarily the frequency or length of such contact creates positive attitudes by ameliorating prejudices towards stigmatized outgroups (Deforges et al., 1991; Schwartz & Simmons, 2001). Employees who have high quality encounters with women managers are expected to be less likely to express stereotypical beliefs about them through automatic information processing. We therefore expect that the quality of work experiences with women managers will be related to positive attitudes towards women in

managerial roles. Furthermore, we expect this relationship to be stronger for ATWoM than for WAMS, because the item content of ATWoM is directly related to women in management, whereas that of WAMS is also related to women in general.

Hypothesis 4a: There will be a positive correlation between quality of work experience with women managers and ATWoM.

Hypothesis 4b: Quality of work experience with women managers will correlate more strongly with ATWoM than with WAMS.

Criterion-related validity: Preference to work with women managers

Attitudes are important for understanding and predicting social behaviour (Ajzen, 2001). In this study, we expected a relationship between attitudes towards women managers and strength of preference to work with women managers. The relationship between positive attitudes towards women managers and preference to work with them makes an intuitive sense and may appear as if it does not require testing. However, the literature suggests that the link between attitudes and behaviour is weak, and the link between attitudes and behavioural intention is modest, at best (e.g., Ajzen & Fishbein, 2005; Allen, Weeks, & Moffitt, 2005).

A longitudinal study on the attitudes towards women executives (Dubno, 1985) concluded that those holding negative attitudes would be predisposed to act on these attitudes when dealing with women in organizations (e.g., discriminate in selection and personnel decisions). We expected that positive attitudes towards women managers would predict a strong preference to work with them.

As discussed previously, the item content of ATWoM is specific to the work context as opposed to the item content of WAMS, which includes both general societal normative expectations and gender roles. Therefore, we argue that the relationship between ATWoM and preference to work with women managers would be stronger compared to the relationship between such preference and WAMS. If supported, this will provide an evidence for incremental validity.

Hypothesis 5a: There will be a positive correlation between ATWoM and preference to work with women managers.

Hypothesis 5b: ATWoM would predict preference to work with women managers over and above WAMS.

Control variables

In this study, age, education, and gender were treated as control variables. In a recent study, compared to older American women, younger American women were found to be more accepting of a female boss (Moore, 2002). Eker (1989) also found that young respondents (aged 35 and younger) had more positive attitudes towards women as managers, compared to old respondents (aged 46 and older). Perceptions about women managers' motivation to perform managerial work effectively have also been found to be influenced by age, such that younger subordinates hold the most positive perceptions (Ezell, Odewahn, & Sherman, 1980). It might be more difficult for older people to change habits and beliefs that may have been rooted for a longer period of time (Staines, Tavris, & Jayaratne, 1974). The longer the attitude is held and acted upon, the harder it is to change it (Tomkiewicz & Brenner, 1982). The difference between generations can also be explained by the role of differential childhood socialization practices on the development of images about women's role in society (Eker, 1989).

Education is another factor that influences the attitudes towards women managers. Studies find that participants with higher levels of education tend to hold the most favorable attitudes towards women as managers (Pereira, 1978; Terborg et al., 1977). This may be due to the fact that education is positively correlated with liberalism and negatively correlated with conservatism in general (Bolak-Boratav, 2009).

As discussed in detail in the previous section, gender is a factor that is expected to influence some of the key study variables, such as attitudes towards women managers and attitudes towards gender roles. Therefore, it is used as a control variable in analyses involving these variables (i.e., Hypotheses 2 to 5).

METHOD

Sample

Data were collected from two separate samples. The first sample, drawn from full-time employees of business organizations in Turkey, was used to develop (i.e., item selection and factor analysis) and validate (i.e., test of hypotheses) ATWoM. The second sample was drawn from a diverse group of students, including senior and junior undergraduate students, MBA and executive MBA students of a mid-size university in Turkey. The second sample was used to replicate the validity evidence of ATWoM (i.e., retest the hypotheses) in its 27-item final form.

The first sample was comprised 460 white-collar employees holding mid-level managerial and nonmanagerial positions in 23 different business

organizations. The organizations were large-scale and all but two (Turkish branch of the largest bank in the world and the largest NGO in Turkey) belonged to three of the largest conglomerates in Turkey. HR managers of companies were requested to provide a list of employees with at least one year of work experience. The distribution of participants across these organizations was almost equal. A variety of industries were represented in the sample including durable goods, IT, insurance, finance and banking, tourism, pharmaceutical products, retail, electronics, energy, and automotive. Four questionnaires had to be discarded due to extensive missing data. The final sample consisted of 202 male and 254 female respondents with the mean age of 32 years ($SD = 6.2$). The majority of the participants were highly educated: 10.5% had a high school degree, 62.1% had a university degree, 26.7% master's degree, and 0.7% had a doctoral degree. Participants were working mostly in nonmanagerial jobs (81%). The average tenure in the organization was 113.28 months ($SD = 74.58$). Finally, 56% of participants had a male manager, and 44% had a female manager.

The second sample was comprised 312 students enrolled in undergraduate (80%), executive MBA (12%), and MBA (8%) programmes. The mean age was 22.83 years ($SD = 5.62$). Fifty-two per cent of the participants were males. Half of the sample (51%) had no work experience, whereas the rest had the mean work experience of 20.49 months ($SD = 49.26$), ranging from 2 months to 228 months.

Measurement

The survey had seven sections. The same survey was used for both samples, except for the ATWoM scale for which a shorter version was used in the second sample.

ATWoM. A total of 68 items (36 positively worded and 32 negatively worded) were generated for ATWoM. Items were generated using data collected through one-to-one structured interviews with 43 white-collar employees working in eight companies belonging to one of the largest conglomerates in Turkey. The sample was chosen from urban, white-collar, middle- and middle-upper-class professionals in private sector of Turkey. Companies were selected according to the type of industry and four individuals on average were interviewed in each of the eight companies. Participants were also purposefully sampled so that their gender, gender of their supervisor, and the department they worked varied. In addition, participants had to have at least one year of work experience. Forty-eight per cent of this sample were male and the average age was 31.2. All participants had a university or a higher degree. Eighty-four per cent of the

participants were in nonmanagerial roles in their company and 43% had a woman manager at the time of the interview.

For item generation purposes interviewees were asked to complete the following two sentences: "In general, women managers are ...", and "Women managers, compared to men, are ...". After the sentence completion task is over, the participants were asked to indicate whether the adjective used in the sentences were positive, negative, or neutral with respect to women managers. For instance, once they had completed the sentence with the adjective "emotional", they were asked to indicate whether being emotional for a woman manager was a positive, negative, or a neutral managerial characteristic.

The interviews yielded a list of 14 key adjectives. We recorded the frequency of each adjective mentioned and the evaluation of these adjectives as positive, negative, or neutral. Most of the items in ATWoM (73%) were based on the adjectives that were grouped as either negative or positive by the majority of respondents (90%). For adjectives evaluated as positive by half of the respondents and negative by the other half (e.g., emotionality, ambition), two items were generated for both directions: one for negative (e.g., "The emotionality of women managers interferes with their work") and one for positive (e.g., "Women managers' emotionality enriches their professionalism").

For all items, the stem was the same: "In general, women managers ...". Sample items were "... are good listeners", "... are tolerant with their employees", "... act emotionally in decision making" and "... are lost in details". The new instrument had a 7-point Likert scale, ranging from 1 ("strong disagreement") to 7 ("strong agreement"), with high scores indicating positive attitudes towards women managers.

Respondents were asked to indicate the extent to which they agreed with each statement on a 7-point Likert scale, ranging from 1 ("strong disagreement") to 7 ("strong agreement"). ATWoM was developed originally in Turkish. The Turkish version was translated into English and back translated into Turkish by two bilingual university professors in the psychology department.

Prior to examining reliability and validity of the newly developed measure, item selection procedure was completed. Following the recommendations of de Vellis (2003), items that did not work were eliminated on the basis of four criteria: low item-total correlation, high skewness, high kurtosis, and significant correlation of the item with the social desirability scale ($p < .05$). Forty-one items were eliminated on the basis of these criteria, and the remaining 27 items (13 positively worded, 14 negatively worded) were used in the subsequent analyses (Appendix). The resulting items had low skewness, low kurtosis, high item-total correlations, insignificant correlations with the social desirability scale, and high internal

consistency (Cronbach's $\alpha = .91$ for the first sample and $.90$ for the second sample). It was also made sure that the remaining items represented the leadership role behaviours in Yukl's (1998) theory: making decisions (13 items on problem solving, planning and organizing, delegating); giving and seeking information (three items on monitoring, informing); building relationships (six items on supporting, managing conflict, and team building); and influencing (five items on motivating). The first two dimensions representing task role behaviours are tapped by 16 items, and the last two dimensions representing relational role behaviours are tapped by 11 items.

Attitudes towards gender roles. Treas and Widmer's scale (2000) was translated, adopted, and validated for Turkish by Aycan for the international work-family conflict project (Aycan et al., 2004). The scale consisted of 16 items, such as "Childcare is a women's primary responsibility and should not be shared by others" and "Men have to earn money for living, and women have to take care of the house and family". Respondents were asked to indicate the extent to which they agreed with each statement on a 7-point Likert scale, ranging from 1 ("strong disagreement") to 7 ("strong agreement"), with high scores indicating traditional attitudes towards gender roles. The internal consistency (i.e., Cronbach's alphas) of the scale was $\alpha = .88$ and $.90$ for the first and second samples, respectively.

WAMS. WAMS was translated and validated for Turkish samples by Eker (1989) and utilized by Aycan (2004). The original scale consisted of 21 items (Peters et al., 1974). Respondents were asked to indicate the extent to which they agreed with each statement on a 7-point Likert scale, ranging from 1 ("strong disagreement") to 7 ("strong agreement"). One of the items ("Men and women should be given equal opportunities for participation in management training programmes") was discarded in this study due to excessive missing data on this item. As management training programmes are not common in Turkish organizations, it was probably difficult for respondents to react to this item. Therefore, the scale used in the present study consisted of 20 items. The factor analysis conducted for WAMS with the present sample resulted in an uninterpretable four-factor solution (the findings could be obtained from the first author). Furthermore, these four factors were very different from those reported by Aycan (2004) and Eker (1989) with similar Turkish samples. We decided to interpret the scale as unidimensional following Terborg et al. (1977), to allow comparisons with ATWoM. After reversing the negatively worded items ratings were summed across items to create an overall score for attitudes towards women managers. High scores indicated positive attitudes towards women

managers. The internal consistency of the scale for the present study was $\alpha = .89$ and $.81$ for the first and second samples, respectively.

Quality of work experience with women managers. A single item was used to measure the participants' quality of experience with women managers: "In general, how would you characterize your experiences with women managers?" Respondents used a 5-point Likert scale, ranging from 1 ("very unsatisfactory") to 5 ("very satisfactory").

Preference to work with women managers. Two items were used to assess the preference for working with a woman manager. Items were: "I would prefer to work with a female manager, rather than a male manager" and "I would prefer to work with a male manager rather than a female manager" (reverse coded). Respondents were asked to indicate the extent to which they agreed with each statement on a 7-point Likert scale, ranging from 1 ("strong disagreement") to 7 ("strong agreement"). The two items correlated significantly, $r = .64$ for the first sample and $.58$ for the second sample, $p < .001$, and they were deemed to be adequate in capturing a simple construct, like the preference to work with women managers. Most frequently used measures of more complex constructs in industrial and organizational psychology, such as job satisfaction and turnover intentions, have been known to be captured by only two or three items (e.g., Cammann, Fichman, Jenkins, & Klesh, 1983; Wanous, Reichers, & Hudy, 1997). The ratings for these two items were averaged to create an overall score of preference to work with women managers. High scores indicate a stronger preference to work with women managers.

Social desirability. Socially desirable responding is a problem in attitude surveys, especially in collectivistic cultures (cf. Harzing, 2006). Therefore, we eliminated items highly correlating with social desirability in the item selection phase of scale development. Participants in the first sample filled out the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). The internal consistency was $\alpha = .50$. Unfortunately, the internal consistency of this measure could not be improved by eliminating items. We reluctantly opted for the retainment of this measure despite its low alpha and computed the correlation of each ATWoM item with the composite score of two items in the social desirability scale that had the highest intercorrelation, $r = .33$, $p < .01$. The decision to eliminate or retain the items remained the same after this additional analysis.

Demographics. Several demographic questions were asked at the end of the questionnaire, including age (an open-ended question), gender (a question requiring to tick boxes; coded as 0 = male, 1 = female), education

(a question requiring to tick boxes; coded as number of years completed in formal education), number of years in work life (an open-ended question), number of years in the current organization (an open-ended question), position (a question requiring to tick a box, coded as 0 = nonmanager, 1 = manager), sector (an open-ended question), current manager's gender (a question requiring to tick boxes, coded as 0 = male, 1 = female), and the duration of work with the current manager (an open-ended question).

Procedure

For the employee sample, questionnaires were given to the HR directors of the organizations to be distributed to employees who volunteered to participate in the study. In the informed consent form, participants were instructed that the survey was about work–life experiences. They were given a brief instruction about the parts of the questionnaire. It was clearly stated that the data were collected for the purposes of a scientific study, that anonymity would be ensured, and that, if interested, their organization would only receive the report of the overall findings of the study. Participants were asked to fill in the questionnaire during their free time, to enclose the completed questionnaire in an envelope provided by the researchers, and to put it in a closed and sealed box placed in the HR department. The questionnaire was self-administered and took approximately 15–20 minutes on average to complete. Students in the second sample filled out the survey in exchange for one extra credit. Students' participation was voluntary and anonymous. Students were instructed not to write their names or ID numbers on the surveys. They filled out a separate form to indicate their participation in the study to get the extra credit.

RESULTS

Partial correlations were computed to examine ATWoM's nomological net. Among demographic variables, gender and education were the only ones correlating with ATWoM. Hence, gender and education were used as control variables in the analyses testing Hypotheses 2 to 5.

Means, standard deviations, and confidence intervals of means of the study variables as well as their correlations for male and female samples are presented in Table 1. Note that Table 1 presents findings based on the first sample drawn from employees. All statistical analyses including those testing the hypotheses were conducted on both employee and student samples. The article reports findings based on the employee sample, because ATWoM's primary target for use is employees. Findings based on the student sample are not reported to save space, unless they differ from the employee sample.

TABLE 1
Descriptive statistics and intercorrelations among study variables for males and females in the employee sample

	<i>M (SD)</i>	95% <i>CI</i>	1	2	3	4	5	6	7	8	9
Males											
<i>M (SD)</i>	4.42 (0.67)			4.60 (0.92)	3.47 (0.99)	3.57 (0.85)	32.57 (6.46)	15.29 (1.66)	0.26 (0.43)	37.54 (42.5)	3.46 (1.45)
95% <i>CI</i>	[4.35, 4.55]			[4.50, 4.77]	[3.31, 3.59]	[3.44, 3.69]					[3.25, 3.68]
Females											
1. ATWoM	5.02 (0.73)	[4.91, 5.11]	–	.44***	–.20**	.47***	–.01	.12*	–.04	–.14*	.36***
2. WAMS	5.61 (0.70)	[5.52, 5.70]	.54***	–	–.72***	.44***	.05	.03	.09	–.05	.42***
3. TAGR ^a	2.49 (0.76)	[2.40, 2.62]	–.23***	–.56***	–	–.32***	.10	–.14*	.01	.13	–.35***
4. Quality of experience with WM ^b	3.62 (0.82)	[3.51, 3.73]	.40***	.27***	.009	–	–.08	–.03	–.12	–.13	.48***
5. Age	31.49 (5.93)		.06	.05	–.04	–.003	–	–.03	.52***	.55***	–.05
6. Education (years)	15.05 (1.77)		.15*	.10	–.29***	.09	.07	–	–.08	.07	.18**
7. Position ¹	0.13 (0.34)		.10	.05	–.03	–.005	.28***	.15*	–	.31***	–.05
8. Work tenure (months)	35.70 (33.19)		–.04	–.03	.09	.01	.26***	.15*	.08	–	–.16*
9. Preference to work with WM ^b	3.75 (1.4)	[3.55, 3.92]	.41***	.35***	–.20***	.43***	.02	.04	.04	.06	–

N = 456; **p* < .05, ***p* < .01, ****p* < .001; ¹Position was coded as 0 = nonmanager, 1 = manager; *CI* = Confidence Intervals. ^aTAGR = Traditional Attitudes Towards Gender Roles; ^bWM = Women Manager. Correlation coefficients above the diagonal were computed for male; those below the diagonal were computed for female respondents in the employee sample.

Hypothesis 1a proposed that women would score higher on ATWoM than men would. Hypothesis 1b further suggested that gender differences in WAMS would be greater than that in ATWoM. Hypotheses were tested by MANCOVA with WAMS and ATWoM as dependent variables, gender as the independent variable, and education as the control variable. Multivariate effect of gender was significant, Wilks' Lambda = 0.71, $F(2, 451) = 92.56$, $p < .001$, partial $\eta^2 = .27$. According to the univariate tests, gender difference for ATWoM was significant ($M_{\text{men}} = 4.42$, $SD_{\text{men}} = 0.67$; $M_{\text{women}} = 5.02$, $SD_{\text{women}} = 0.72$), $F(1, 452) = 77.06$, $p < .001$, partial $\eta^2 = .15$, and gender difference for WAMS was almost twice as much than that of ATWoM ($M_{\text{men}} = 4.60$, $SD_{\text{men}} = 0.92$; $M_{\text{women}} = 5.61$, $SD_{\text{women}} = 0.70$), $F(1, 452) = 179.80$, $p < .001$, partial $\eta^2 = .28$. The findings supported Hypotheses 1a and 1b.

Hypothesis 2 stated that there would be a positive correlation between ATWoM and WAMS. The partial correlation controlling for gender and education was significant, $r = .50$, $p < .001$, providing evidence for the convergent validity of ATWoM. As expected this correlation was moderate in size.

Hypothesis 3a stated that there would be a negative correlation between ATWoM and traditional attitudes towards gender roles. The partial correlation controlling for gender and education also lent support to this hypothesis, $r = -.24$ and $-.35$, $p < .01$ for the first and second samples, respectively. Hypothesis 3b suggested that this correlation would be higher for WAMS. The magnitude of the partial correlation between WAMS and traditional attitudes towards gender roles was indeed high, $r = -.66$ and $-.79$, $p < .001$ for the first and second samples, respectively, indicating considerable overlap between the constructs measured by these two scales. We used the Williams's T_2 to test differences between these two correlations in the first sample with a variable in common as suggested by Steiger (1980). The difference between these two correlations was significant for the employee sample, $T_2 = 11.84$, $p < .001$, supporting Hypothesis 3b.

In the next hypothesis ATWoM was expected to be positively correlated with the quality of interaction with women managers (Hypothesis 4a). Partial correlations controlling for education and gender showed that ATWoM correlated significantly with quality of work experience with women managers, $r = .46$, $p < .001$. Hypothesis 4b suggested that this correlation would be stronger for ATWoM than for WAMS. WAMS' correlation with quality of work experience with women was $r = .36$ ($p < .001$). Comparison of these two correlations confirmed Hypothesis 4b, $T_2 = 2.31$, $p < .05$.

Hypothesis 5a stated that ATWoM would positively predict preference to work with women managers. Furthermore, Hypothesis 5b stated that ATWoM would positively predict preference to work with women managers

over and above WAMS. We used hierarchical regression analysis to test the criterion validity of ATWoM and its incremental validity over WAMS (Table 2). In the first step, control variables (gender and education) were entered to predict the preference to work with women managers. In the second step, WAMS score was added to the equation and was found to be a significant predictor of the preference, $R^2 = .16$, $F(3, 436) = 30.58$, $p < .001$, 95% CI [.22, .54]. In the third step, ATWoM score was added. In this last equation, WAMS score did not have a significant beta weight, whereas ATWoM did, $R^2 = .22$, $F(4, 435) = 35.62$, $p < .001$, 95% CI [.38, .62], and the change in the explained variance was significant from Step 2 to Step 3. In other words, ATWoM positively predicted preference to work with women managers and had incremental validity over WAMS, supporting Hypotheses 5a and 5b. It should be noted that evidence of incremental validity was not found in the student sample; both ATWoM and WAMS were equally significant in predicting preference to work with women managers.

As a secondary analysis, we conducted a principal component factor analysis with varimax rotation to explore possible subscales of ATWoM (Table 3). Exploratory factor analysis revealed three orthogonal factors (with eigenvalues over 1) emerged in both samples of males and females. First, two factors were the strongest and they included items corresponding leadership role behaviours in Yukl's (1998) theory. The first factor was labelled as "task role behaviours". This factor included items corresponding to role behaviours in "giving and seeking information" and "making

TABLE 2
Hierarchical multiple regression analyses predicting preference to work with women managers

Predictor	ΔR^2	β
Step 1		
Education		.11*
Gender		-.09*
Step 2	.14***	
Education		.13**
Gender		-.15**
WAMS		.28**
Step 3	.06***	
Education		.09*
Gender		-.17**
WAMS		.12
ATWoM		.36**
Total R^2	.20***	

* $p < .05$, ** $p < .01$, *** $p < .001$. $N = 456$; employee sample.

TABLE 3
Principal components factor analysis of ATWoM with varimax rotation

Items	Factor loadings		
	1	2	3
In general, women managers:			
Factor 1: Task role behaviours			
1. ... have trouble overcoming challenges	0.75	0.20	0.15
2. ... cannot approach work events objectively	0.74	0.35	-0.01
3. ... cannot see things from a global perspective; get lost in details.	0.72	0.21	-0.10
4. ... often do not focus on their work due to nonwork responsibilities.	0.72	0.04	0.23
5. ... do not take an active stance in the face of problem; they remain passive.	0.71	0.17	0.20
6. ... act emotionally while making decisions.	0.71	-0.08	-0.01
7. ... often do not behave professionally when dealing with people.	0.71	0.32	-0.01
8. ... give concessions when they are not supposed to.	0.69	0.08	0.08
9. ... take time to produce results because they pay too much attention to details.	0.67	0.27	-0.10
10. ... cannot give priority to their work lives because of their family responsibilities.	0.62	-0.10	0.31
11. ... rush into decisions.	0.59	0.20	0.03
12. ... have difficulty delegating tasks to others.	0.57	0.11	-0.01
13. ... have trouble being thorough when necessary.	0.56	-0.25	0.14
14. ... engage in office politics to pursue self-centred interests and goals.	0.54	0.28	-0.16
Factor 2: Relational role behaviours			
15. ... help employees happily in the face of problems.	0.10	0.78	0.09
16. ... anticipate employees' problems and provide support.	0.25	0.77	0.09
17. ... empathize with employees' feelings and behave accordingly.	0.16	0.77	0.06
18. ... are understanding of employees problems.	0.14	0.76	0.15
19. ... know how to talk with their employees.	0.23	0.72	0.22
20. ... are easy to communicate with.	0.14	0.72	0.17
21. ... recognize employees' needs and problems in a timely manner.	0.22	0.65	0.15
22. ... are socially competent.	0.15	0.62	0.34
23. ... possess emotional sensitivity that enhances their professionalism.	-0.04	0.52	0.20
Factor 3: Work ethic of women managers			
24. ... work very hard.	0.13	0.26	0.70
25. ... pursue their work at the expense of their personal lives.	0.00	0.09	0.67
26. ... are orderly and organized.	0.04	0.41	0.59
27. ... monitor and guide employees to make sure that things run smoothly.	0.04	0.32	0.58
Percentage of explained variance	23.26	20.27	8.50
Eigenvalues	6.74	5.88	2.47
Cronbach's alpha	.91	.90	.70

$N=456$; employee sample.

decisions'' categories of Yukl's taxonomy. The factor explained 23.23% of variance for women and 22.17% of variance for men. It was composed of 14 items, such as "In general, women managers act emotionally while making

decisions (reverse coded)" ($\alpha = .90$ for both men and women). The second factor was labeled as "relational role behaviours". The items in this factor corresponded role behaviours in "building relationship" and "influencing others" categories of Yukl's taxonomy. This factor explained 21.93% and 17.10% of variance for women and men, respectively. It was composed of nine items (e.g., "In general, women managers recognize employees' needs and problems in a timely manner"), ($\alpha = .91$ and $.89$ for women and men, respectively). The third and relatively weak factor was labelled as "work ethic", explaining 7.68% variance for women and 9.32% of variance for men, which included items related to women managers' work ethic (e.g., "In general, women managers work very hard"). The internal consistency of these four items was $\alpha = .69$ and $.71$ for women and men, respectively. The first factor was correlated significantly with the second factor, $r = .32$ for women, $.36$ for men, $p < .001$, but not with the third factor, $r = .11$ for women, $.09$ for men, $p > .05$. A similar factor structure and explained variance was obtained for the student sample.

DISCUSSION

The purpose of the present study was to develop an up-to-date, reliable, and valid measure of attitudes towards women managers (ATWoM). The existing measures in the literature suffered from a number of psychometric problems, including construct contamination, construct deficiency, and unstable factor structure. The new scale was designed to overcome the problems of the previous measures—especially those of WAMS, the most commonly used attitude measure in the literature.

ATWoM has a number of strengths. First, ATWoM's items were driven from both theory (i.e., role theories of leadership) and empirical data (i.e., in-depth interviews with working men and women). The construction and selection of items was guided by the role theories of management. The items in the final version of the measure captured role behaviours proposed by Yukl's theory (1998). Exploratory factor analysis on both employee and student samples showed that these behaviours were mainly grouped as task role behaviours and relational role behaviours as suggested by the theory. Second, three separate samples were used to develop and validate ATWoM. Item development and scale validation were based on employee samples (i.e., item generation based on 43 employees from 8 organizations; item selection based on 456 employees from 23 organizations). A third sample, comprising 312 students enrolled in undergraduate and MBA programmes, was used to retest the validity of ATWoM in its final form. Third, ATWoM was a reliable measure of the construct for both gender groups and both employees and students. Fourth, the measure's construct and criterion-related validities were tested and supported in both employee and student samples. Items *directly* tapped attitudes towards women managers.

Therefore, the measure was also content valid. Assessment of different types of validities was not reported for previous measures. Finally, all items in ATWoM had a normal distribution, high item-total correlations, and low correlations with the social desirability scale. Items were written in short fragments with clear wording making it easy to understand and respond to. Each item presented a single, rather than multiple, attitude statement.

The selection of constructs that are used to validate ATWoM was guided by the theoretical framework offered by Lyness and Terrazas (2006), which suggested that attitudes towards women managers were related to situational barriers related to certain cognitive structures and processes and opportunities created by the organizations' structural context. Accordingly, we expected that positive attitudes towards women managers would be correlated with egalitarian attitudes towards gender roles (representing cognitive structures) as well as the quality of interactions with them (indirectly associated with presence of counterstereotypic examples in the organizational power structure). Our findings supported these hypotheses.

ATWoM and WAMS were compared on all validity estimates using both employee and student samples. First, WAMS had weaker *content validity* than ATWoM. The target of attitudes in ATWoM was clearly designated as "women in managerial roles", whereas that in WAMS was mixed to include women in social life, in work life, and in managerial/leadership roles. Second, WAMS suffered from *temporal validity* because its items reflected opinions of 1960s about the role of women in society. Third, WAMS had poorer *construct validity* than ATWoM. Because of construct contamination (i.e., items tapping women's roles in social life) WAMS' correlation with traditional attitudes towards gender roles was almost three times higher than that of ATWoM. On the other hand, its correlation with the quality of interactions with women managers was significantly lower than that of ATWoM. It should be noted that the correlation between traditional attitudes towards gender roles and attitudes towards women managers (as measured by both ATWoM and WAMS) was slightly higher for students than employees. Students are not as experienced as employees in work life and they have less exposure to the variety of profiles of women managers. Therefore, they may have more inclination to associate gender roles with managerial roles of women than employees do. Fourth, WAMS items included negative attitude statements towards *women in general* (e.g., "Women are less capable of learning mathematical and mechanical skills than are men") and created a wider gender gap than did ATWoM. This suggests that WAMS' relationship with gender is confounded (and therefore inflated) by the relationship of both of these variables with traditional attitudes towards gender roles. This points to a problem of content validity affecting construct validity of WAMS. Finally, WAMS was a weaker predictor of preference to work with women managers than ATWoM, also

indicating poorer *criterion-related validity*. In the employee sample, ATWoM predicted preference to work with women managers above and beyond WAMS, whereas in the student sample this finding was not replicated. This may be due to the fact that the majority of students (68%) did not make a clear preference to work with men or women managers, whereas the majority of employees did (73.9%).

Despite the strengths of the new measure, one important weakness that must be mentioned is that it had a low but significant correlation with the social desirability scale, $r = .099$, $p < .05$, even after eliminating all items that had significant correlation with the social desirability scale. However, it should also be noted that the correlation was insignificant after controlling for gender and education, $r = .06$, $p > .05$. Rudman and Kilianski (2000) contend that, compared to implicit measures, explicit measures of attitudes are more prone to socially desirable responding. In future studies, more can be done towards assuring anonymity of participants and confidentiality of the results obtained from ATWoM. The most frequently utilized measures of attitudes towards women in management in the literature are explicit measures like ATWoM. Few studies used implicit measures to test the convergence of findings with explicit measures. For example, Rudman and Kilianski used both implicit and explicit measures of attitudes towards female authority and concluded that “The intermethod independence of these measures shows that gender equality may be hindered by both automatic and conscious gender authority associations” (p. 1326). The convergence of findings between implicit and explicit measures of attitudes (Schwarz, 2008) leads many researchers to opt for explicit measures that are easier to administer and less costly compared to computer-based implicit measures of attitudes.

Although the samples for the present study were relatively large, the sampling strategies used may limit the generalizability of the findings. Future studies should benefit from random sampling strategies. The employee data were collected from 23 organizations, which provided a sufficient amount of diversity of workplace characteristics. However, all of the companies were from private sector organizations except for one (i.e., an NGO), and all had headquarters in Turkey except for one (i.e., Citibank). Although this scale was developed and validated using data only from one country, namely Turkey, we argue that neither the scale items nor the relationships with the other study variables are culture bound, and that the findings of the study are not limited to Turkey. As discussed earlier, the demographic characteristics of our sample and the type of organizations they work for are highly similar to their potential counterparts in economically developed and industrialized countries. As such, our sample is more likely to represent the white-collar, professional, well-educated, urban, middle-upper income level employee populations in the globalized

corporate world, than the typical Turkish working class. Nonetheless, there is an obvious need for cross-cultural validation of ATWoM, just as there is a need for cross-cultural validation of scales developed in the US and in other countries.

ATWoM is a reliable and valid measure that can be used in future research and in applied settings. Organizations aiming at raising awareness about prejudice against women managers and designing intervention programs to promote diversity can use ATWoM as a tool to assess the effectiveness of intervention programs. ATWoM may also be used longitudinally to detect changes in attitudes towards women in authority over time, and thus provide insight on the pace, direction, and possibility of change to accommodate women in managerial positions (e.g., Twenge, 1997).

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APPENDIX: ATWOM

Please indicate the extent to which you agree with each statement by writing the appropriate number from the following scale in the blanks.

1	2	3	4	5	6	7
Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree

In general, women managers:

1. _____ ... have trouble overcoming challenges. (R)
2. _____ ... help employees happily in the face of problems.
3. _____ ... anticipate employees' problems and provide support.
4. _____ ... cannot approach work events objectively. (R)
5. _____ ... empathize with employees' feelings and behave accordingly.
6. _____ ... cannot see things from a global perspective; get lost in details. (R)
7. _____ ... work very hard.
8. _____ ... often do not focus on their work due to nonwork responsibilities. (R)
9. _____ ... are understanding of employees' problems.
10. _____ ... do not take an active stance in the face of problem; they remain passive. (R)
11. _____ ... act emotionally while making decisions. (R)
12. _____ ... know how to talk with their employees.
13. _____ ... often do not behave professionally when dealing with people. (R)
14. _____ ... pursue their work at the expense of their personal lives.
15. _____ ... are orderly and organized.
16. _____ ... give concessions when they are not supposed to. (R)
17. _____ ... take time to produce results because they pay too much attention to details. (R)
18. _____ ... cannot give priority to their work lives because of their family responsibilities. (R)
19. _____ ... are easy to communicate with.
20. _____ ... sense employees' problems and needs in a timely manner.
21. _____ ... rush into decisions. (R)

22. _____ ... are socially competent.
23. _____ ... have difficulty delegating tasks to others. (R)
24. _____ ... monitor and guide employees to make sure that things run smoothly.
25. _____ ... have trouble being thorough when necessary. (R)
26. _____ ... engage in office politics to pursue self-centred interests or goals. (R)
27. _____ ... possess emotional sensitivity that enhances their professionalism.

(R) = Reverse coded items.