

The Educated Worker: An Empirical Investigation of Expectations of Leadership

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Meta-analytic studies have found that men and women are different in areas such as how they approach morality, forgiveness and leadership. Similarly, meta-analyses have found that increased education is related to increased self-esteem, job attitudes and social capital. In this study, 577 working adults from the state of Texas completed the Project Globe Leadership Questionnaire. This study found that both gender and education were related to the intensity with which participants believed particular leadership characteristics contributed to and inhibited outstanding leadership. Formal education was related to stronger ratings of the importance of leadership behaviors.

INTRODUCTION

When conducting research in the field of leadership many options exist. Some researchers, for example, perform focus group interviews or case studies. The information garnered in these types of studies is very rich. However, typically these types of studies are conducted with small samples, which limit the ability to generalize their results. Additionally, even with methods of triangulation, these types of studies tend to lack something equivalent to an alpha level for establishing significance. They are primarily very rich, but descriptive information.

The majority of quantitative leadership studies tend to use the survey method. Generally, these types of studies fall into one of three designs. In *Leader-Only* types of studies, researchers ask leaders to complete self-assessments of how they lead. Demographic comparisons are often made, such as self-assessed leadership styles of women versus men. Leaders might also take a second instrument such as a personality assessment to assess the relationship between the constructs measured. For example, a researcher might explore relationships between leaders' personality scores and self-assessed leadership scores.

Leader-Only types of studies suffer from the problem of leader self-perception. Any working adult has encountered at least one leader who was a megalomaniac. The followers of that particular leader believed she/he was a very poor leader. Yet, the leader's inflated sense of self would result in that leader completing a self-assessment that would indicate she/he was an extraordinary leader. To some degree, the law of large numbers eventually accounts for some of this self-assessment bias, but it will still be present in leader-only types of studies.

In an *Other-Than-Leader* type of study, some combination of stakeholders assesses how the leader leads. Often these raters are the leader's followers, but they can also be peers, the leader's own boss or some other stakeholder group. This type of assessment provides a more realistic assessment of how the leader actually leads than does a leader-only study. One challenge to an other-than-leader study, however, is co-variation. While not absolute, in a large percentage of these types of studies follower independent variables such as age, experience and education often co-vary with the leader.

For example, a 60 year old leader who holds a masters degree and has been leading for 20 years "typically" is at an elevated level of an organization, compared to a leader who is 22, holds a bachelors degree and who is in her/his first year as a leader. More times than not, the followers who work directly for the 20 year veteran are also likely to have many years of leadership experience, advanced education and so forth. Conversely, the followers of the younger, new leader, more than likely hold educational credentials of college or less and have more than likely had limited leadership experiences themselves. These co-variations between leader and follower demographics can be, to some degree, controlled for statistically, but a large number of other-than-leader types of studies do not report the results of the many spurious follower variables that might influence ratings of the leader.

A third type of study is often called *Implicit Leadership*. In this type of study, no "actual" leader is rated. Rather, the concept of desired or outstanding *leadership* is measured. In these types of studies, participants complete a survey concerning their prototypes of what constitutes outstanding leadership. There may be a second instrument, such as personality, as well, in order to look at associations between the second construct and participants' implicit views or what constitutes outstanding leadership, or the leadership scores obtained may be analyzed for participant demographics.

To date, the largest study of implicit leadership was the Globe Research Project (House, 2004). This study surveyed over 17,000 participants worldwide about what contributed to the participants' concepts of outstanding leadership. The 17,000 participants were from 62 countries/societies.

The primary focus of the Globe study was to analyze how cultural preferences predicted leadership preferences. While the study added significantly to the body of literature related to implicit leadership, the study did not report how participants' gender and education moderated their views of leadership.

The Impact of Education

Adults develop and grow through a wide range of activities. Most of these influences are informal and difficult to codify empirically. Adults are influenced through things such as life experiences, faith activities, self-help books and the media they watch. Because these influences are so unique to each individual, broad measures such as age, work experience or various socio-economic indicators are often used in research in order to capture the effects of some of these influences.

One variable that is regularly used is formal education. One advantage of using formal education as a predictor variable is that accredited education within a country tends to be somewhat similar from person to person. Certainly, the experiences vary by university and major, but generally, a bachelor's degree represents a common duration and level of rigor across individuals. The same holds true for a masters, doctorate and so forth.

Education as a predictor variable has been studied to the point that many meta-analyses exist. A sampling of recent meta-analytic studies, for example, shows that education predicts job attitudes, entrepreneurial success, self-esteem, social capital, and receiving mentorship. Ng (2010), in a meta-analysis of 800 articles, found that education level was a positive predictor of job attitudes. Huang (2009) synthesized 154 evaluations on social trust and 286 evaluations on social participation and found that education was positively correlated to individual social capital. Twenge and Campbell (2002), in a meta-

analysis of 446 samples representing 312,940 participants, found a positive relationship between education level and self-esteem. Hezlet (2003), in a study of 65 independent samples representing 17,087 participants, found that education level was positively associated with receiving mentorship. In a meta-analysis of 70 independent samples, representing 24,733 participants, Reeves et al (1997), found a relationship between entrepreneurial human capital investments, coded as education and/or experience and entrepreneurial success.

The Impact of Gender

Gender has also been studied in a variety of academic areas. Meta-analytic studies have found that women score higher than men in areas such as behavioral self-esteem and moral– ethical self-esteem, care-orientation towards morality, forgiveness, collaborative computer-mediated communication, extraversion, anxiety, trust and nurturance. Men score higher than women in areas such as assertiveness, overall self-esteem, the self-esteem domains of physical appearance, athletic, personal, and self-satisfaction.

Gentile et al (2009), meta-analyzed 115 articles and dissertations representing 32,486 participants to explore gender differences in reported self-esteem. Males scored higher than females on the self-esteem domains of physical appearance, athletic, personal, and self-satisfaction. Females scored higher than males on the self-esteem domains of behavioral conduct and moral– ethical self-esteem. Major et al (1999) conducted a meta-analysis of 226 samples representing 82,569 participants to explore gender differences in reported self-esteem. The study found that males reported higher global self-esteem than female participants did.

Miller's (2008) meta-analysis of 53 empirical articles representing 15,731 participants found women were more forgiving than men across a variety of sample types, measures of forgiveness and in both US and non-US samples

Jaffee and Hyde (2000) performed a meta-analysis of 113 studies representing 5,783 male and 6,654 female participants. Women scored higher than men did on Care Orientation - characterized by a focus on maintaining relationships, responding to the needs of others, and a responsibility not to cause hurt. Men, on the other hand, scored higher than women did on Justice Orientation – characterized by principles of fairness and equity such as those assessed in conventional measures of moral reasoning.

Li's (2005) meta-analysis of 50 studies involving 63,889 users found that female users had a significantly higher frequency of collaborative instances using computer-mediated communication than males and females were more collaborative and personally oriented than males.

Feingold (1994) analyzed 68 studies representing 17,729 participants to compare differences in personality between men and women. Males were found to be more assertive and had slightly higher self-esteem than females. Females scored higher than males on extraversion, anxiety, trust and nurturance. The differences were consistent across ages, years of data collection, educational levels, and nations.

Purpose of the Study

Although Project Globe was a landmark study, a variety of other variables besides culture undoubtedly contribute to the implicit prototypes of outstanding leadership that individuals hold. This study used the *Project Globe Research Survey* to assess 21 measures of leadership. Four demographic variables were then analyzed: participants' gender, years of formal education, age and years of management/leadership experience.

Leadership Findings from Project GLOBE

The GLOBE Study measured leadership preferences in 62 societies worldwide. To simplify interpretation of global differences, the study created clusters of countries. The ten clusters created were Eastern Europe, Latin America, Latin Europe, Confucian Asia, Nordic Europe, Anglo, Sub-Saharan Africa, Southern Asia, Germanic Europe, and the Middle East. Table 1 provides the mean scores for each global cluster for each of the second-order dimensions of leadership.

TABLE 1
LEADERSHIP PREFERENCES FOR 10 GLOBAL CLUSTERS

Societal Cluster	CLT Leadership Dimensions					
	CV	TO	P	HO	A	SP
Eastern Europe	5.74	5.88	5.08	4.76	<u>4.20</u>	3.67
Latin America	5.99	<u>5.96</u>	5.42	4.85	3.51	3.62
Latin Europe	5.78	5.73	5.37	4.45	3.66	3.19
Confucian Asia	5.63	5.61	4.99	5.04	4.04	3.72
Nordic Europe	5.93	5.77	5.75	<u>4.42</u>	3.94	<u>2.72</u>
Anglo	<u>6.05</u>	5.74	5.73	5.08	3.82	3.08
Sub-Saharan	5.79	5.70	5.31	5.16	<u>3.63</u>	3.55
Southern Asia	5.97	5.86	5.06	<u>5.38</u>	3.99	3.83
Germanic Europe	5.93	5.62	<u>5.86</u>	4.71	4.16	3.03
Middle East	<u>5.35</u>	<u>5.47</u>	<u>4.97</u>	4.80	3.68	<u>3.79</u>

Note. CV – Charismatic/Value-Based, TO - Team Oriented, P – Participative, HO – Humane-Oriented, A – Autonomous SP – Self-Protective. Items shown underlined and in bold are highest and lowest societal preferences for that dimension of leadership.

In interpreting the scores, it is important to understand that participants responded to 112 leadership behaviors on a Likert scale that ranged from one to seven. A rating of “one” was actually a very strong, negative rating, indicating that the respondent believed that that leadership behavior greatly inhibits a person from being an outstanding leader. A rating of “seven,” on the other end of the Likert scale, represented a belief that that leadership behavior greatly contributes to a person being an outstanding leader. Scoring options of “two” or “six” represented somewhat inhibiting or somewhat contributing to outstanding leadership. Scoring options of “three” or “five” represented slightly inhibiting or slightly contributing to outstanding leadership. The middle Likert choice, 4, represents that that behavior has no impact on a person being an outstanding leader.

For leadership, mean scores above 4.5, the terms “contribute to” or “preferred” are an acceptable interpretation, and for mean scores below 3.5, the phrases “inhibited” or “tolerate” are an acceptable interpretation. Using this lexicon, generally, both first and second order leader behaviors related to being charismatic, team-oriented, humane-oriented, and participative were believed to contribute to being an outstanding leader, with some societies holding stronger opinions about the degree to which these behaviors contributed to outstanding leadership than other societies. Autonomous and self-protective leadership, on the other hand, generally fell in the range from having no impact to inhibiting outstanding leadership, with some societies holding stronger opinions on the degree to which these behaviors were a liability or inhibitor.

Table 1, for example, illustrates that globally, self-protective leader behaviors were believed to inhibit a person from being an outstanding leader. Nordic Europe’s mean of 2.72 indicates that that societal cluster believed self-protective leader behaviors somewhat inhibit outstanding leadership. Conversely, the Middle East’s mean of 3.79 indicates that that societal cluster bordered on believing self-protective behavior has no impact on being an outstanding leader. Since neither societal cluster actually embraced self-protective leadership, in this example an accurate interpretation is that Nordic Europeans held stronger beliefs that self-protective leadership inhibited outstanding leadership than did the Middle East societal cluster. It would be incorrect to conclude that the Middle East societal cluster ($M = 3.79$)

“preferred” self-protective leadership more than the Nordic cluster ($M = 2.72$). A better interpretation would either be that the Nordic cluster believes self-protective leadership inhibits outstanding leadership more than the Middle East cluster, or that the Middle East cluster is willing to tolerate self-protective leadership more than the Nordic culture.

Table 1 indicates that the Anglo societal cluster, which includes the United States, had among the highest global means for charismatic/value-based, participative, and humane-oriented leadership, but among the lowest means for self-protective, indicating that status conscious, face saving, and self-centered attributes strongly inhibit effective leadership.

Education and Leadership

A limited number of studies have reported relationships between education and leadership. Generally, these studies indicate that as education increases, effective leadership behaviors also increase. Kearney and Gerbert (2008), for example, found that team leaders in a multi-national pharmaceutical company who had obtained a Masters degree were rated higher on emphasizing team performance, than those with a bachelors or less. Xirasagar (2006) found that physician leaders who also held an MBA were rated higher on transformational leadership than those without an MBA. Turner (2002) found an inverse relationship between education and transactional leadership. Stout-Stewart (2005) found a positive relationship between education and all five Exemplary Leadership Practices measured on the *Leadership Practices Inventory*. Reeves et al (1997) found that substance abuse counselor supervisors who held graduate credentials reported using more interpersonally-sensitive and less task-oriented behaviors than supervisors who held a bachelors degree.

Gender and Leadership

In the seminal meta-analysis of gender and leadership, Eagly, Johannesen-Schmidt and van Engen (2003) meta-analyzed 45 studies which compared men and woman on measures of transformational, transactional, and laissez-faire (passive-avoidant) leadership styles. The studies were conducted with people occupying leadership roles who were rated by their subordinates, peers, and superiors using the *Multifactor Leadership Questionnaire*. The results of the meta-analysis revealed that female leaders were more transformational and scored higher on the subscales of charisma, idealized influence, inspirational motivation, intellectual stimulation, and individual consideration than their male counterparts. Female leaders also scored higher than males on the first subscale of transactional leadership, contingent reward. Male leaders scored higher on the subscales of management by exception active and management by exception passive. The study also found that women surpassed men in areas of leadership styles that were positively related to effectiveness while men’s leadership styles had a negative relationship to follower effectiveness.

Age and Leadership

While there are many studies that report leadership style and age, the vast majority of those studies are leader self-assessment studies in which leaders report how they believe they lead, rather than studies in which followers actually rate their leaders. Several, large sample studies, however, in which the leadership ratings are those of the followers do exist. The overall findings of this body of literature seem almost stereotypical. Older leaders tend to be rated higher on dimensions of leadership such as being calm, conservative, considerate, cooperative and deferent to authority. Younger leaders tend to be rated higher on being energetic, exciting and friendly, but tend to emphasize short-term results, have a production focus, and are somewhat self-focused.

In one of the largest studies performed, Sessa et al (2007) analyzed 79,866 direct report ratings of leaders using the *Leadership Effectiveness Analysis* instrument. Participants came from more than 6,000 North American companies in 23 industries across 48 states. Older leaders were rated as more calm and as using a more considered approach that draws on the skills and abilities of others. Younger leaders were rated as more energetic. They were also seen as focused on attaining short-term results and were more self-centered.

Kabacoff and Stoffey (2001) administered the *Leadership Effectiveness Analysis* to 640 managers in the 25 – 35 year range and 640 managers in the 45 – 55 year range. Each manager underwent 360-degree evaluations from followers, peers and supervisors. Participants were from 282 North American companies. Older managers were rated higher on leadership that emphasized being conservative, practicing restraint, cooperation and deference to authority. Younger leaders were rated higher on strategic thinking, excitement, having a tactical, management focus and emphasizing production.

In a study of 285 team members and 21 team supervisors in the pharmaceutical industry Kearney (2008) found that the relationship between transformational leadership and team performance was positive when the leader was older than the other team members, but non-significant when the leader's age was closer to the mean age of the team members

Barbuto et al (2007) used the *Multifactor Leadership Questionnaire* with 234 followers of 56 leaders from a variety of organizations. The 46+ age group was rated the highest for transformational leadership including the subscales of idealized influence, intellectual stimulation, individualized consideration, and effectiveness. The lowest ratings were given to the 36–45 age groups for intellectual stimulation and individualized consideration.

Gilbert (1990) asked 1,634 employees to rate their immediate supervisors on 12 dimensions of leadership. Significance for leader age was only found on four of the 12 dimensions. Older leaders tended to delegate more effectively than younger leaders, while younger leaders were rated higher in the leadership dimensions of being a calming influence, being friendly and enjoyable.

Experience and Leadership

The literature on experience is mixed. Several studies have found no relationship between leadership experience and ratings of leadership. Laurent (2007), for example, in a study of 238 athletic training leaders, found no relationship between years of leadership experience and any of the five measures of the *Leadership Practices Inventory*. Corona (2010) found no relationship between years of professional experience, and emotional intelligence among a population of 103 individuals from a national Hispanic American business organization. In a study of 870 elementary school principals Eren (2011) found no relationship between the experience of the principals and their technological leadership behaviors. Juras (2008) analyzed differences in financial performance of top performing and worst performing bank holding companies as a result of a series of board of directors' characteristics. No differences were found in the companies' Return on Assets or Return on Equity as a result of the average tenure of the board of directors of the companies.

Other studies have found limited relationships between experience and leadership. In a meta-analysis of 64 independent samples representing 10,884 leader-member dyads, Sin (2009) found that the length of the leader-follower relationship was positively related to LMX loyalty, but unrelated to LMX affect, contribution and professionalism. In a study of 3,900 teachers from 81 schools, Williams (2009) found that the tenure of the principal was unrelated to student achievement, negatively related to the number of disciplinary incidents on campus and positively related to campus culture. Ejaz (2009), in a study of 93 respondents from the Pakistani banking system, found that experience was positively related to the leadership dimensions of developing others, developing self, supporting team, pursuit of excellence and accountability but was not related to the leader's ability to identify follower pain, business acumen, commitment or interpersonal skills.

Participants

The participants in this study consisted of 692 working adults from the state of Texas. The sample ranged in age from 20 to 82 with a mean age of 41.30 years. There were 56 participants who self-identified their ethnicity as Asian, 66 as African-American, 264 as White and 242 as Hispanic. There were 218 males and 474 females who reported their gender. Education was collected as years of formal education. Years of formal education ranged from 10 years (approximately sophomore in High School) to 22 (PhD, MD and other doctoral credentials). The mean number of years of formal education was 16.8 years (slightly more than four years of college).

Years of work experience ranged from only 1 year to 51 with a mean of 19.77 years. Years of management experience ranged from 0 years to 39 with a mean of 6.71 years.

Instrument

The instrument used was the *Project Globe Leadership Questionnaire*. This instrument has been used by over 20,000 participants worldwide. To develop the instrument, two empirical pilot studies were conducted in 28 countries to assess the psychometric properties. In the first pilot study, the survey was distributed in 28 countries to people who had full-time working experience as a white-collar employee or manager. Exploratory factor analysis, aggregation analysis, reliability analysis, and intra-class correlations were then conducted on the results of the surveys. A second pilot study was conducted in 15 countries that did not participate in the first pilot study in order to replicate the scales in a different sample. The results confirmed the findings from the first pilot study and verified through aggregation tests their target level of analysis.

The instrument consists of 112 questions. For each question, the participant is asked to rate to what degree that behavior or characteristic inhibits or contributes to outstanding leadership. The rating scale ranges from one to seven. The instrument measures 21 first-order dimensions of leadership that can comprise six second-order dimensions. The 21 first-order dimensions are: *Administratively Competent, Autocratic, Autonomous, Charismatic I: Visionary, Charismatic II: Inspirational, Charismatic III: Self-Sacrifice: Risk Taker, Self-Sacrificial, Convincing, Conflict Inducer, Decisive, Diplomatic, Face Saver, Humane Orientation, Integrity, Malevolent, Modesty, Participative, Performance Oriented. Procedural, Self-Centered, Status Conscious, Team I: Collaborative Team Orientation and Team II: Team Integrator..* Definitions of each measure are provided in Appendix A

METHOD

Multiple Analysis of Co-Variance (MANCOVA) is a statistical technique for comparing differences in multiple dependent variables simultaneously. In this study, a MANCOVA was run for the categorical independent variable of gender and three co-variants of years of formal education, age and years of management/leadership experience. The 21 measures of leadership were the dependent variables.

Results

Table 2 shows the means for the 21 measures of leadership. Using the language of the *Project Globe Questionnaire*, 10 aspects were, on average, considered to somewhat contribute to outstanding leadership. Six characteristics were deemed to slightly contribute to outstanding leadership. Four characteristics were considered to have no impact, and four were considered to inhibit outstanding leadership.

TABLE 2
CHARACTERISTICS THAT CONTRIBUTE TO OR INHIBIT OUTSTANDING LEADERSHIP

Characteristic	Mean	SD
Contributes Somewhat		
Integrity	6.28	1.14
Performance Oriented	6.07	1.13
Charismatic I: Visionary	6.07	1.05
Administratively Competent:	5.90	1.12
Charismatic/Value-Based	5.84	1.01
Team-Oriented	5.84	0.83
Team II: Team Integrator	5.82	0.93
Decisive	5.78	1.09
Charismatic II: Inspirational	5.76	0.93
Participative	5.68	1.13
Contributes Slightly		
Humane-Oriented	5.48	1.26
Modesty	5.46	1.11
Diplomatic	5.43	0.94
Charismatic III: Self-Sacrifice	5.06	1.13
Team I: Collaborative Team Orientation	4.74	0.86
Autonomous	4.66	1.14
Has No Impact		
Procedural	4.46	0.98
Status Conscious	4.16	1.60
Self Protective	3.68	0.73
Conflict Inducer	3.57	1.09
Slightly Inhibits		
Face Saver	2.95	1.16
Somewhat Inhibits		
Autocratic	2.20	1.12
Self Centered	2.15	1.03
Malevolent	1.68	0.93

Multiple Analysis of Co-Variance Results

In order to analyze the relationships between the four independent variables and the 21 measures of leadership, a 4-Way Multiple Analysis of Co-Variance was run. Using the Wilks' Lambda test, significance was found for all three variables: gender, education, and age.

TABLE 3
RESULTS OF A 4-WAY MULTIPLE ANALYSIS OF COVARIANCE

Variable	Wilks' Lambda	F	Sig.
Gender	.91	2.48	.00
Education	.88	3.42	.00
Age	.93	2.09	.00
Leadership Experience	.97	0.79	.78

Results for Gender

Because gender was significant in the MANCOVA, 21 separate univariate tests were run with gender as the independent variable and each of the leadership characteristics as dependent variables. Gender differences existed for eight of the 21 dimensions of leadership at $p < .05$. The overall image that emerged was that women held stronger opinions about the benefits of five aspects of leadership generally considered to contribute to outstanding leadership: integrity, visionary charisma, participative, humane-oriented and diplomatic. Women also held stronger opinions about the liabilities of three aspects generally considered to inhibit outstanding leadership: conflict inducer, autocratic and malevolent.

TABLE 4
SIGNIFICANT RESULTS FOR GENDER

Dependent Variable	Type III Sum of Squares	F	Sig.	Mean for Males	Mean for Females
Females Believed These Characteristics Contributed to Outstanding Leadership More Than Did Males					
Integrity	5.64	4.96	.03	6.18	6.33
Charismatic I: Visionary	3.80	4.10	.04	6.00	6.11
Participative	8.58	6.92	.01	5.48	5.75
Humane-Oriented	9.15	6.45	.01	5.37	5.53
Diplomatic	6.25	7.75	.01	5.31	5.49
Females Believed These Characteristics Inhibited Outstanding Leadership More Than Did Males					
Conflict Inducer	8.28	6.91	.01	3.75	3.48
Autocratic	12.96	10.58	.00	2.39	2.11
Malevolent	8.34	11.57	.00	1.79	1.59

Note. Only significant differences are shown.

Results for Years of Formal Education

Eighteen of the 21 measures of leadership were related to years of formal education. For each of these measures, the relationship reported is a partial correlation after controlling for the impacts of gender, age and leadership experience. The general pattern that emerged was that formal education tended to accentuate the importance of those aspects of leadership considered to either contribute to or inhibit outstanding leadership. Formal education was unrelated to the ratings of leadership that respondents generally believed had no or only a slight impact on outstanding leadership such as being procedural, status conscious or a conflict inducer.

This lack of significance for those aspects of leadership that tend to have only moderate influence negates an initial interpretation that those with more education simply have stronger opinions when completing the instrument used. If that were the case, significant correlations should have been found on almost all of the 21 dimensions of leadership. Instead, formal education was related to stronger ratings of the importance of leadership behaviors such as integrity, charisma, performance and team orientation, modesty, humane-oriented and diplomacy. Formal education was also related to stronger ratings of the degree to which self-protective, face-saving, autocratic, self-centered and malevolent behaviors inhibit outstanding leadership.

TABLE 5
SIGNIFICANT RESULTS FOR YEARS OF FORMAL EDUCATION

Dependent Variable	Type III Sum of Squares	F	Sig.	Mean	Partial Correlation
The More Years of Formal Education, The More Participants Believed These Characteristics Contributed to Outstanding Leadership					
Integrity	17.07	14.99	.00	6.27	.15
Performance Oriented	31.58	28.36	.00	6.06	.21
Charismatic I: Visionary	25.50	27.51	.00	6.06	.21
Administratively Competent:	4.57	3.94	.05	5.89	.08
Team II: Team Integrator	7.10	9.82	.00	5.81	.12
Decisive	9.21	9.49	.00	5.77	.12
Charismatic II: Inspirational	10.98	15.08	.00	5.76	.15
Participative	14.98	12.07	.00	5.67	.14
Humane-Oriented	25.76	18.17	.00	5.48	.17
Modesty	10.96	9.84	.00	5.45	.12
Diplomatic	4.93	6.11	.01	5.43	.10
Charismatic III: Self-Sacrifice	11.60	10.28	.00	5.06	.13
Team I: Collaborative Team Orientation	4.22	6.69	.01	4.74	.10
Humane-Oriented	25.76	18.17	.00	5.48	.17

The More Years of Formal Education,
The More Participants Believed These Characteristics
Inhibited Outstanding Leadership

Face Saver	6.40	4.74	.03	2.94	-.09
Autocratic	16.80	13.72	.00	2.20	-.15
Self Centered	22.26	22.19	.00	2.14	-.19
Malevolent	12.50	17.33	.00	1.68	-.17

Note. Only significant differences are shown. Partial correlations shown are after controlling for gender, age and leadership experience.

Result for Age

Age was only related to four of the 21 dimensions of leadership. After controlling for the effects of gender, education and leadership experience, the finding was that the older the participant, the more she/he believed integrity contributed to outstanding leadership and the more being autocratic, face-saving and status Conscious inhibited outstanding leadership.

**TABLE 6
SIGNIFICANT RESULTS FOR AGE**

Dependent Variable	Type III Sum of Squares	F	Sig.	Mean	Partial Correlation
The More Years of Formal Education, The More Participants Believed Integrity Contributed to Outstanding Leadership					
Integrity	4.77	4.19	.04	6.27	.08

The More Years of Formal Education, The More Participants Believed These Characteristics Inhibited Outstanding Leadership					
Autocratic	8.54	6.97	.008	2.20	-.11
Self Centered	5.54	5.52	.019	2.15	-.10
Face Saver	5.18	3.83	.051	2.95	-.08

Note. Only significant differences are shown. Partial correlations shown are after controlling for gender, education and leadership experience.

DISCUSSION

Though all four independent variables of work experience, age, formal education and gender were found to have significant effects on leadership preferences, two variables, gender and years of formal education stood out. Table 6 highlights consistencies between gender findings in this study and previous meta-analytic studies for gender. Meta-analyses have found that women are more transformational, forgiving, caring, nurturing, and trusting than men. These overall meta-analytic findings align well with the results of this study that found that women held stronger opinions than men about the benefits of integrity, team-oriented, participative, humane-oriented and diplomatic leadership. Women also held stronger opinions than men about the liabilities of four aspects generally considered to inhibit outstanding leadership conflict inducer, self protective, autocratic and malevolent leadership.

**TABLE 7
GENDER META-ANALYTIC CONSISTENCIES WITH THIS STUDY**

Meta-Analytic Areas in Which Women Score Higher	Areas Related to this Study in Which Women Scored Higher	Areas Related to this Study in Which Women Scored Lower
Transformational Leadership	Integrity, Humane-Oriented , Participative, Team-Oriented	Self-Protective, Autocratic. Conflict Inducer, Malevolent
Moral Self-Esteem	Integrity	Malevolent
Forgiveness	Humane-Oriented	Malevolent
Caring	Humane-Oriented	Conflict Inducer, Malevolent
Trust	Integrity	Conflict Inducer
Nurturance	Diplomatic, Participative, Team-Oriented	Malevolent, Self Protective,

Table 8 highlights consistencies between education findings in this study and previous meta-analytic studies. Because a meta-analytic study specifically analyzing education and leadership does not exist, a second section of Table 7 includes findings from the individual education and leadership studies available.

Meta-analyses have found that increased levels of education are related to increased self-esteem, positive job attitudes, entrepreneurial success, social capital and receiving mentorship. These meta-analytic findings align well with the results of this study, which found that education was positively related to the desire for leadership integrity, charisma, team and performance orientation. This study also found that education was related to the belief that increased face saving, self-protective, self-centered, autocratic and malevolent behaviors inhibited successful leadership.

TABLE 8
EDUCATION META-ANALYTIC CONSISTENCIES WITH THIS STUDY

Meta-Analytic Areas Related to Higher Education Levels	Areas in this Study Positively Related to Education Levels	Areas in this Study Negatively Related to Education Levels
Self-Esteem	Integrity, Charisma	Face Saver, Self-Protective, Self-Centered, Malevolent
Job Attitudes Entrepreneurial Success	Performance Orientation Charisma, Performance Orientation	Self Centered
Social Capital	Charisma, Team Orientation	Autocratic, Face Saver
Receiving Mentorship		Self Centered
Leadership Studies Related to Higher Education Levels	Areas in this Study Positively Related to Education Levels	Areas in this Study Negatively Related to Education Levels
Transformational	Integrity, Charisma, Team Orientation	Malevolent, Autocratic
Inter-Personal		Self-Protective, Self-Centered, Malevolent
Team-Oriented	Team Orientation	Self-Protective, Self-Centered, Malevolent

CONCLUSION

Studies have found that men and women are different in areas such as how they approach morality, forgiveness and leadership. This study found that they are also different in the intensity with which they believe particular leadership characteristics contribute to and inhibit outstanding leadership. Similarly, studies have found that increased education is related to increased self-esteem, job attitudes and social capital. This study found that education is also related to the intensity with which participants believe particular leadership characteristics contribute to and inhibit outstanding leadership.

For both variables, the most striking result was that women and respondents who were more educated rated positive aspects of leadership higher than men and less educated respondents. Women and respondents who were more educated also rated negative aspects of leadership lower than men and less educated respondents. These results on women concur with the findings of Salter, Green, Duncan, Berre, and Torti (2010) who found that women had a significantly stronger reaction to transformational

leadership language and a significantly stronger negative reaction to passive leadership language than men.

The question then presents itself, why do women show a more significant reaction to positive aspects of leadership behavior or communication and more negative Hall's (1984) meta-analysis found women to be more in tune to others' non-verbal communications. The same study found that women were able to more readily show their own emotions and attitudes through non-verbal communications than men. Hyde and Linn (1988) found that women were far more productive in their utilization of speech than men, as women speak almost twice the number of words in a day than men.

Eagley and Crowley (1986) found that women aided others from a nurturing or caring perspective, while men helped others in need from a heroic or chivalrous motive. These findings seem to indicate that women are far more concerned with communication of all kinds than men. So now a second question presents itself, why are women more concerned with the positive aspects and negative aspects of leader behavior or communication than men.

Shirao, Okamoto, Okada, Ueda, and Yamawaki (2005) found that women's brains, specifically their bilateral caudate nuclei and left thalamus, were more highly activated when unpleasant words or negative interpersonal non-verbal facial expressions were used in interrelationships than men. These researchers indicate that the over activation of these physical systems has negative consequences on the health of an individual. Schwartz and Begley (2002) suggests that the prefrontal cortex, the part of the brain which acts a governor over emotional reactions, is more fully developed in women at an earlier age than men. This finding suggests women's threshold of emotion required to elicit a negative response has to be greater than the threshold experienced by men. It is intuitive then to believe that positive and negative aspects of leadership resulting in positive or negative communications is of more concern to women than men, because their limbic systems are more positively affected or negatively affected than men.

While there appears to be no direct research connection with the finding that more educated individuals react more strongly to positive and negative aspects of leadership than those less educated, Furnham, Monsen, & Ahmetoglu, (2009) did find a relationship between Costa & McCrae's (1992) Big 5 Personality traits and academic performance. These results suggest the more an individual possesses the Big 5 Personality traits, the better their academic performance. Goleman, Boyatis, & McKee (2002) in their discussion on emotional intelligence suggest that the more an individual possesses the Big 5 Personality traits, the more likely they are to engage in the behaviors associated with emotional intelligence. Generally, the better one's academic performance the more they are encouraged to further their education, and as the Big 5 traits suggest improved academic performance and a related affinity for emotional intelligence, then one can intuitive make the connection between, level of education and a heightened reaction to the positive and negative aspects of leadership as found in this study.

While cause and effect cannot be established in this non-experimental design, these finding allude to the observation that women seem to be better at recognizing positive and negative aspects of leadership than men. It also alludes to the observation that all forms of education seem to increase attitudes about positive and negative leadership characteristics.

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APPENDIX A

Aspects of leadership measured by the Project Globe Leadership Questionnaire

1. *Administratively Competent*: Orderly, Administratively Skilled, Organized, Good Administrator
 2. *Autocratic*: Autocratic, Dictatorial, Bossy, Elitist
 3. *Autonomous*: Individualistic, Independent, Autonomous, Unique
 4. *Charismatic I: Visionary*: Foresight, Prepared, Anticipatory, Plans Ahead
 5. *Charismatic II: Inspirational*: Enthusiastic, Positive, Morale Booster, Motive Arouser
 6. *Charismatic III: Self-Sacrifice*: Risk Taker, Self-Sacrificial, Convincing
 7. *Conflict Inducer*: Normative, Secretive, Intragroup Competitor
 8. *Decisive*: Willful, Decisive, Logical, Intuitive
 9. *Diplomatic*: Diplomatic, Worldly, Win-Win Problem Solver, Effective Bargainer
 10. *Face Saver*: Indirect, Avoids Negatives, Evasive
 11. *Humane Orientation*: Generous, Compassionate
 12. *Integrity*: Honest, Sincere, Just, Trustworthy
 13. *Malevolent*: Hostile, Dishonest, Vindictive, Irritable
 14. *Modesty*: Modest, Self-Effacing, Patient
 15. *Participative*: Does not Delegate, Does Not Micromanage, Egalitarian, Group Oriented
 16. *Performance Oriented*: Improvement-Oriented, Excellence-Oriented, Performance-Oriented
 17. *Procedural*: Ritualistic, Formal, Habitual, Procedural
 18. *Self-Centered*: Self-Centered, Nonparticipative, Loner, Asocial
 19. *Status Conscious*: Status-Conscious, Class-Conscious
 20. *Team I: Collaborative Team Orientation*: Group-Oriented, Collaborative, Loyal, Consultative
 21. *Team II: Team Integrator*: Communicative, Team Builder, Informed, Integrator
- (House et al., 2004, p. 131).