The purpose of this study was to determine the most important leadership and managerial behaviors for project managers as perceived by female project managers and to ascertain the frequency with which these behaviors are practiced by female project managers.

A survey instrument of leadership behaviors was submitted to female project managers, representing a variety of industries, team types, and sizes. The respondents were asked to rate each behavior as to its importance for an effective project manager to exhibit and to indicate the frequency of use by female project managers.

Even though much of the literature on effective leaders indicates the importance of transformational behaviors, the results of this study show that the respondents do not attach as much importance to transformational leadership behaviors as they do managerial skills and transactional leadership behaviors. They also use transactional leadership behaviors and managerial skills more frequently than transformational leadership behaviors.

**Keywords:** female project managers; leadership; management skills

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**Introduction**

Project managers have a two-pronged responsibility in managing a project: the technical components of the project—plans, schedules, budgets, statistical analysis, and monitoring and control involved in the various knowledge areas and processes—and managing the people in such a way to motivate the team to successful completion of the project goals. Suggesting that project managers are now, more than ever, being looked to as the people "who are going to implement the corporate strategies and objectives rather than just reporting status on a disaster" points out the significance of the project manager (Kloppenborg & Opfer, 2002, p. 18).

A plethora of research and corresponding literature on leadership and management skills and behaviors exists, but a much smaller cadre of literature specifically addresses leadership in project managers. Morris (2003) suggested that project management research should address in a theoretical context how core elements work together to deliver successful projects, with one of the most important core elements as the leadership of the project team. In fact, according to Zimmerer and Yasin (1998), organizational effectiveness requires project managers to combine their technical competency with the effective display of leadership.

Thamhain (2003) reported results that define four essential conditions for building effective project teams: a professionally stimulating work environment, good project leadership, qualified personnel, and a stable work environment; but in the past, most organizations rewarded their project managers for efficiency measures that stressed the technical rather than managerial or leadership-based aspects of project management. This emphasis on the technical, rather than on the combination of technical with leadership aspects, is no longer acceptable in today’s world (Yasin, Martin, & Czuchry, 2000).

The present study was undertaken to ask female project managers to determine the most important leadership and managerial behaviors for project managers to use and to ascertain the frequency with which these behaviors are practiced by female project managers.

Research studies into the 1990s concluded there were no differences in the leadership styles between the genders, but in 1990 an article entitled “Ways Women Lead” by J. B. Rosener was published in the Harvard Business Review, which caused scholars to revisit the prior conclusions. Successive studies (Bass, Avolio, & Atwater, 1996; Eagly & Johnson, 1996) reported some significant differences,
though small, and to this date no clear cut conclusion has been reached. In the same way, there are no conclusive findings on effective leadership styles in either men or women in the project environment.

In the past women have been underrepresented in management, especially in the traditional project-based industries of construction and engineering (Gale & Cartwright, 1995), yet the interest of women in project management is growing as evidenced through the increasing numbers in the Women in Project Management Special Interest Group (WiPM SIG) of the Project Management Institute.

Through a review of general and project management leadership literature and a survey, this project addressed the following:

- Identified through a literature review a list of general leadership and managerial behaviors
- Designed a survey instrument incorporating the behaviors identified in the literature review
- Determined, using a sample of female project managers, the degree of importance of recognized leadership behaviors to the general project manager population
- Determined the degree to which these behaviors are used by female project managers as perceived by female project managers
- Determined if variables, such as length of project experience, type of organizational structure, or industry affect perceptions of leadership behaviors and managerial skills.

The research questions to be addressed included the following:

- To what degree are commonly recognized leadership and managerial behaviors viewed as important for project managers?
- To what degree do female project managers use these leadership/managerial skills as perceived by female project managers?
- How do female project managers perceive males view female project managers and how do females perceive themselves as project managers?
- Are perceptions of the respondents affected by the industry, size of project, type of project structure, and number of years as project manager?

Review of General Leadership Literature

Leadership is one of the most written about, talked about, and studied phenomena in the literature and around the water coolers of organizations. Some research has focused on behaviors associated with task versus people (Blake & Mouton, 1978), some on emotional intelligence (Goleman, Boyatizis, & McKee, 2002), some on traits (Kirkpatrick & Locke, 1991), some on contingencies (Fiedler, 1967), and some on two contrasting management styles: transformational and transactional leadership (Bass et al., 1996).

Transformational/Transactional Leadership

The concept of transformational leadership was first introduced by Burns (1978) but refined and developed by Bass (1985). Transformational leaders develop positive relationships with subordinates for the purpose of motivating performance that accomplishes specific goals. Translating this into project management terms, team members are encouraged by transformational leaders to focus on the interests and goals of the group rather than on their own needs and interests. According to Bass and others (Avolio, 1999; Avolio & Bass, 1988; Bass, 1985; Bass & Avolio, 1993a, 1993b), transformational leaders achieve successful individual and group performance by performing one or more of the following:

- Exhibiting charismatic behaviors and serving as role models
- Intellectually stimulating their workers
- Inspiring by persuading their workers to accept the mission and its attainability
- Meeting the emotional needs of their workers through individual considerations.

A second type of leadership identified by Bass (1985) is transactional leadership, a set of behaviors that clarify the team members’ responsibilities, the expectations the project leader has, the tasks that must be accomplished, and benefits for the members if they comply. This style is based on the exchange of a reward to the member for effort and performance. One of the primary factors of this style of leadership is called contingent reward or a positive reinforcing interaction between the project manager and the team members.

The research and writings of Bass and associated scholars show that managers that emphasize transformational leadership are perceived as more effective and satisfying by their subordinates than transactional leaders. In addition, transformational leadership has a positive effect on the organization’s productivity and financial results. Tracey and Hinkin (1998) found that transformational leadership correlated with the management attributes of clarifying, inspiring, supporting, and team-building. In addition, Burke and Collins (2001) investigated the relationship between selected management skills and several leadership styles, including transformational leadership, and found that the managerial skills of communicating, delegating, personal adaptability, time management, problem analysis, and decision-making correlated with transformational leadership. In other words, these behaviors are frequently exhibited by those people identified as transformational leaders. Supporting the attributes identified by Bass is a study by Brown, Richmond, and Rollin, and reported by Salopek (2004), which found vision topped the list of critical leadership competencies across all levels, experience, and personality types. Ranked also in the top five are strategic thinking, relationship building, execution, and people development. The study also rated adaptability, optimism, empathy, and self-awareness as more important than all other general leadership attributes presented.

In addition, there is a set of recognized skills and behaviors, which fall neither under transformational nor transactional leadership and called managerial skills.
Review of Project Management Leadership Literature

Even though Turner and Müller (2005, p. 57), in their literature review, reported that “rarely does the literature on project success factors specifically or overtly mention the project manager and his or her leadership style and competence,” Lechler (1997), as reported by Hauschildt, Gesche, and Medcof (2000), found in his review of 44 studies that the success of a project is much more dependent on the human factor (project leadership, top management support, project team) than on the technical factors. He also found that the human factor increases in importance as projects increase in complexity, risk, and innovativeness.

Focusing on the leadership factor, Goodman (1993) emphasized that the project manager’s two major functions are the ability to provide leadership to integrate the project system and to provide leadership to the project team; consequently, he argued the project manager must depend on negotiation skills and, to a lesser extent, on technical skills. Keegan and DenHartog (2004) found no correlation between the project manager’s leadership style and the team’s commitment and motivation, whereas they did find this link between the line manager and employees. Even though their results do not confirm a link between transformational leadership and project success, they suggested the leadership style of project managers should be transformational. It may be they have taken this stand as general leadership research has found that transformational leadership is correlated with more satisfied employees and a positive effect on productivity and financial results and because there is, as yet, little research literature directly related to transformational leadership in project managers.

Jiang, Klein, and Chen (2001) found that leadership, communication, and networking skills top the list of competencies for project managers. This same study found that project manager performance had a direct relationship with project outcomes, which confirms the critical role of the project manager’s leadership on project outcomes. In addition to these competencies, Gushgar, Francis, and Saklou (1997) supported the importance of communication for the project manager.

In an earlier study, a survey (Jiang, Klein, & Margulis, 1998) asked IT project managers to rank 18 system analyst skills in order of importance to project success. The rank order was: (most important to least) interviewing, directing, managing, speaking, listening, writing, cooperation, patience, leadership, sensitivity, diplomacy, training, empathy, organization, communications, politics, sales, assertiveness, and nonverbal skills. Frame (1994) suggested the set of skills, listed as those for IT project managers, may apply to project managers regardless of industry, context, or functional focus.

Anderson and Tucker (1994) identified desirable project manager attributes to be strong human relations, leadership, technical, and administrative experience, and Berger (1996) identified presentation skills as an increasingly important skill for a project manager.

The Project Management Institute conducted a Member Needs Assessment Survey in 2000 and found that the three top capabilities that will be most important to people in the profession are leadership skills (vision and motivating others), people skills (getting along with others), and management skills (directing and managing others) (PMI, 2001). It is apparent from the literature that leadership is an important factor in project success and deserves more attention.

Review of Gender Leadership Literature

Research on gender stereotyping suggests that men continue to believe that female managers, compared with male managers, lack leadership and other managerial qualities (Heilman, Bloi, Martell, & Simon, 1989; Martell, Parker, Emrich, & Crawford, 1998). Along these same lines, a report by the Conference Board of Canada (2000) showed that 69% of women executives believe that not being taken seriously at work is more of a problem for female managers than their male colleagues. Fifty percent of the women feel female managers are perceived as having less organizational commitment and professional capability than their male counterparts.

There is a body of research that suggests that men and women exhibit different leadership and interpersonal communication styles. Rosener (1990) found that women tend to use transformational leadership more than men. Arguments, however, have been presented that show that men and women tend to stereotype their own behavior according to cultural views of gender-appropriate behavior (Billard, 1992). Gale and Cartwright (1995) made the point that project-based industries, such as construction and engineering, tend to be inherently “masculine” in orientation, which may have an effect on the way female project managers view appropriate behavior. Furthermore, there may be under-representation of women in some industries, especially in project-based organizations, which may cause gendering of the project management discipline in such a way that some men may find that women do not “fit in.” Mulenburg (2002) also stated that project management has been a male-dominated field with an absence of gender-related studies. He asks the question of whether or not gender makes a difference in a project manager. A study, such as this one, may add new insights into the perceptions of women of the leadership/managerial behaviors that should be exhibited by project managers and which, in fact, females practice. More studies that expand on this study will ultimately provide an answer to the question that Mulenburg poses.

Instrument Design and Sample Selection

An inventory was constructed that included a broad array of specific behaviors required of effective leaders. The instrument behaviors are representative of many of the studies previously cited, as well as behaviors identified (48 of the 50 behaviors) by Martel and DeSmet (2001), who derived their behaviors from the Managerial...
Practices Survey (Yukl, 1989, 1994; Yukl, Wall, & Lepsinger, 1990). Martel and DeSmet added additional behaviors through three categories (intellectual stimulation, upward influence, and modeling) influenced by the Managerial Leadership Questionnaire (Bass, 1998; Hater & Bass, 1988; Trempe, Rigby, & Haccoun, 1985; Yukl, 1994). Additional influence behaviors were identified by Yukl and Falbe (1990), and humor was identified as a leadership behavior as it may shape the climate and informal social relations among the team members, promote increased creativity, and facilitate learning (Barbour, 1998; Hatch & Ehrlich, 1993; Heath, 1997). Each of the behaviors in the instrument is associated with leader effectiveness and holds a prominent position in current leadership theories. Because each of the behaviors had been tested for construct validity in the studies previously mentioned, this survey instrument was tested only for content validity by a panel of five experienced certified Project Management Professionals (PMPs).

The behaviors for this survey were classified under three major categories: transformational leadership, transactional leadership, and management skills, based on the works of Yukl (1989, 1994). The transformational leadership category includes attributed charisma, intellectual stimulation, inspirational motivation, individualized consideration, and influence. Transactional leadership focuses on contingent reward, and managerial skills include conflict resolution, time management, and delegation. Table 1 shows the group categories, the number of questions for each group, and an example of a question from the group.

The sample of 62 respondents was self-selected from the WiPMSIG membership. The survey was sent to all members who access the WiPM Yahoo site. The survey instrument was returned through e-mail to a secure site, and the data were recorded anonymously in an Excel file. The statistical tests used to analyze the data were descriptive statistics, the t test of significance, and the Pearson product-moment correlation.

Five demographic questions, the results of which are shown in Tables 2-4 and Figure 1, were identified through a panel of experienced project managers.
1. The type of industry (financial services, manufacturing, mining, construction, transportation, computers/telecommunications, real estate, aerospace, government, health care, chemicals and pharmaceuticals, education, professional services, other)
2. The project organizational structure:
   - Heavy project manager/heavy project team—project manager and core team dedicate nearly all of their time to the project.
   - Heavy project manager/light project team—project manager dedicates nearly all his or her time to project, but team members support project only when specific support is required.
   - Light project manager/heavy project team—project manager plays key role in project activities, such as organizing and planning efforts the team will perform, but dedicates majority of time and effort to multiple projects or different activities.
   - Team members are real performers, dedicating nearly their full-time effort to project.
3. Size of project team (less than 5 members, 6–10, 11–20, 21–50, over 50)
4. Number of years respondent in project environment (less than 2 years, 2–5 years; 6–10 years; 11–20 years, over 20 years)
5. Job title of the respondent

The respondents were clustered into eight industry categories, concentrated in the heavy project manager/heavy project team structure, and with teams of 6–50 members.

<table>
<thead>
<tr>
<th>Leadership/Managerial Category</th>
<th>Number of Questions</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transformational Leadership</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Attributed charisma</td>
<td>12</td>
<td>Arouses team members to greater effort by setting an example of dedication, courage, or self-sacrifice</td>
</tr>
<tr>
<td>2. Intellectual stimulation</td>
<td>5</td>
<td>Encourages and challenges team members to think in new ways</td>
</tr>
<tr>
<td>3. Inspirational motivation</td>
<td>6</td>
<td>Describes a clear and appealing vision of what can be accomplished with team members’ cooperation and support</td>
</tr>
<tr>
<td>4. Individualized consideration</td>
<td>8</td>
<td>Offers team members extra instruction or coaching</td>
</tr>
<tr>
<td>5. Influence</td>
<td>10</td>
<td>Influences the opinions, decisions, and policies of those in higher levels within the organization</td>
</tr>
<tr>
<td><strong>Transactional Leadership</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Contingent reward</td>
<td>3</td>
<td>Recommends pay increases or bonuses for effective performance</td>
</tr>
<tr>
<td><strong>Management Skills</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Conflict resolution</td>
<td>3</td>
<td>Attempts to resolve disagreements in a constructive manner by encouraging frank and open discussion</td>
</tr>
<tr>
<td>2. Time management</td>
<td>1</td>
<td>Uses time efficiently</td>
</tr>
<tr>
<td>3. Delegation</td>
<td>2</td>
<td>Delegates to team members the authority to make important decisions and implement without additional approval</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Question categories and examples
Most of the respondents had more than two years and less than 20 years of experience in a project environment. Ninety-five percent of the respondents held the title of project manager.

The respondents were asked the degree of importance of 50 behaviors that project managers should exhibit to be effective leaders. Each behavior was assessed on a 4-point Likert scale (absolutely vital, important, somewhat important, or less important). There was an effort to force the respondents to differentiate between levels of importance. For each of these same behaviors, the respondents were asked to indicate the frequency of use by female project managers on a 4-point Likert scale (almost always, frequently, sometimes, rarely or never). The final four questions of the survey addressed the respondents’ perceptions of general effectiveness of female project managers.

### Results of the Study

#### Most Important and Least Important Behaviors for Project Managers

Those behaviors perceived as the least important for a project manager (somewhat important to less important) were only in the transformational leadership group, which included intellectual stimulation, influence, inspirational motivation, and individualized consideration. This means these behaviors were viewed somewhat or less important for a project manager to exhibit.

The behaviors identified as the most important (absolutely vital and important) were found in all three categories of transformational, transactional, and managerial. The important, specific behaviors focused on individualized consideration, attributed charisma, delegation, and contingent reward. The least important behaviors are completely represented by the transformational style of leadership, while the most important are represented by behaviors in transformational, transactional, and managerial styles. Yet, the transformational style is one that is recognized in the general leadership literature as very effective. Table 5 shows the most important and the least important behaviors that a project manager should use if he or she is to be effective.

It is interesting to note that although vision was assessed as the least important behavior by this sample of project managers, the Brown, Richmond, and Rollin study (cited in Salopek, 2004), and the PMI study (2001) found vision as one of the most critical leadership competencies. This may be especially noteworthy as this sample of females, even though very small, tended to be more senior in experience and working with projects of heavy project manager and team involvement, which we might think would increase the importance of vision. This was also the question that varied the most among the respondents as it had the highest standard deviation of 0.8885 with a mean of 3.81 (somewhat important leaning toward less importance).

The behavior that had the least variation in agreement by the respondents was “delegates to team members the authority to make important decisions and implement without additional approval,” with a mean of 2.92 (somewhat important but approaching the important rank) and a standard deviation of 0.3876. Thirty-eight of the 50 questions had standard deviations that ranged between 0.5 and 0.6.

When all behaviors were identified according to the three major groups (transformational, transactional, managerial skills), we find that the mean score of each group lies between “somewhat important” to “less important” for project managers. No mean scores fell within the important or vitally important range.
Exhibited Behaviors by Female Project Managers

Comparing the group mean scores of desired behaviors for project managers and the degree to which these are used by female project managers (Table 6), contingent reward behaviors appear to be more important for project managers than influence behaviors. This is interesting considering a typical response heard from a project team member is that "we’re overworked and don’t have enough resources." Influence behaviors are those that would assist the project team to acquire what it needs to accomplish the goals of the project, yet this group of respondents rated influence as the least important behavior. At the same time contingent reward behaviors are logical behaviors for project managers as they reflect the clarification of goals and benefits for team members.

This sample perceived that females use transformational leadership attributes (attributed charisma, influence, inspirational motivation, intellectual stimulation, and individualized consideration) less often, whereas other studies show females are more likely than males to indicate that they use transformational leadership style (Burke & Collins, 2001). The individualized consideration group is the third most important group for effective project managers, rated between important and somewhat important by these respondents, yet they perceived they use these behaviors "sometimes" and was ranked as the least used group of all leadership behaviors. If female project managers do not tend to use transformational leadership style as frequently as others in general management, it may mean that female project managers adapt to the style of leadership advocated by the PMBOK® Guide (PMI, 2004), which has been shown to lean toward the masculine leadership style (Buckle & Thomas, 2003) or the more transactional style.

### Table 5: Most important and least important behaviors for effective project managers

<table>
<thead>
<tr>
<th>Least Important</th>
<th>Managerial Skills</th>
<th>Transactional Leadership</th>
<th>Transformational Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Keeps team informed of upcoming changes</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Serves as liaison between project team and sponsoring organization</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maintains good working relationships with people in other parts of the organization</td>
<td>3.63</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Backs up team members in difficult situations</td>
<td>3.65</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Secures commitment and resources from superiors when required</td>
<td>3.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Praises or recognizes team members for demonstrating exceptional creativity, initiative, persistence, or skill</td>
<td>3.80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Describes a clear and appealing vision of what can be accomplished with team members’ cooperation and support</td>
<td>3.81</td>
</tr>
<tr>
<td></td>
<td>Delegates to team members the authority to make important decisions and implement without additional approval</td>
<td>2.91</td>
<td>Recommends pay increases or bonuses for effective performance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recommends promotion for exceptional performance</td>
<td>2.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Meets the emotional needs of the team members</td>
<td>2.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Instills pride in his/her associates because of their association with him/her</td>
<td>2.73</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provides team members with challenging new responsibilities or special assignments to develop and demonstrate skills</td>
<td>2.91</td>
</tr>
</tbody>
</table>
Important Behaviors for Project Managers

(1 = Vital Importance; 2 = Important; 3 = Somewhat Important; 4 = Less Important)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contingent reward</td>
<td>3.1147</td>
</tr>
<tr>
<td>Attributed charisma</td>
<td>3.2289</td>
</tr>
<tr>
<td>Individualized consideration</td>
<td>3.2597</td>
</tr>
<tr>
<td>Managerial skills</td>
<td>3.2699</td>
</tr>
<tr>
<td>Intellectual stimulation</td>
<td>3.3841</td>
</tr>
<tr>
<td>Inspiration motivation</td>
<td>3.4234</td>
</tr>
<tr>
<td>Influence</td>
<td>3.4438</td>
</tr>
</tbody>
</table>

Frequency of Behaviors by Women Project Managers

(1 = Almost Always; 2 = Frequently; 3 = Sometimes; 4 = Rarely/Never)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managerial skills</td>
<td>2.9914</td>
</tr>
<tr>
<td>Contingent reward</td>
<td>2.6136</td>
</tr>
<tr>
<td>Attributed charisma</td>
<td>3.039</td>
</tr>
<tr>
<td>Influence</td>
<td>3.0677</td>
</tr>
<tr>
<td>Inspirational motivation</td>
<td>3.068</td>
</tr>
<tr>
<td>Intellectual stimulation</td>
<td>3.075</td>
</tr>
<tr>
<td>Individualized consideration</td>
<td>3.1293</td>
</tr>
</tbody>
</table>

Table 6: Important behaviors and exhibited behaviors by group

**Frequency of Behavior Use by Female Project Managers**

The respondents were asked to assess the behaviors of the effective project manager in terms of the frequency these behaviors are used by female project managers (Table 7). It is clear that women project managers see other female project managers using transactional behaviors and managerial skills more than transformational behaviors. A point to note is that one-third of the least used behaviors fall within the influence group, a transformational leadership behavior.

In a study by Thamhain and Gemmill (1974), authority was ranked as the most important influential method used by project managers, followed by work challenge and expertise. The use of authority resulted in lower project performance and less disagreement and involvement among project personnel. At the same time these project managers who used work challenges and expertise as influence methods were perceived as more highly effective on project performance. Subsequent studies showed challenging work, management knowledge, and authority as the most important influence methods, although they varied in order of importance among the studies (Sotiriou & Wittmer, 2001). Comparing these findings with those of this study, expertise is one of the least used behaviors by female project managers, and challenging work is one of the most used behaviors, yet still only “sometimes” used. This does not seem to be congruent with the previously mentioned studies nor the common understanding that the technical component of project management, as reflected by expertise and the PMBOK® Guide, carries a lot of weight.

A coefficient correlation statistic was applied to the behaviors to determine the relationship between the desired behavior and the perceived frequency of use of the behavior. Thirty-nine of the 50 behaviors showed a very high or high correlation between desired behaviors and used behaviors. The less important it was, the less frequently it was used; or the more important it was, the more frequently it was used. Eight showed a moderate correlation and three showed a weak correlation. Of the three behaviors with a weak correlation, they were less desirable but more frequently used, and two of these three were classified as influence behaviors.

The final four questions of the survey dealt with perceptions of the respondents toward female project managers and women’s perceptions of men’s attitudes toward women. Table 8 shows the questions, the results in scores, means, and standard deviations of each. The questions each had four alternative responses—1 (strongly agree), 2 (agree more than disagree), 3 (disagree more than agree), and 4 (strongly disagree).

The sample of this study had a stronger belief that they are weaker project managers than they believe men perceive them to be. Comparing that response with the perception of this group that women have less commitment and professional capability than men seems to point out a reinforcement with their self-perception of less competence. This could be related to Turner and Müller’s (2005, p. 57) statement that “many project managers do not recognize themselves, their leadership style, or their competence as a connection to project success.” This result could also be related to the fact that they believe men do not take them seriously. In some ways, these findings negate the findings of other gender stereotyping research that suggests that men continue to believe that female managers, compared with male managers, lack leadership and managerial qualities (Heilman, Boci, Martell, & Simon, 1989; Martell et al., 1998), as these respondents believe men perceive them to be stronger project managers than they themselves believe.

This study strongly supports other research, however, especially that of the report by the Conference Board of Canada (2000), that showed 69% of women executives believe that women are not taken seriously at work, and that 50% of women feel women managers are perceived as having less organizational commitment and professional capability than their male counterparts. Interestingly, the research indicates that women believe this is how they are perceived by others, but this study showed that women actually believe this is true about themselves.

**Limitations of the Study**

As always with self-reported data there is a possibility of perception error and bias. There may be differences between self-reported behaviors and actual exhibited behaviors. Also the study was
the same set of behaviors. It may also be advantageous to assess male perceptions on the frequency with which they exhibit the behaviors and then compare with those of the females. Because these studies are relying on reports by respondents, an additional study observing the behaviors in relationship to the type of project, success of the project, and the gender of the project manager may add to the project leadership knowledge base.

Because each individual team member comes to the project team with a set of beliefs, values, and cognitions in place, the set of behaviors identified in this survey instrument may be useful to begin a dialogue with team members in how they see the desired behaviors and exhibited behaviors; i.e., what levels of behaviors seem to be those most wanted with any certain project group at any certain time (Muscarella, 2004). An understanding of team member expectations for leader behaviors may also be of value in optimizing the style of leader involvement with subordinates (Vecchio & Boatwright, 2002).

Prior research results show conditions for building effective project teams include a professionally stimulating work environment, good project leadership, qualified personnel, and a stable work environment (Thamhain, 2003). Because of this study and others, the current study focused on attempting to grasp exactly what is meant by effective project leadership by identifying a list of general leadership and managerial behaviors. The set of 50 behaviors were classified into three leadership/managerial groupings: transformational leadership, transactional leadership, and managerial skills.

An instrument of these behaviors was submitted to a group of 62 women project managers representing a variety of industries, project team types and sizes, and number of years employed in the project environment. The respondents were asked to rate each behavior as to its importance of use by an effective project manager. None of the mean values of the behaviors rated higher than 2.4913 in importance on a convenience sample of women belonging to the PMI WiPMSIG and self-selected through the WIPM Yahoo group e-mail. Because the sample was self-selected and limited in size, the results cannot be generalized across the entire project management population nor even across the entire female project management population. In fact, some statistical tests were impossible to use on the demographic data, especially that related to the industry of the respondent. The study does, however, expose information not readily available from other sources. The results of this study must be viewed with caution because of the sample size; however, it may provide a methodology that can be replicated with a larger sample and including men.

Summary and Implications
This study has investigated the desired behaviors for an effective project manager to use and the frequency with which these behaviors are used by females, all from the perspective of female project managers. PMI, in its literature and leadership conferences, has focused on the importance of leadership for project managers. Yet, when much of the current research literature is examined, we find leadership discussed in general terms. Some of the general management literature, however, has attempted to identify exactly what is meant by leadership. Using the categories, definitions, and classification schemes developed and tested by the general management scholars, the authors are able to address leadership behaviors with specificity in this study.

In addition, women are taking on more roles in project management, and little research has been conducted on female project managers. This study may help us take a look at the desirable leadership behaviors of a project manager from a female perspective. This may lead us to take another step and assess male project managers to determine whether there is any difference in the importance they attach to the same set of behaviors. It may also be advantageous to assess male perceptions on the frequency with which they exhibit the behaviors and then compare with those of the females. Because these studies are relying on reports by respondents, an additional study observing the behaviors in relationship to the type of project, success of the project, and the gender of the project manager may add to the project leadership knowledge base.

Because each individual team member comes to the project team with a set of beliefs, values, and cognitions in place, the set of behaviors identified in this survey instrument may be useful to begin a dialogue with team members in how they see the desired behaviors and exhibited behaviors; i.e., what levels of behaviors seem to be those most wanted with any certain project group at any certain time (Muscarella, 2004). An understanding of team member expectations for leader behaviors may also be of value in optimizing the style of leader involvement with subordinates (Vecchio & Boatwright, 2002).

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<table>
<thead>
<tr>
<th>Table 7: Most and least exhibited behaviors by female project managers</th>
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</thead>
<tbody>
<tr>
<td><strong>Most Exhibited Behaviors (in order of frequency)</strong></td>
</tr>
<tr>
<td>1. Recommends promotions for exceptional performance</td>
</tr>
<tr>
<td>2. Recommends pay increases or bonuses for effective performance</td>
</tr>
<tr>
<td>3. Delegates to team members the authority to make important decisions and implement without additional approval</td>
</tr>
<tr>
<td>4. Gets ideas and views accepted by superiors</td>
</tr>
<tr>
<td>5. Instills pride in his/her associates because of their association with him/her</td>
</tr>
<tr>
<td>6. Influences the opinions, decisions, and policies of those in higher levels within the organization</td>
</tr>
<tr>
<td>7. Provides team members with challenging new responsibilities or special assignments to develop and demonstrate skills</td>
</tr>
<tr>
<td>8. Meets the emotional needs of the team members</td>
</tr>
<tr>
<td>9. Adjusts to demands without becoming frustrated</td>
</tr>
<tr>
<td><strong>Least Exhibited Behaviors</strong></td>
</tr>
<tr>
<td>1. Earns the respect of others by demonstrating competence in personal task performance</td>
</tr>
<tr>
<td>2. Aroused team members to greater effort by setting an example of dedication, courage, or self-sacrifice</td>
</tr>
<tr>
<td>3. Uses time efficiently</td>
</tr>
<tr>
<td>4. Negotiates with clients, vendors, technical specialists, functional managers, and team members</td>
</tr>
<tr>
<td>5. Offers encouragement, advice, or assistance when team members need help</td>
</tr>
<tr>
<td>6. Maintains good working relationships with people in other parts of the organization</td>
</tr>
<tr>
<td>7. Keeps team members informed of upcoming changes</td>
</tr>
<tr>
<td>8. Serves as liaison between project team and sponsoring organization</td>
</tr>
<tr>
<td>9. Praises or recognizes team members for demonstrating exceptional creativity, initiative, persistence, or skills</td>
</tr>
</tbody>
</table>
4-point Likert scale, with 1 equaling vital importance and 4 equaling less importance. The most important behaviors included those from all three groups, with the behavior of “meets the emotional needs of the team members” as the most important. The least important behavior with a mean value of 3.8196 on the 4-point scale, with 3 as somewhat important and 4 as less important, was “describes a clear and appealing vision of what can be accomplished with team members’ cooperation and support,” yet, this has been identified as one of the most critical leadership behaviors (Salopek, 2004).

The respondents were also asked to indicate the frequency of use of each behavior by female project managers. The behavior used most frequently was “recommends promotions for exceptional performance” with a mean value of 2.3728 with 2 equal to frequently and 3 equal to sometimes. The least frequently used behavior was “earns the respect of others by demonstrating competence in personal task performance,” with a mean value of 3.2542.

Even though much of the literature on successful project managers indicates effective leadership is vital to the success of projects, these results show that women in this study do not attach as much importance to the transformational leadership behaviors as they do managerial skills and transactional leadership.

The results of this study pose several questions, then, for study:

• Does project management require a different style of leadership than general management?

• Do female project managers view important leadership behaviors differently than males?

• Do female project managers use different leadership behaviors than males?

• Can these findings be replicated with a larger and more diverse sample?

More study should be conducted to determine the degree to which the organizational culture, structure, and environment affects these perceptions versus a lack of knowledge, experience, and training. It is perplexing why female project managers view other female project managers as weaker than their male counterparts and yet do not perceive males viewing females as weaker. Because leadership is irrevocably proven to be important to the success of projects, it is incumbent for us to determine the degree to which the organizational culture, structure, and environment affects these perceptions versus a lack of knowledge, experience, and training. It is important to find out whether these findings will be replicated with a larger sample.

As Baker (2002, p. 20) said “…The place to start is knowing which traits are important, followed by a sincere assessment of one’s own strengths and weaknesses. With the knowledge of what is important and where we stand, we can then be prepared to move forward.”

References


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