

THE POWER OF TEAMS: DO SELF-MANAGING WORK TEAMS INFLUENCE
MANAGERS' PERCEPTIONS OF POTENCY?

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The present study examined the perceptions of teams and managers on team potency levels as a function of stage of team development. Drawing from the power and influence literature, potency was established as a means by which to assess team's internal dynamics. Stage of team development was separated into four categories including pseudo, potential, real and high performance teams. Archival data included 45 teams and managers gathered from the manufacturing and service industries. Results indicated a significant linear relationship between team perceptions of team potency and stage of team development. Additionally, potency perceptions of teams significantly differentiated between the four stages of team development. Manager perceptions of team potency produced non-significant results. Possible explanations of the results as well as implications for practice and future research are provided.

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CHAPTER 1

Introduction

For more than thirty years the concept of work teams has been evolving. (Cohen & Bailey, 1997). Lawler, Mohrman, and Ledford's (as cited in Sundstrom, McIntyre, Halfhill, & Richards, 2000) series of reports of the *Fortune 1000* companies revealed that in 1987, 70% of companies surveyed had incorporated at least some type of group participation and 27% had self-managing groups. By 1996, self-management participation jumped to 78%. During the course of this evolution, researchers have focused extensively on central themes such as type of team, design and implementation, and predictors of effectiveness. These investigations have proved integral to organizations wishing to incorporate work teams. For instance, past attempts by organizations to implement quality circles provided little if any organizational innovation – a direct result of the restricted scope of authority and limited employee power and influence (Lawler & Mohrman, 1987). Researchers examined this phenomenon and revealed a classic example of dashed expectations: after recurring cycles of lack of organizational support and reluctance to implement ideas, initial employee enthusiasm faded to disillusionment (Steel, Mento, Dilla, & Lloyd, 1985). Subsequent analyses showed that in order for organizations to experience real growth and innovation, teams would require real authority (Campion, Medsker & Higgs, 1993). A push toward understanding the effects of this involvement and authority continues.

A less studied yet important theme within the teams' literature relates to stage of team development. Organizations that understand the various phases of team development, and recognize the patterns of change, encourage the survival and success rate of self-managing work teams. It has been documented that clear, social and behavioral differences exist between a newly forming group of individuals when compared to a well-established team unit. (Avolio,

Jung, Murry, & Sivasubramaniam, 1996; Hackman, 1990, 2002; Spreitzer, Noble, Mishra, & Cooke, 1999). These internal dynamics may have an effect upon how the team views itself (Gibson, 1999). At the earliest stages of development, a new group reflects individual differences and a heterogeneous attitude regarding commitment and identification within the group (“How do I do my task”). Members are self-interested and tasks may be seen as compulsory. This initial stage of development results in a decline in team performance (Kennedy, 2002). Farrell, Schmitt, & Heinemann (2001) regard this phase as ambiguous and confusing to new members, and note that in order for a team to move toward a more advanced stage, members need to develop a team culture that reflect responsibilities, procedures, and decision making.

As the group gains experience together, a collective attitude forms where the individual identifies more within the context of the group (“How do I do our task”). This phase is defined by emerging rules and expectations that mold an increasing sense of belonging (Gist, Locke, & Taylor, 1987). The team learns how to handle conflict, determines how the work should be done, and establishes a set of norms that becomes the basis of the team’s culture (Farrell et al., 2001). Finally, within the most advanced stages of team development, members move beyond their own self interests by endorsing a collective perspective regarding their responsibilities to each other and to the team (“How do we do our task”). Members express a great sense of solidarity, are more effective at their tasks, and share a sense of respect toward one another. This shift from individual mind-set to shared perspective allows the team to view itself as a collective entity with a common set of social roles and a shared purpose (Avolio et al., 1996). Farrell et al. define this stage as one in which behavior is regulated by a shared culture. Although members come and go, what remains within the team are the established patterns and routines of social and behavioral interactions (Gibson, Randel, & Earley, 2000; Wageman, 1997). Table 1 (see Appendix A) describes the stages of team development adapted from Katzenbach and Smith (1993).

A continued effort by researchers to pinpoint and identify the various team structures and behaviors of advanced teams has resulted in a variety of labels that describe basically one single fundamental concept. Whether termed autonomous, empowered, self-managing, self-led, self-directing, self-designing, or self-governing, a central idea behind supplying teams with more authority involves the handing over of decision making to the team of certain work processes that traditionally reside with the manager (Cohen & Bailey, 1997; Mohrman, Cohen, & Mohrman, 1995; Wageman, 1997). For purposes of this paper, the term *self-managing* will represent the general notion of authority allocation given to those teams functioning at the most advanced stages of development.

Self-managing work teams hold excellent potential. A key to tapping into this potential lies in the detailed approach of the team's initial design (Hackman, 1990; Mohrman et al., 1995; Stevens & Campion, 1994; Wageman, 1997). For example, the extent and limits of a team's responsibilities need to be specified clearly (Hackman, 2002). Issues such as team composition (Rentsch & Klimoski, 2001), team boundaries (Hackman, 2002), team vision (Avolio et al., 1996), and task orientations (Stevens & Campion) require careful planning if the team is to succeed. With this basic framework in place, allowing teams the freedom to create and control their own systems and foundations is at the core of self-management (Avolio et al.). A significant advantage of self-management is that it permits teams to "own the work, rather than merely execute work on behalf of someone else" (Druskat & Kayes, 1999, p. 215). Work that is intrinsically satisfying can stimulate creativity and nurture pride in accomplishment. Solid collaboration is more likely to occur in teams that have a passion for their work than when work is done in an obligatory manner. In this sense, teams have the capacity to develop into high performing, synergistic units that become increasingly capable over time (Hackman, 1990). It might be assumed that the more capable and successful the team, the more likely the team is to

be labeled as “good.” Hackman (1990) notes that once a team is labeled, altering the perceptions of those external to the team is not easy; both the external judgments of others as well as the internal beliefs of the team itself have likely been cemented. By impacting the perceptions of external others, superior teams might act as agents of influence that affect the beliefs of those outside the team. It is the purpose of this study to explore the progression and effect of this type of team development and potential influence by addressing the following general questions.

1. Do characteristics that make up a team’s internal dynamics act to influence the external perceptions of others?

2. How are these perceptions differentially impacted by the current stage of team development?

Internal Dynamics of Teams

The search to identify the characteristics of high performing and effective teams has been prevalent within the teams’ literature (Campion et al., 1993; Gully, Incalcaterra, Joshi, & Beaubien, 2002; Lester, Meglino, & Korsgaard, 2002). Along the way, researchers have defined numerous constructs in an attempt to understand a team’s internal dynamics. The following briefly describes a small sampling of these constructs and how they might be relevant to self-managing work teams.

Efficacy

Collective motivation has been described as a reward-based orientation and is considered an individual-level attribute. That is, individual outcomes (rewards) are contingent upon collective accomplishments (Guzzo, Yost, Campbell, & Shea, 1993). Collective motivation theories may be useful under certain circumstances but because the construct emphasizes individual elements of performance and rewards, it may not be an appropriate means with which to conceptualize self-managing work teams.

Collective self-esteem, also defined at the individual level, analyzes the way in which members self-evaluate their group. The emphasis is placed on the individual and how he or she views their status as a valued member inside the group (Ellemers, Doosje, & Spears, 2004). As with collective motivation, collective self-esteem is based on individual-level characteristics. However, unlike collective motivation, collective self-esteem is a value judgment not based on rewards and therefore might be a better representative of self-managing work teams.

Group aspirations, an older construct, is considered a group-level attribute (Guzzo et al., 1993). Emphasis is placed on the group selecting and agreeing to a task, the aim of the task and its level of difficulty, and the decision-making functions surrounding the task. (Zander, 1971; Zander & Medow, 1965). Because group aspirations is a goal-oriented construct that stresses the importance of group objectives, it is more conducive to the communal spirit of self-managing work teams. However, the term itself is antiquated and therefore very little current research exists on the construct.

A related and more contemporary concept of group aspirations, as well as collective self-esteem, is the construct of collective efficacy. This construct is related to group aspirations because it is, in part, a task-oriented concept. Additionally, because collective efficacy is an individual-level attribute based on members' judgments of group capabilities, it is also related to collective self-esteem (Little & Madigan, 1997). Because collective efficacy can be linked to certain elements of collective self-esteem and group aspirations, and because it is a more prevalent topic within the literature, it will be described here in more detail. It should be noted that other terms such as group efficacy (Gibson, 1999; Gibson et al., 2000; Pescosolido, 2003) and team efficacy (Gully et al., 2002) have been used to illustrate essentially the same concept. For the sake of clarity, the term *collective efficacy* will be used in this paper.

Collective efficacy has been defined by Guzzo et al. (1993, p. 90) as “an individual’s

belief that a group can perform successfully.” At the time of their writing, the authors were not certain whether collective efficacy referred to task-specific or more task-general beliefs about performance. Some confusion seemingly continues to exist (Gibson et al., 2000). For example, Little and Madigan (1997) note that efficacy should be directed toward a specific domain of tasks and the team’s entire process of achieving those tasks. However, Pescosolido (2003, p. 21) maintains efficacy to be “extremely task specific.” Because the purpose of this study is to explore the development and influence of a team’s internal dynamics, it is beyond the scope to address and / or resolve the task disparity aspect of this construct. Instead, this study will consider the attitudinal element of collective efficacy as it pertains to the beliefs of self-managing work teams.

Collective efficacy, with its task-oriented focus, is an important factor for understanding certain motivational aspects of work teams. It has been suggested that collective efficacy is “a force that acts to keep the group together” (Pescosolido, 2003, p. 21). Efficacy beliefs: (a) form as team members trade information about each other, (b) are enhanced as the team experiences successful performance, and (c) eventually determines what the team thinks it can do (Gibson, 1999). Hackman (2002) notes that, compared to when work was begun, an effective team becomes a more capable unit upon the completion of that work. As tasks are performed successfully, the team’s confidence in its own capabilities is strengthened thus enhancing efficacy beliefs (Mohrman et al., 1995; Prussia & Kinicki, 1996). As a result, teams with higher collective efficacy might choose more challenging goals and persist longer to attain those goals than teams with lower collective efficacy. Additionally, as efficacy beliefs build, the team is more likely to develop into a high-performing, effective unit. The conclusion can be drawn, therefore, that the more efficacy beliefs team members possess, the closer that team is to reaching the advanced stages of development. Yet because collective efficacy refers to individual

beliefs about the team not necessarily shared by other team members, it falls short of achieving a shared perspective. As previously noted, a shared perspective is an important ingredient toward reaching the advanced stages of team development and optimizing the performance potential of self-managing work teams (Druskat & Kayes, 1999). Subsequently, collective efficacy theories may overlook certain social aspects of teams defined as self-managing. To help more thoroughly understand the development and influence of self-managing work teams, a final attitudinal construct, potency, will be explored.

Potency

Identified as a group-level attribute, Guzzo et al. (1993, p. 90) define potency as the “shared belief in a group that it can be effective.” Potency is similar to collective efficacy because it is a belief internal to the team about how well the team can perform (Gully et al., 2002; Lester et al., 2002). However, potency is considered an overall, collective belief in the team’s general ability to perform rather than an individual-level belief about a team’s ability to perform tasks (Hecht, Allen, Klammer, & Kelly, 2002; Lee, Tinsley, & Bobko, 2002; Sosik, Avolio, & Kahai, 1997). It should therefore allow for a richer understanding of self-managing work teams. Because a shared perspective is a crucial ingredient of both potency and self-managing work teams, potency will be used to operationalize a team’s internal attitudinal dynamics.

A considerable body of research has shown potency to be a positive predictor of group performance (Lee et al., 2002; Pearce, Gallagher, & Ensley, 2002; Sivasubramaniam, Murry, Avolio, & Jung, 2002; Sosik et al., 1997). For example, Lee et al. compared the effects of potency and efficacy on task performance and found potency to be a significant predictor of performance while efficacy was unrelated. Additionally, Campion et al. (1993) revealed that potency was the strongest predictor of 19 team characteristics on three effectiveness criteria

including productivity, employee satisfaction, and manager judgments. Questions surrounding whether the potency-performance relationship exists merely because better performing teams are comprised of more able team members prompted Hecht et al. (2002) to test if potency could predict performance over and above actual team abilities. Results showed that potency contributed positively and significantly to performance after team member ability was controlled. These results indicate that although high-performing teams require exceptional abilities of members, the belief in those abilities is just as important as the actual abilities themselves. In other words, those that think they can, do.

On many levels, the relationship between potency and performance is thought to be reciprocal (Hecht et al., 2002; Lee et al., 2002; Lindsley, Brass, & Thomas, 1999; Pearce et al., 2002; Sosik et al., 1997; Sivasubramaniam et al., 2002). First, a well-designed team compliments member ability and bolsters a belief in that ability (potency), increasing the probability of successful performance. Second, successful past performance is a strong determinant of future performance, which in turn adds to overall potency. Third, the reoccurrence of successful performance reinforces potency beliefs by strengthening the team's own view of itself. Hackman (1990) notes that when a well-designed team encounters reinforcing events, a positive spiral can be triggered. Spirals have amplifying properties that are defined by the relationship between certain variables such as potency and performance – an increase in one variable tends to lead to an increase in the other (Lindsley et al.). There is some debate as to whether these amplifying properties are considered beneficial to self-managing work teams. For example, longitudinal studies have revealed that the potency-performance relationship, however significant, tends to decrease over time (Lee, et al.; Lester et al., 2002; Pearce et al.; Sivasubramaniam et al.). Lindsley et al. explains this phenomenon by reasoning that consecutive positive, or upward, spirals experienced by teams result in overconfidence and subsequent complacency.

Overconfidence was also identified by Sivasubramaniam et al. (2002) who tracked potency variations in teams over time. Investigators noted that newly formed teams who rated themselves as both transformational and high on initial potency later exhibited a decline in potency levels. It is likely that new teams, who are still forming norms and systems, might overestimate their true capabilities. As previously noted, this study posits that self-managing work teams reside in more advanced stages of team development and as such have established routines and patterns of behaviors.

Self-managing teams, by virtue of the members' experience together, have had numerous encounters with failure and accordingly have learned how to make the necessary adjustments that prompt self-correcting actions. This assertion is supported by Lester et al.'s (2002) longitudinal findings regarding newly formed teams. Although results revealed a general decline in potency levels for all teams, the potency levels of newly formed team declined to a much greater degree compared to established teams. Thus, this study presents the following set of research questions and hypotheses.

1. Is there a relationship between perceptions of team potency and stage of team development?

H1: Team members' ratings of team potency will be correlated with stage of team development. Specifically, potency perceptions will increase as stage of team development increases.

2. Do variations exist in perceptions of team potency as a function of stage of team development?

H2: Team members' ratings of team potency will differ depending on stage of team development. Specifically, members of a more advanced team will contain higher levels of potency compared to members of a less advanced team.

Influence and Power

Having established potency as an attitudinal basis for the internal dynamics of self-managing work teams, the remainder of this study will focus on how it might be possible for those internal attitudes to radiate outward, acting as agents of influence on the perceptions of those individuals external to the team.

Influence

The majority of research conducted on influence has been defined in terms of deliberate, intentional tactics meant to purposefully sway the behavior of others. For example, Sussmann and Vecchio (1997, p. 144) define an influence attempt as “a social occasion wherein one individual exhibits behaviors . . . with the intent of altering the behavior of another . . .” Porter, Allen, and Angle (1981) reported on the political behavior and upward influence tactics directed toward superiors by subordinates intending to promote their own self-interests. The work of Kipnis, Schmidt, and Wilkinson (1980) led to the development of a classification system of deliberate influence tactics used by people on the job. Fourteen categories, generated from 370 influence tactics, were reduced to eight dimensions and tested on subordinates, co-workers, and superiors in order to examine the means by which individuals persuade others. Dimensions include ingratiation, rationality, assertiveness, sanction, exchange, upward appeal, blocking and coalitions. The choice of tactic and reason for exercising influence was found to be associated with bottom-line objective of the influencer and power level of the influencee. For instance, workers used assertiveness and sanctions more often on subordinates rather than on co-workers or superiors, whereas superiors most frequently were influenced by means of rationality tactics. The above findings reveal a relatively narrow view of the effects of influence and indicate a gap in the literature. Defining influence exclusively in terms of deliberate tactics restricts the scope of the construct. Therefore, drawing from social psychology theory, the idea of non-deliberate

influence, which has gone virtually unexplored, is presented.

Social influence has been conceptualized as consisting of separate categories used to indicate intentionality (Tedeschi & Bonoma, 1972). That is, either the influencer's intentions are deliberate and include planned influencing strategies, or the influencer's intentions are not deliberate and include no planned influencing strategies. Researchers have identified this type of non-deliberate influence as social contagion, a distinct type of social influence based on its association with intentionality. Social contagion theorizes that the mere presence of a person (or group) may determine the behavior of another individual even though the influencer is unaware of his or her persuasive power (Levy & Nail, 1993). French and Raven (1959, p. 193) define influence as "psychological change" that is not limited to conscious behavior, and note that a person can exert influence by a mere "passive presence." Describing influence as both intentional, whereby a person can directly affect another (i.e., "My health teacher was a good influence because she taught us about the dangers of cigarette smoking") and unintentional ("Because she looked physically fit and healthy, my teacher influenced me to begin an exercise regimen"), allows for a more complete interpretation of a bilateral construct. Both aspects can result in some type of change in opinion or behavior; overt tactics purposefully set out to persuade (The teacher intentionally developed a lesson plan in order to sway opinions about the dangers of smoking) whereas unintentional behavior illustrates modeling and imitation (The teacher did not tell me to exercise per se, but because I wanted to emulate her healthy appearance, her influence was nonetheless as effective).

In tandem with the above intentional influence tactics, and used synonymously within the influence literature of the past (Mechanic, 1962), is the closely related construct of power. Raven (1992) defines power as the *potential* to influence another person or group, meaning that in order for an influence attempt to occur and be successful, the influencer must possess a certain amount,

and particular type of, social power. Numerous categories of power exist, such as global social power (Nesler, Aguinis, Quigley, Lee, & Tedeschi, 1999), credibility power (Aguinis, Simonsen, & Pierce, 1998), opportunistic power (Rawwas, Vitell, & Barnes, 1997), and facilitation power (Humphrey, O'Malley, Johnston, & Bachman, 1988). Arguably, however, the most widely accepted and rigorously applied theory of social power is that of French and Raven (1959). Their bases of social power have been used extensively by researchers in the industrial and organizational, as well as social psychology arenas, and also within educational, legal, religious, and political settings. Although French and Raven link power with influence by defining power in terms of influence, power has since been clearly established as a closely related, but distinct construct (Hinkin & Schriesheim, 1990). Indeed, Raven's (1992) re-examination of the power bases notes the importance of distinguishing power from influence tactics. Table 2 (see Appendix A) lists the five original bases of social power presented by French and Raven along with the sixth base, informational power, subsequently added by Raven (1965; as cited in Raven, 1992). Findings on informational power have been sporadic and some researchers have chosen to merge it with expert power (Humphrey et al.) or to avoid it entirely (Martin, 1978; Rawwas et al.). However, Raven (1992) warns that ignoring the distinctiveness of this power base is likely to cause measurement problems. Therefore informational power is included if only for the sake of completeness.

Expert Power

Some investigators have chosen to further differentiate the power bases into two categories, formal and informal. Legitimate, reward, and coercive power are considered more formal in nature while expert and referent power are more informal (Peiro & Melia, 2003; Vecchio, 1997). According to Peiro and Melia, formal power is a socially determined characteristic based on the person's hierarchical position in the organization (usually the

manager) and is exercised in a top-down manner. Informal power is a personal characteristic based on competencies and experience not necessarily associated with the formal structure of the organization. Informal power is described as reciprocal, flowing in all directions, and as such requires a certain extent of knowledge by the influencer as well as trust by the influencee.

Tedeschi & Lindskold (1976) report that the more knowledge the individual possesses, the more believable the persuasive attempt. High-performing, self-managed work teams must possess considerable knowledge in order to perform successfully. Moreover, teams are likely to both season their skills and advance their knowledge after repeatedly executing their tasks, producing a high degree of task proficiency. Vecchio notes that some managers may be highly dependent on the expertise of their subordinates. Therefore, it is reasonable to assume that self-managing work teams hold varying degrees of expert power over those external to the team, including managers.

Referent Power

As previously mentioned, informal power requires not only knowledge on the part of the influencer but also trust on the part of the influencee. Trustworthiness is a key factor in successful influence attempts (Tedeschi & Lindskold, 1976). Managers who trust the motives and actions of their teams are more likely to identify with them. Referent power corresponds to an internalization of values, attitudes, and behaviors (Tedeschi & Bonoma, 1972), and develops when there is a desire to identify with, and become closely associated to, another individual or group.

A number of variables contribute to this identification process, including attractiveness, vigor, modeling, and confidence (Vecchio, 1997). The amount of confidence displayed by an influencer can affect strength of identification and subsequent perceptions of an influencee. Hyatt & Ruddy (1997) report that confidence, rated by teams, was found to be positively and

significantly related to managers' ratings of team effectiveness. There are several speculative reasons for this: (a) a confident team is a good reflection of the manager's competence, consequently the manager is more likely to rate the team as more effective, (b) confidence acts to endorse the team's belief in its own success, and (c) the more success the team experiences, the more confident the team becomes.

This relationship between confidence and success extends outside the team to the perceptions of external others. The team's confidence levels act as agents of influence to sway the beliefs of those individuals outside the team. That is, those teams exuding more confidence may be perceived as being superior performers and therefore may be more admired and respected by others. Consequently, a team's referent power is enhanced. In support of this, Raven (1992) reports that individuals who lack self-confidence are more likely to use "harder" forms of social power to influence others, such as coercion. Because the act of coercion is normally carried out in a willful manner, this power base can be considered an intentional form of social power. A basic tenet of this study is that influence can be unintentional; the team does not deliberately plan to impact a manager's perceptions. Rather, the influence effect was preceded by and was a result of the team possessing certain attributes including referent and / or expert power.

Tedeschi & Lindskold (1976, p. 322) assert, "The way an individual views the world, his attitudes and values, and the actions he takes are significantly affected by the presence of other people." That is, all individuals possess certain amounts and / or types of social power and therefore possess the potential to influence. Thus all teams, no matter what stage of development, possess some degree of social power. Yet it is also likely that not all teams have the ability to influence. By definition, teams within more advanced stages of development are proficient and dynamic performers which can, in turn, increase their referent and expert power as discussed

above. As stage of development increases, the power of the team increases but it is unknown as to what point power reaches a level that can result in a successful yet unintentional influence attempt. What can be assumed is that teams within more advanced stages of development are more likely to possess higher levels of social power than are teams in newly forming stages.

Because teams (a) are assumed to possess varying degrees of social power, (b) function at various stages of team development, and (c) consist of differing levels of potency, managers' perceptions are likely to be affected. Whether due to a lack of knowledge, confidence, identification, or interpersonal interactions, managers may perceive a newly forming team as less potent than a more established team. Lester et al.'s (2002) evaluation of potency variations on groups with high and low levels of communication and cooperation revealed that groups at lower levels experienced a significant decline in potency over time but groups with higher levels did not. These findings can be applied to this study because higher levels of communication and cooperation are associated with teams in the advanced stages of development, whereas lower levels are associated with teams in earlier stages. In this sense, stage of team development should differentially affect the way in which a manager perceives team potency. This idea leads to the following research questions and hypotheses.

3. Is there a relationship between managers' perceptions of team potency and stage of team development?

H3: Managers' ratings of team potency will be correlated with stage of team development. Specifically, potency perceptions will increase as stage of team development increases.

4. Do variations exist in managers' perceptions of team potency as a function of stage of team development?

H4: Managers' ratings of team potency will differ depending on stage of team

development. Specifically, managers will rate a more advanced team higher on levels of potency compared to a less advanced team.

Finally, this study compares the relationship of potency perceptions of the team from the team's perspective and from the manager's perspective. Teams in more advanced stages of development are assumed to have more influence potential. Potency beliefs of the team act as a gauge with which the team's internal attitudes can be externally perceived. These internal beliefs are likely to radiate outward to influence the beliefs of external others. Whatever potency level the team perceives itself to have, the managers' beliefs likely will coincide. This leads to the fifth research question and hypothesis.

5. Is there a relationship between team members' perceptions of team potency and managers' perceptions of team potency?

H5: Team members' ratings of team potency will be positively correlated with managers' ratings of team potency.

CHAPTER 2

Method

This study was conducted to explore the potential influence teams have on the potency perceptions of managers, and if that influence is differentially impacted by stage of team development. An assumption was made that all teams possess a certain degree of social power regardless of stage of development. Thus the focus of this study was on determining the influence potential of each stage.

Survey data was analyzed from team members and managers in order to explore potency perceptions. Summary data from team and managers members was used to analyze stage of team development as a potential influence of perception.

Participants

This study utilized archival data from a field study originally performed on 68 teams comprised of 412 members from seven companies (Kennedy, 2002). Two companies were from the service industry and five from manufacturing. Original data included working teams, parallel teams, and project teams identified by the team's manager (see Appendix D). Project teams are considered time-limited and temporary in nature, disbanding when the work is completed. Parallel teams exist to make recommendations and are characterized as having limited authority (Cohen & Bailey, 1997). Because an important focus of this study was on the developmental potential of self-managing work teams, project teams and parallel teams were excluded from the analyses. Instead, work teams, described as "continuing work units" that are stable and well defined (Cohen & Bailey, p. 242), comprised the entire sample. This brought the total number of teams to 45 including 280 individual team members. Average number of individuals on each team was six. Teams comprised of members from six companies; two from the service industry and four from manufacturing. Education level of individual team members was 33% high school,

43% some college, 21% bachelor's degree, and 3% advanced degree (see Appendix C). The total number of managers was 45.

Kennedy's (2002) original analysis investigated five stages of team development including working groups, pseudo teams, potential teams, real teams and high performance teams that were drawn from the work of Katzenbach and Smith (1993). Removing project teams and parallel teams from this study as previously discussed resulted in the elimination of the working groups category. Thus, the sample consisted of seven pseudo teams (15.5%), 15 potential teams (33.3%), 14 real teams (31.1%), and nine high performing teams (20%).

Instrumentation

Measurement Overview

Although there is general consensus among researchers that potency is a reliable predictor of performance, methods used to assess potency have not escaped controversy. The debate surrounds the use of questionnaires versus group discussions. Certain team questionnaires require members to be aware of one another's beliefs and, as Gibson et al. (2000) note, aggregation of individual member responses does not necessarily reflect the beliefs of a team. However, they also note that group discussions might produce unrealistic conclusions by swaying individuals to publicly agree but who privately might disagree. Guzzo et al. (1993) provide several measurement options, such as peer and manager ratings, as well as qualitative options, including observation, and formal and informal interviews. They note that any one option is an acceptable way to measure potency. The current investigation did not locate any study reporting the use of qualitative methods. However, an investigation into utilization of group discussion and questionnaires found the latter to be the current method of choice. For example, Gully et al.'s (2002) meta-analysis reported only 25% of 67 studies used the group discussion method. Guzzo et al. notes that questionnaires can be used with confidence to assess

potency. Therefore, this study utilized questionnaires to measure potency. Means and standard deviations were evaluated to assess the level of agreement among team members (Kennedy, 2002).

Potency

Surveys distributed to both managers and team members were used to assess potency levels. Team potency was measured using an eight-item scale developed by Guzzo et al. (1993). Shea and Guzzo (1987) found this instrument to have acceptable levels of criterion-related validity in relation to measures of group effectiveness ($r = .31, p < .01$). Table 5 displays potency statements included on the team members' and managers' individual questionnaires (see Appendix A). On a Likert-type scale, team members and managers indicated the extent to which each statement best describes the team (1 = *strongly disagree*; 5 = *strongly agree*). Items were randomly sorted, and several were reversed scored. Cronbach's alpha reliabilities were 0.88 for teams and 0.79 for managers.

Stage of team development

Original data consisted of an informational questionnaire completed by the individual team members asking them to select one of five statements that best describes their team (see Appendix C). Each of these statements described the internal process characteristics of each phase of development. Stages of development were classified into number values in order for members to assign a value to each stage. Team members' assigned values were averaged to represent the assigned stage of development. As previously noted, the working groups stage of development was dropped from the further examination due to the elimination of parallel and project teams, leaving four stages of team development for analysis.

Summary information

Team surveys included a section on demographics and summary data including an

inquiry as to length of time each member had served on his or her particular team. Team tenure ranged from 5.5 months to 7.6 years with an average tenure of 2.5 years (see Appendix C).

As a reference, Table 3 lists a summary of all research questions, hypotheses, instrumentation, and methodology (see Appendix A).

CHAPTER 3

Results

This study analyzed how the potency perceptions of teams and managers are differentially impacted by the current stage of team development. Forty-five teams and 45 managers provided usable data. Descriptive statistics including means, standard deviations, and sample size, are presented in Table 4 (see Appendix A). Standard deviations for team perceptions of potency are low and range from 0.12 to 0.22, indicating a high level of agreement. An alpha level of 0.05 was used for all analyses. A *z*-score examination revealed no univariate outliers.

Assumptions

Normality was assessed by examining skewness and kurtosis. Values revealed no statistical departure from normality (< 3.29). As an additional check of normality, an inspection of SPSS Histograms (Figures 2 through 4, see Appendix B) showed the data to be relatively normally distributed with the exception of manager data on team potency levels being slightly, negatively skewed. Because no statistical skewness or kurtosis was found, a transformation of the data was not attempted (Tabachnick & Fidell, 2001).

Levene's test of equality of error variance showed $p > 0.05$. Therefore, because the *p*-value is greater than the alpha level used in the analysis, the assumption of homogeneity of variance was met.

Hypothesis Findings

The following results will address the findings for each hypothesis ordered by type of analysis. Results of the correlation analyses for H1, H3, and H5 will be discussed first followed by a discussion of the analyses of variance for H2 and H4.

To measure the strength of association between potency and stage of team development, a Pearson product-moment correlation analysis was performed to test H1, H3, and H5.

Correlation analyses were specified as one-tailed in order to examine the direction of the relationships. A rough inspection of linearity was assessed using SPSS Scatterplots (Tabachnick & Fidell, 2001). Bivariate scatterplots showed acceptable oval shapes for team potency and stage of team development, as well as for the team potency and manager potency variables (Figures 5 through 7, see Appendix B). The scatterplot for manager potency and stage of team development variables was not as well defined.

For H1, it was hypothesized that as teams move toward a more advanced stage of development, team potency perceptions would increase. In support of H1, the correlation between potency perceptions of teams and stage of team development yielded a statistically significant relationship with $r = 0.83, p < 0.01$.

Support for H3 was not found between manager perceptions of potency and stage of team development with $r = 0.23, p > 0.05$.

For H5, it was hypothesized that as team perceptions of potency increase, manager perceptions of potency would increase. In support of H5, the correlation between potency perceptions of teams and potency perceptions of managers yielded a statistically significant relationship with $r = 0.26, p < 0.05$.

Two separate one-way between-subjects ANOVAs were conducted to determine if reliable mean differences exist in the perceptions of potency of teams and managers as a function of stage of team development. For H2, it was hypothesized that team potency perceptions would be greater for a more advanced team compared to the perceptions of a less advanced team. Findings revealed an overall significant difference $F(3, 41) = 33.64, p < .001$, between teams within different stages of development. To pinpoint the differences and to confirm the directional aspect of H2, six post hoc analyses using Tukey's tests were performed. With the exception of the comparison between pseudo teams and potential teams, post hoc tests showed all mean

difference comparisons to be significant at the 0.05 level.

Results of the second ANOVA did not support H4. No overall significant differences were found between manager perceptions of team potency and stage of team development $F(3, 41) = 1.28, p > .05$.

To rule out the possibility of a confounding effect on stage of team development, a post hoc analysis between stage of team development, team potency, manager potency, and team tenure was performed. Non-significant ANOVA results confirmed that team tenure did not have an effect on either potency perceptions or stage of team development.

CHAPTER 4

Discussion

The findings from this study yield mixed results. On the one hand, potency perceptions of managers did not differentiate as a function of stage of team development. Regardless of developmental stage, managers rated team potency relatively high with all means above 4.00. On the other hand, strong support was found when analyzing how teams view themselves. Teams at different stages of development vary in their ratings of potency, with more advanced teams rating themselves higher. As a developmentally advanced team, members have had more opportunities to build trust and collaboration thereby increasing their sense of capability. The more the team develops and advances as a unit, the more it perceives itself as potent. These potency perceptions can be viewed as a type of self-rated representation of how the team is judging and monitoring its own internal performance. At some point during this positive developmental progression, certain internal attributes are achieved and the team advances to the next stage. Figure 1 shows a clear linear trend of this phenomenon (see Appendix B).

A somewhat comparative framework is that of Maslow's hierarchy of needs, in that once certain needs are relatively satiated, other levels of needs emerge, motivating and dominating behavior. However, rather than a needs-satisfaction model representing personal progress, team advancement can be depicted through a growth model. Given the opportunity and tools to succeed, newly forming teams are motivated to progress towards the next level of team development. Successful performance, along with certain amounts of interpersonal and job-related skills, will allow the team the potential to grow into a high performing, self-managed work unit. Superior teams within the most advanced stages of development have attained a type of team self-actualization. Higher levels of potency perceptions exist within those teams because the team has the skills, as well as the beliefs, in its own abilities.

It is important to note that time had no effect on stage of team development. That is, team tenure, assessed in months since team formation, was found to be a non-significant factor in determining stage of team development. The fact that some teams had been together longer than others was unrelated to their stage of development. Additionally, time did not contribute to the increase of potency perceptions within the team or the manager. That is, potency did not increase as team tenure increased. Rather, factors such as trust, commitment, and ability to collaborate are the likely determinants that affect potency perceptions of teams at different stages of development. Quality of internal team dynamics rather than the quantity of time spent together contributes to the rise in potency perceptions.

This study also tested the influence potential that teams at higher levels of potency have on external others, namely managers. Although results show no support for manager potency perceptions as a function of stage of team development, a few possible explanations are explored.

First, it is possible that manager responses were biased due to lack of information. Attribution theory in social psychology argues that our responses to others are affected by how we view their behavior (Jones, 1976). Assigning positive behaviors to those groups with which we identify reinforces and protects self-esteem, and helps to enhance the expectation of success. However, when information is lacking, the potential for cognitive error increases, distorting our views of reality and influencing our biased processing (Franzoi, 2003). Managers simply did not have enough information about the teams to thoroughly assess potency. As the findings indicated, managers rated most all teams high on potency regardless of stage of development. Without the appropriate information needed to make a proper assessment, managers rated their teams high on potency in order to boost their own self-concept and raise the probability of being identified with a superior team.

Secondly, the dynamics between managers and self-managed work teams are such that much of the time they have limited interaction. By definition, self-managed work teams are designed to manage most aspects of their unit's activities. Consequently, the manager's ability to accurately rate the team might be reduced. A team's internal dynamics may be apparent to the team yet less externally visible to a manager who has limited interaction. Unless a team's outward behavior is sharply adverse, a manager may have a difficult time differentiating pseudo teams from potential teams, potential teams from real teams, etc.

Third, even though managers were unable to distinguish potency levels among teams at different stages of development, the fact that managers rated most all teams high on potency brings to light an interesting aspect of the influence of teams. For example, certain teams functioning at less advanced stages of development may also have been comprised of members with longer tenure. Managers may have been influenced to believe teams possessed more expertise (thus expert power) than what was merited merely by the outward appearance of length of time on the job. Additionally, teams with longer tenure may outwardly exude more confidence not necessarily due to high performance but merely because members are more familiar with the routines of the organization. Confidence is a factor that contributes to the desire to identify with another person (Vecchio, 1997), which, in turn, gives rise to referent power (Raven, 1992). Thus, the argument for unintentional influence due to the perceptions of expert and referent power is enhanced.

Limitations

The following limitations of this study are noted. First, because the results were obtained using archival data, the nature of the data and the manner by which the study was originally conceived might have been a force dictating the current findings. The design of the original study was likely not structured to test the particular research questions presently posed.

Second, as noted above, the questionnaire did not offer managers the opportunity to rate their team's stage of development. Rather, stage of team development was evaluated by a self-reported measure rated by the teams themselves. However, by allowing managers the opportunity to independently categorize their team within a particular stage, a mental framework is enabled thus facilitating a more defined context. Given a better-defined context, managers might have been prompted to provide a more thorough assessment of genuine team behavior rather than an across-the-board potency rating. Additionally, to reduce the risk of same-source bias and increase the likelihood of an informed decision, the manager assessment should be tailored to include questions about team behavior that can be directly observed.

Future Research

The limitations noted above give rise to a discussion about the implications for future research. First, because of the difficulties associated with the use of archival data, subsequent investigations should strive to design studies that directly address the prospective research question. The probability of a more precise and accurate set of findings is likely to increase.

Secondly, because managers did not have the opportunity to rate stage of team development, and because they lacked information and a frame of reference with which to properly assess potency, future research should ensure all participants have equal information in order to optimize the accuracy of the results. Further, different methods to assess potency should be utilized such as observational ratings and measures of team performance in order to present a more complete representation of team behavior.

Finally, much of the assumptions of this study were based on the concept of unintentional influence. Because virtually no research exists regarding this construct, the opportunities for future research are ample. Factors such as identification, knowledge, admiration, and social standing might be preconditions that lead to unintentional influence. A development of a

taxonomy of the elements likely involved with this construct is warranted.

Implications for Research

This study has set the stage for the continued exploration into the effects of power and influence. An intriguing follow-up might address variables other than potency that contribute to the unintentional influence potential and therefore the power of self-managed work teams. External factors of the team such as manager tenure, manager feedback and organizational culture as well as other internal team factors such as team composition and cohesion may affect the potential influencing capabilities of teams. Additionally, assessing teams on each of the six social bases of power may help to identify the range of effect where teams move from potential to actual yet unintentional influence.

Implications for Practice

Given the above summary of the findings and despite the fact of the unsupported hypotheses, a few practical implications are worth noting. First, this research confirmed the assumption that the more developmentally advanced the team, the stronger the team potency beliefs. Conversely, team potency perceptions were shown to be lower in less developed teams. Organizations can use this information to encourage and support lesser-developed teams to boost confidence levels. Although a natural inclination by managers might be to identify with and provide resources to a more advanced team, particular attention should be paid to those teams that are newly forming so that members are provided the tools and support needed if a higher level of team development is desired.

Lastly and perhaps most importantly, is the notion of alignment between manager and team. For instance, this study found strong support for the manner in which teams differentiate from each other. Teams had a realistic grasp on what their beliefs are about themselves compared to where they are developmentally. In contrast, managers were not able to differentiate between

team developmental stage and potency perceptions. As previously mentioned, managers rated all teams high on potency regardless of developmental stage. This indicates a possible alignment issue that could potentially affect the health of the team. A newly forming team that is struggling needs a manager who can provide resources, both tangible and intangible, to promote team success. The dilemma occurs when manager and team differ with respect to the capabilities of the team. Managers who rate a less advanced team unrealistically high on potency levels may not be providing the resources appropriate for that particular team. Organizations wishing to promote high performing teams should urge the alignment between manager and team as it is crucial to basic team survival and it is an important factor in increasing the likelihood of a successful and potent self-managing work team.

APPENDIX A

Tables

Table 1

Stages of Team Development

Stage	Description
Pseudo Team	Heterogeneous, individualistic attitude; lack of shared vision; no mutual accountability; confusion; faulty communication; substandard performance; minimal influence potential
Potential Team	Collective attitude develops; desire to work together is shared; individualism fades; communication opens; initial team culture develops; performance improves; limited influence potential
Real Team	Collective attitude strengthens; mutual accountability increases; norms and rules develop; fluent communication; conflict considered non-threatening; effective performance; credible influence potential
High Performance Team	Norms and rules firmly established; universal collective mind-set; deep sense of solidarity and respect toward team and each other; dynamic performance; proficient task ability; high influence potential

Note: Adapted from “The wisdom of teams: Creating the high-performance organization,” by J. R. Katzenbach and D. K. Smith, 1993, Boston, MA: Harvard Business School Press.

Table 2

The Six Bases of Social Power

Power Base	Description
Reward	Based on the influencee's perceptions that the influencer can provide desired tangible (pay raises, promotions) or intangible resources (personal approval).
Coercive	Based on the influencee's perceptions that the influencer has the ability to punish for non-conformity; viewed as a negative form of reward power.
Legitimate	Based on the influencee's perceptions that the influencer is in a position of authority and has the right to issue directives.
Referent	Based on the influencee's perceptions of identification or desire to be associated with the influencer; initiating from values and behaviors rather than sanctions or force.
Expertise	Based on the influencee's perceptions that the influencer possesses superior knowledge and skills, which the influencee is dependent upon.
Informational	Based on the influencee's perceptions that the influencer possesses direct or indirect information. Generally used for purposes of persuasion or to implement change.

Table 3

Research Questions, Hypotheses, Instrumentation, and Methodology

Research Question	Hypothesis	Instrumentation	Methodology
1. Is there a relationship between perceptions of team potency and stage of team development?	H1: Team members' ratings of team potency will be correlated with stage of team development. Specifically, potency perceptions will increase as stage of team development increases.	<ul style="list-style-type: none"> • Potency survey (Team) • Stage of development questionnaire 	Correlation
2. Do variations exist in perceptions of team potency as a function of stage of development?	H2: Team members' ratings of team potency will differ depending on stage of team development. Specifically, members of a more advanced team will contain higher levels of potency compared to members of a less advanced team.	<ul style="list-style-type: none"> • Potency survey (Team) • Stage of development questionnaire 	One-way ANOVA
3. Is there a relationship between managers' perceptions of team potency and stage of team development?	H3: Managers' ratings of team potency will be correlated with stage of team development. Specifically, potency perceptions will increase as stage of team development increases.	<ul style="list-style-type: none"> • Potency survey (Manager) • Stage of development questionnaire 	Correlation
4. Do variations exist in managers' perceptions of team potency as a function of stage of development?	H4: Managers' ratings of team potency will differ depending on stage of team development. Specifically, a more advanced team will be rated higher in potency compared to a less advanced team.	<ul style="list-style-type: none"> • Potency survey (Manager) • Stage of development questionnaire 	One-way ANOVA
5. Is there a relationship between team members' perceptions of team potency and managers' perceptions of team potency?	H5: Team members' ratings of team potency will be positively correlated with managers' ratings of team potency.	<ul style="list-style-type: none"> • Potency survey (Team; Manager) 	Correlation

Table 4

Team Potency Perceptions Means and Standard Deviations as a Function of Stage of Team Development

Stage of Team Development	Mean		Standard deviation		Sample size	
	Manager	Team	Manager	Team	Manager	Team
Pseudo Team	4.31	3.80	0.62	0.22	7	7
Potential Team	4.17	3.99	0.55	0.21	15	15
Real Team	4.35	4.25	0.49	0.17	14	14
High Performance Team	4.58	4.63	0.32	0.12	9	9

Table 5

Items for the Measurement of Team Potency

1. This team has confidence in itself.
2. This team believes it can become unusually good at producing high-quality work.
3. This team expects to be known as a high-performing team.
4. This team feels it can solve any problem it encounters.
5. This team believes it can be very productive.
6. This team can get a lot done when it works hard.
7. No task is too tough for this team.
8. This team expects to have a lot of influence around here.

APPENDIX B

Illustrations

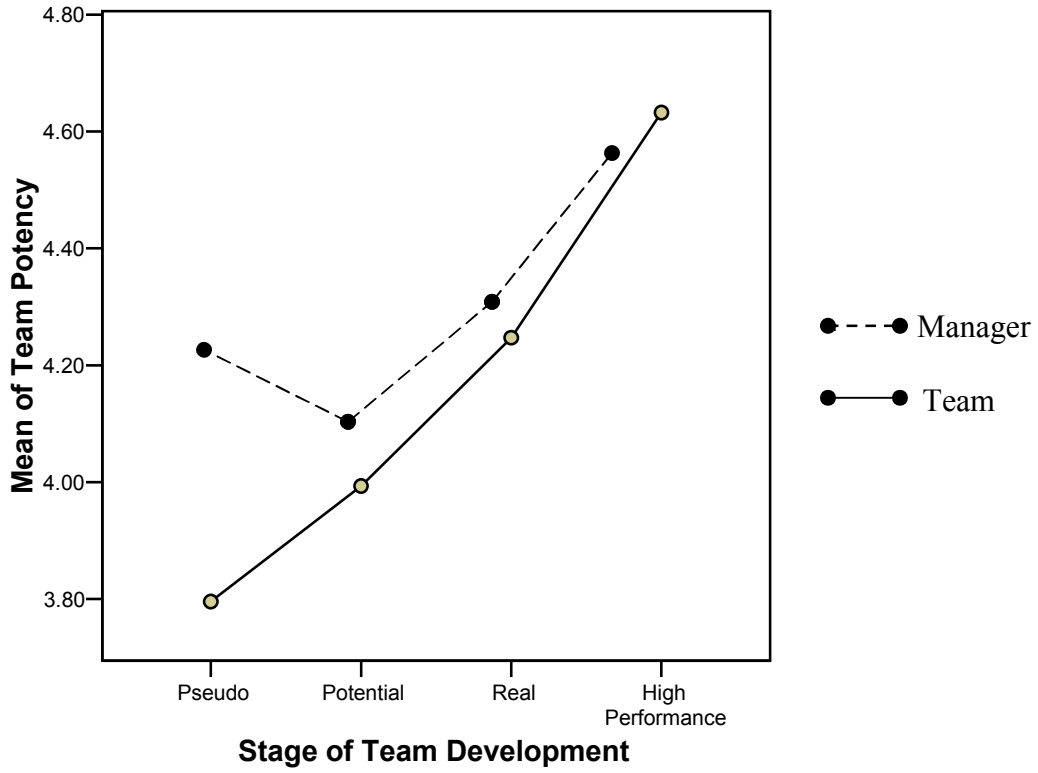


Figure 1. Means plot of potency perceptions of teams and managers as a function of stage of team development.

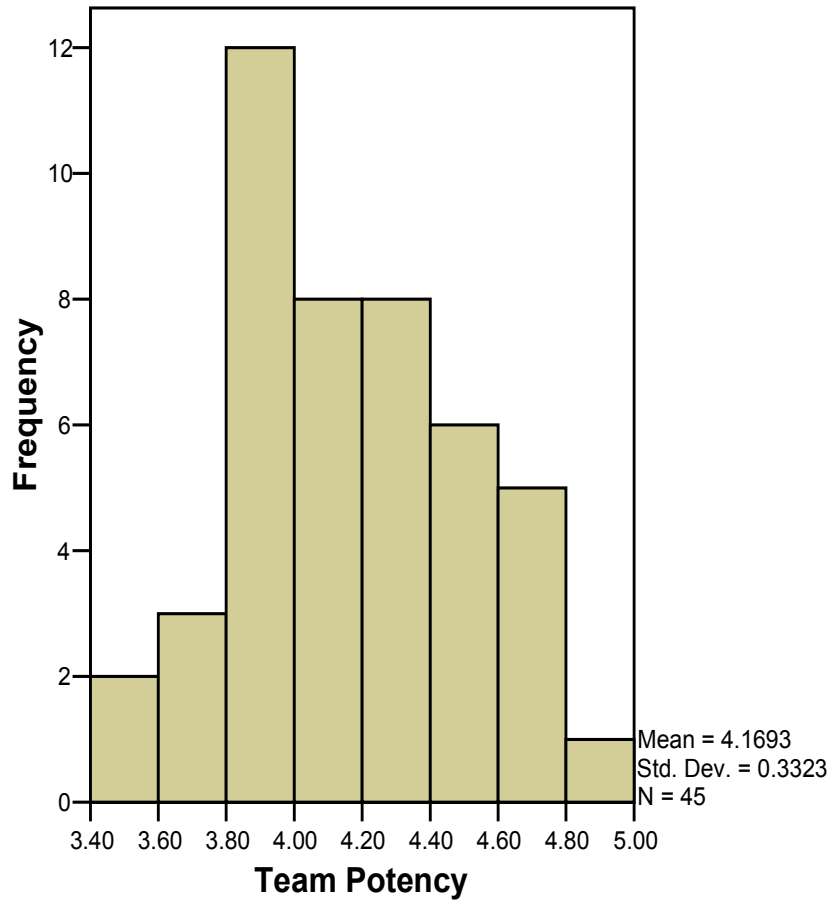


Figure 2. Frequency histogram of team perceptions of team potency.

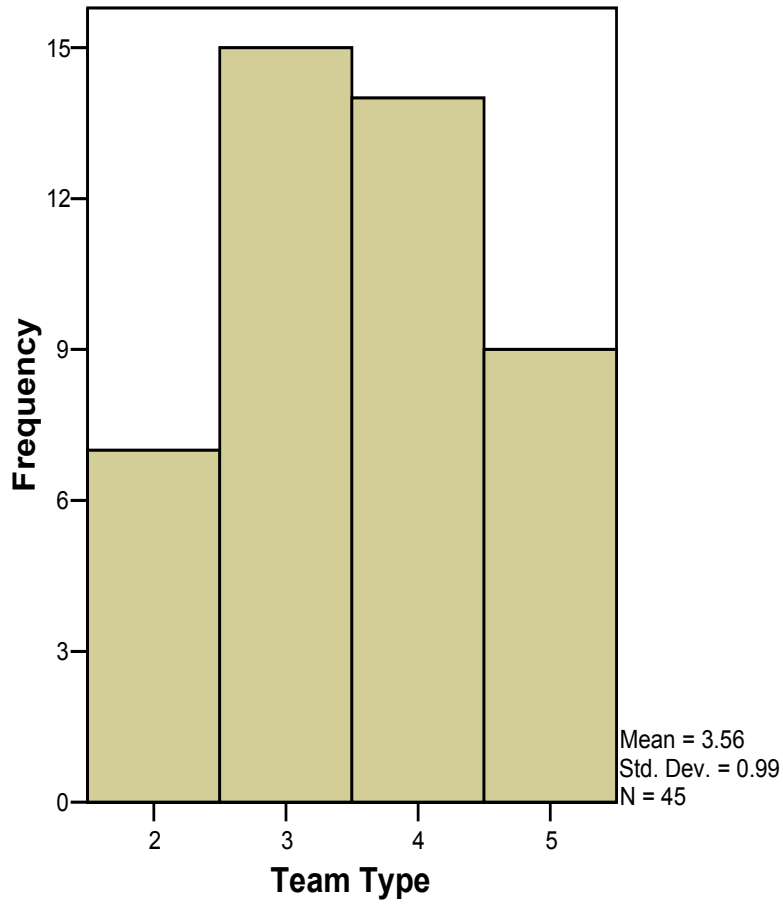


Figure 3. Frequency histogram of stage of team development.

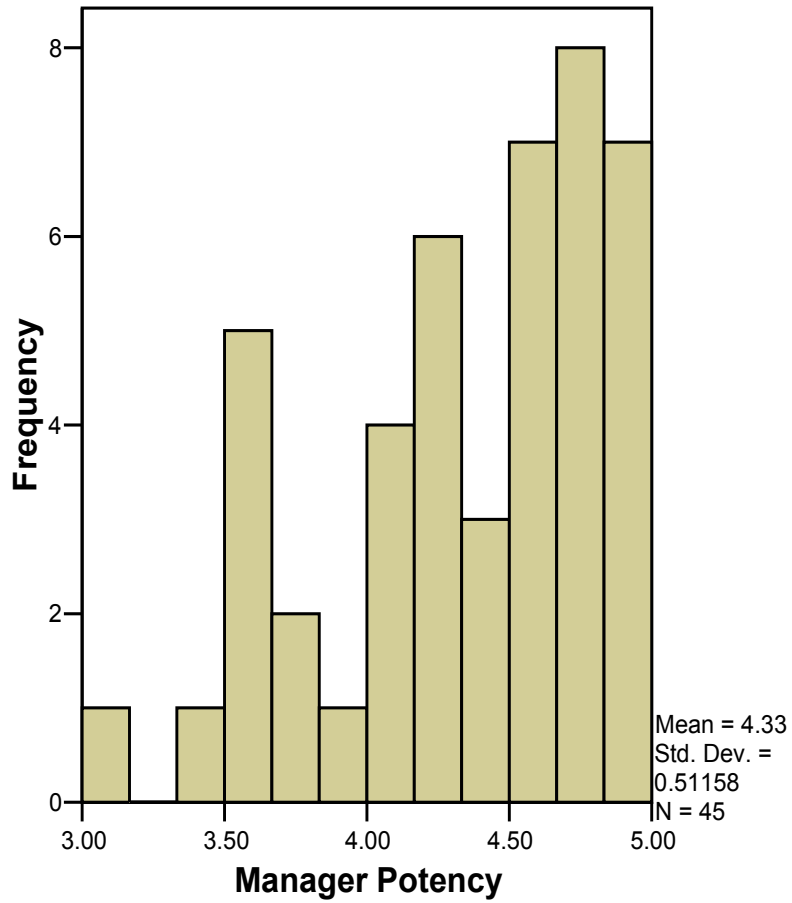


Figure 4. Frequency histogram of manager perception of team potency.

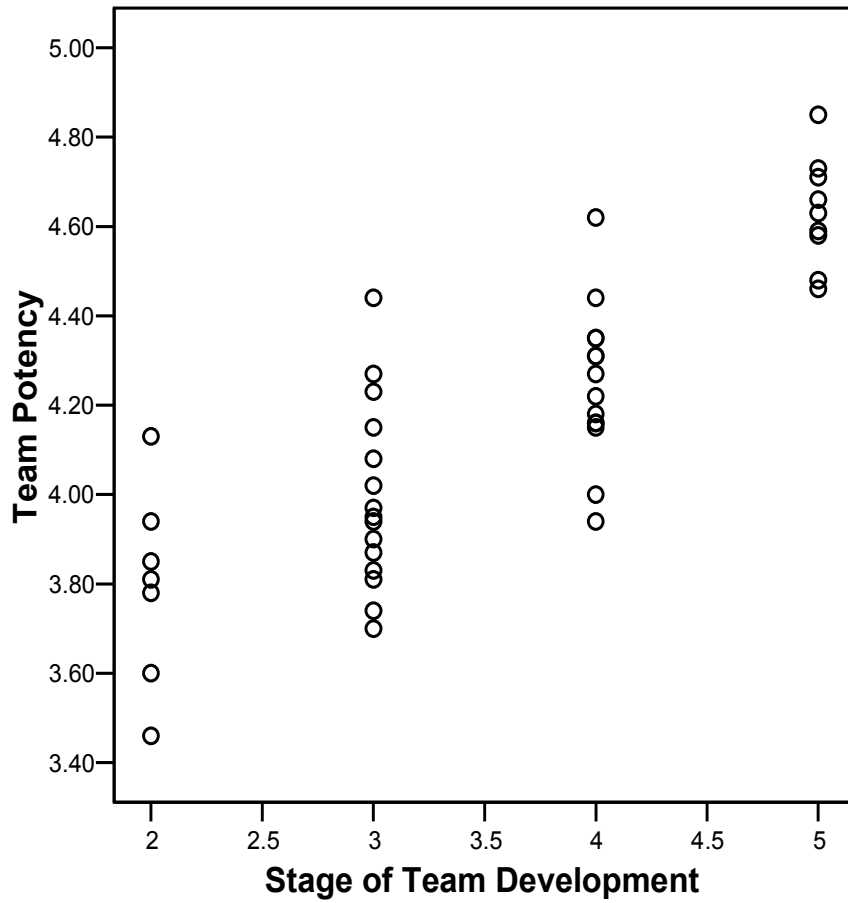


Figure 5. Scatterplot of team perception of team potency and stage of team development.

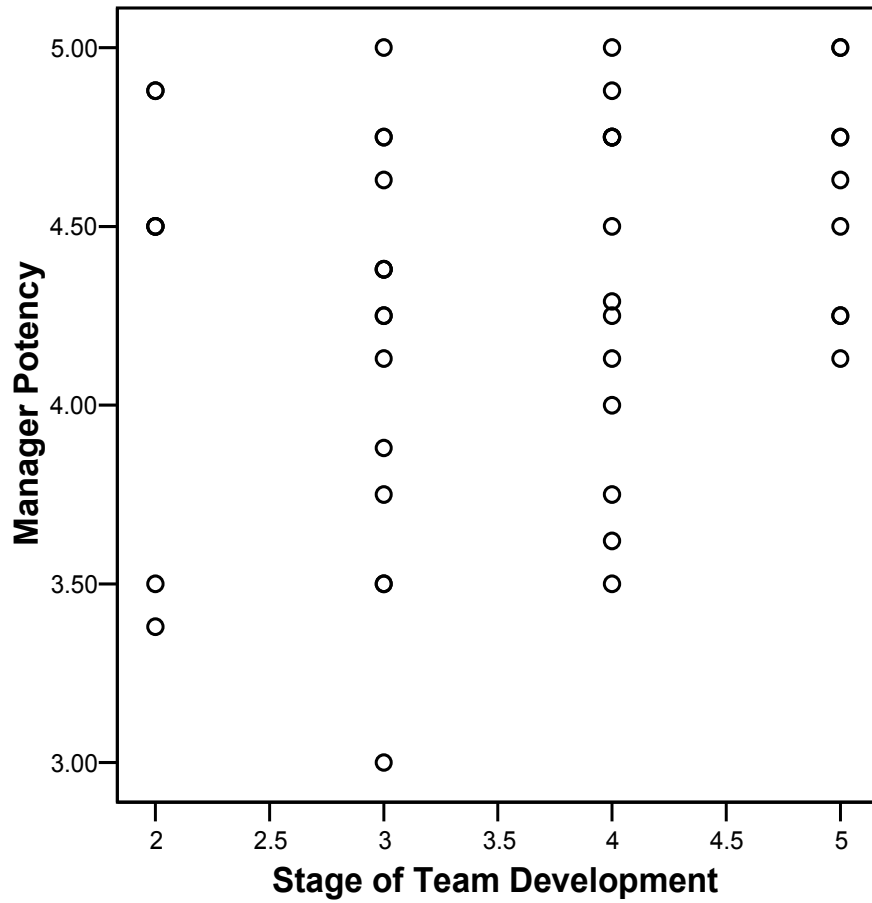


Figure 6. Scatterplot of manager perception of team potency and stage of team development.

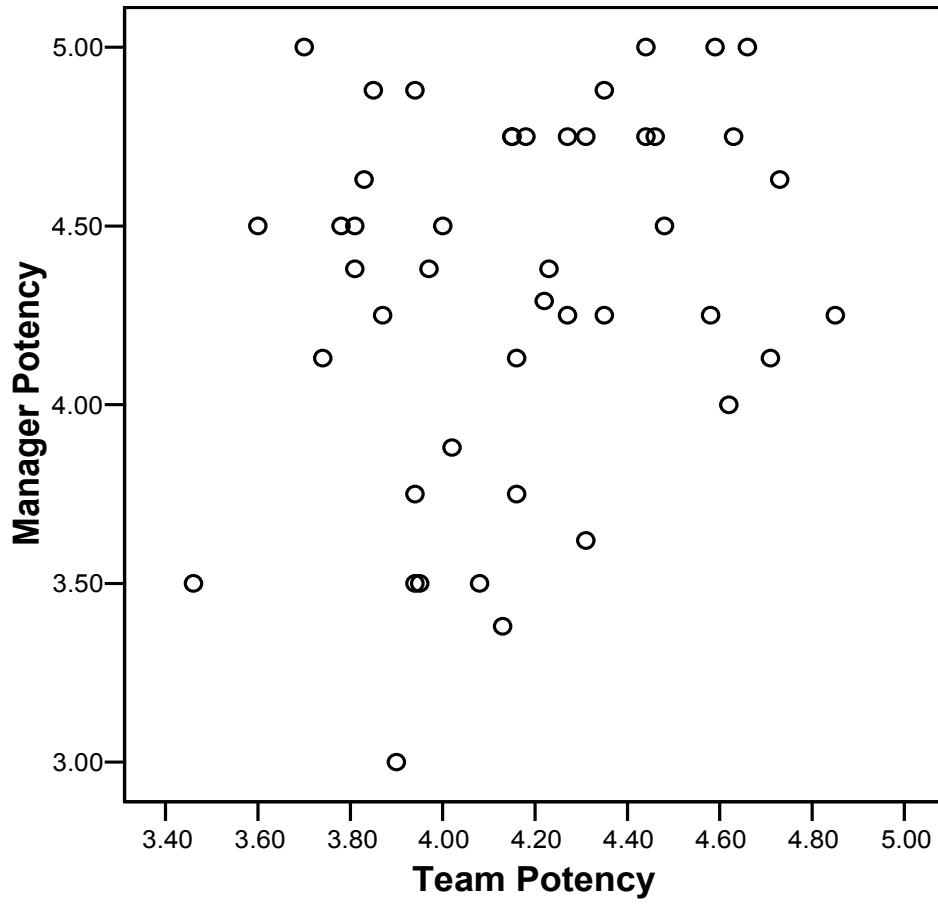


Figure 7. Scatterplot of manager perception and team perception of team potency.

APPENDIX C

Team Questionnaire

1. Name of Organization _____

2. Team Name _____

2. Number of months on this team _____

3. What is the highest level of education you have completed? Please circle.

1) High school

2) Some college

3) Bachelor's degree

4) Advanced degree

5) Other _____

4. Please circle the number of the description that best fits your team.

1) My team is newly formed, not yet united, and has a clearly established leader. Team members have individual work products and, as a result, are individually accountable for the result.

2) My team is confused over our purpose and goals. There is little communication and, often, conflicts erupt during discussions. There is little mutual accountability.

3) My team is establishing a common purpose and performance goals. Team members openly communicate and are collectively accountable for mutual work products. Team members encourage working together for the team's benefit.

4) My team has specific purpose and collective work products. We share leadership roles, are empowered and take initiative comfortably. Team members encourage participation and share accountability.

5) My team has specific purpose and collective work products. We share leadership roles, are empowered and take initiative comfortably. Team members encourage participation and share accountability. In addition, members are deeply committed to one another's personal growth and success.

APPENDIX D

Manager Questionnaire

1. Name of Organization _____

2. Team Name _____

3. Which of the following best describes this team? Circle number.

1. **Work Team:** Work teams are work units responsible for producing goods or providing services. Membership is usually on going and typically from the same function. Work cycles are continuous and repetitive. Examples of this type of team include production lines, maintenance teams, distribution teams and customer satisfaction teams.
2. **Parallel Team:** Parallel teams are cross-functional teams used for problem-solving and improvement activities. Membership is on going and draws from different functions or departments whose work processes overlap. These teams co-exist with the members' home department responsibilities. The teams' objective is to analyze a process and make recommendations to management. Examples of parallel teams include scrap reduction teams, inventory accuracy teams and vendor certification teams.
3. **Project Team:** Project teams are cross-function and used for problem solving. They differ from parallel teams in that they are brought together with a specific goal and, once achieved, they disband and return to their functional group. Examples of project teams include research and development, design, implementation and task forces.

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