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The Role Of Caring Behavior In Teams: How Relational Processes Lead To Group Effectiveness

Steven B. Wolff  
Marist College  
School of Management  
290 North Rd.  
Poughkeepsie, NY 12601  
(914)575-3000 x2939  
E-mail: [steven.wolff@marist.edu](mailto:steven.wolff@marist.edu)

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Abstract

Although team effectiveness has been studied for decades, many scholars lament that we still do not know how to create the "magic" characteristic of effective teams. Research has identified contextual factors and how they contribute to team effectiveness. Additionally, scholars recognize that relational processes are important but knowledge of how they lead to team effectiveness is limited. The present study suggests the need to better understand and more fully incorporate relational processes into models of team effectiveness. It contributes to knowledge of teams by examining behaviors that affect relationships and showing how these behaviors impact team effectiveness. Specifically, this study examines the role of caring behavior on team effectiveness. Caring behavior is defined as a set of behaviors that show respectful attention to teammates; it does not imply an intimate relationship. The research presented here reveals that caring behavior creates a sense of safety and trust, builds relationships, and facilitates team member engagement in the group's task. In turn, these emergent characteristics lead to effective outcomes. This study suggests that without these qualities, contextual factors are less likely to consistently result in developing effective teams.

Team effectiveness ranges from dysfunctional to "hot groups" (Leavitt & Lipman-Blumen, 1995). Dysfunctional teams sap energy from their members, leaving them drained. "Hot groups" labor intensely; their members become ever more energized and excited (Leavitt et al., 1995). What makes the difference?

This question has interested researchers for decades but the answer has been elusive. Today, as more teams are being used (Lawler, Mohrman, & Ledford, 1995) and more complex decisions are being made in teams, the answer to this question is even more important. Scholars have begun to suggest that the gap in our knowledge may stem from the focus of our research. For example, Donnellon (1996) has suggested that we need to more closely examine the subtle effects of language in a team. Worchel, Coutant-Sassic & Grossman (1992) suggest that we need better integration of individual- and group- level concepts. These suggestions tap into aspects of teams that are better understood through the perspective of complex adaptive systems (Lewin, 1992; Smith & Comer, 1994; Smith & Gemmill, 1991).

Two characteristics of complex adaptive systems help us understand why our knowledge of teams is insufficient to help us consistently build effective teams: (1) properties of the system (team) result from complex interaction at multiple levels, and (2) behavior of the system (team) is determined by relationships and interaction of the elements (members) (Lewin, 1992). Much research has focused on understanding group level characteristics (e.g., size, climate, competencies, etc.) and interaction patterns (e.g., seeking feedback, boundary activities, problem-solving process, etc.) of effective teams, however, from a complex-adaptive-system perspective this is a bit like chasing shadows. Characteristics and interaction patterns are epiphenomena that cannot be understood apart from the underlying processes that bring them into being. For example, Edmondson (1999) found learning-oriented behavior such as seeking feedback, processing mistakes, discussing failures, etc. is associated with effective teams performing complex interdependent tasks. She also found that engaging in these behaviors

depends upon members' perceptions that the team is a safe and trusting place. Thus, knowing effective teams engage in learning-oriented behaviors (a team interaction pattern) is insufficient for creating an effective team unless we also understand something about the team's climate. The research presented in this article shows that team climate is an emergent property and depends upon relations among team members.

The character of relationships among team members and the norms that govern interaction, are fundamental factors influencing which group level properties (i.e., team characteristics and interaction patterns) emerge (Druskat & Wolff, 1999a; Wolff, 1999). If we are to understand how effective teams develop, we must understand the role of relationships and the mechanisms by which they lead to group level characteristics observed in effective teams. Current knowledge describes the importance and character of relationships but provides little insight into how internal processes lead to the emergent properties of effective teams. For example, Hackman (1987) recognizes synergy as important and defines it as interaction that increases process gains and reduces process losses, however, he does not explore how synergy is created.

The driving force behind the research presented here is the hypothesis that understanding effective teams requires examining, at the most fundamental level, the behaviors that build relationships. It is from these behaviors that team characteristics emerge. Caring behavior, defined as a set of behaviors that indicate respectful attention to others, is central to building relationships (Kahn, 1990, 1996), thus, it should play an important role in creating effective teams. This connection, however, has not been previously studied. The research presented here helps further our understanding of effective teams by examining of the role of caring behavior in developing team effectiveness.

### Caring Behavior

Relational behavior is given minimal attention in the study of teams (McIntyre & Salas, 1995), and is often devalued and "disappeared" in organizations (Fletcher, 1996). The relational component of group member behavior, however, builds or destroys safety and trust (Golembiewski & McConkie, 1975), affects the degree to which group members are engaged in

the work of the group (Kahn, 1996), and determines the nature of the working relationships among members (Roark & Sharah, 1989). All these factors are likely to affect team outcomes and the degree to which group members are energized or depleted by their experience.

### Defining Caring Behavior

Caring behavior is a set of relational behaviors hypothesized to affect the ability of a group to generate characteristics of effective teams such as creating a safe and trusting environment, providing feedback, and engaging team members (Kahn, 1993, 1996). Caring behavior does not imply an intimate relationship but rather it implies a respectful attention to others. In his empirical study of caring behavior in a social service agency, Kahn (1993) identified eight caring behaviors: accessibility, inquiry, attention, validation, empathy, support, compassion, and consistency. These are briefly defined in Table 1.

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Insert Table 1 About Here

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Based on a literature review and qualitative observation of teams, I add the following three caring behaviors that also impact relationships: forgiveness, taking responsibility, and instrumental support (see Table 1). Effective groups that continuously learn may fail occasionally (Edmondson, 1999). When mistakes are made, or behavior is unknowingly detrimental to the group, the caring course of action is for group members to accept responsibility for their actions; they must attempt to change the behaviors that are harming the group. Group members must also be willing to forgive mistakes of their colleagues (Lewicki & Bunker, 1996). Lewicki and Bunker (Lewicki et al., 1996) argue that taking responsibility and forgiveness are instrumental in creating resilience in trust, i.e., the ability to repair trust should it be inadvertently broken. Finally, most research on highly effective teams recognizes a need for instrumental support, i.e., for members to help each other out with a task when needed (McIntyre et al., 1995).

### Caring Behavior Affects Team Outcomes

Research shows a variety of behaviors similar to caring behaviors have a positive impact on team effectiveness. For example, Druskat (1996a) found that being perceptive and sensitive to other members' attitudes, feelings, or situations is more common in high-performing teams than average teams. These behaviors correspond to the caring behaviors of empathy, attention, and compassion. Helping behaviors, which correspond to the caring behavior of instrumental support, have been found to be significant predictors of team performance outcomes (Podsakoff, Ahearne, & MacKenzie, 1997), and instrumental support is associated with levels of innovation in a team (Burningham & West, 1995).

Although there is evidence that various caring behaviors are associated with team effectiveness, current research does not provide a comprehensive and specific examination of the role of caring behavior. Furthermore, the mechanism by which caring behavior leads to outcomes has not been delineated.

#### The Hypothesized Mechanism by Which Caring Impacts Team Effectiveness

Figure 1 represents the final hypothesized model of team effectiveness showing the central role of caring behavior. Individual caring behavior is hypothesized to facilitate the engagement of team members in the group's task, develop a climate of safety and trust, and foster cohesiveness. Safety and trust are hypothesized to be associated with the use of effective performance strategies. This, along with cohesion and engaged team members, ultimately leads to team effectiveness as measured by task outcomes, satisfaction, and individual learning.

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Insert Figure 1 About Here

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### Caring Behavior Builds Safety And Trust

Caring behavior is associated with safety and trust. For example, people are more willing to be themselves in the presence of the caring behaviors of attention and empathy (Albrecht & Adelman, 1987). (Butler, 1991) interviewed 84 managers to develop a list of conditions that

contribute to trust. He then validated a scale he created to test these conditions. Some of the conditions of trust were availability, consistency, and receptivity, all caring behaviors. In their development of a socio-emotional model of group effectiveness, Druskat and Wolff (1999a) argue that a caring orientation is important for building safety and trust, which affects the development and engagement in performance strategies that lead to team effectiveness. Finally, Shaw (1997) argues that trust is vital to business success and defines three factors that lead to a sense of trust within an organization: concern for performance, acting with integrity, and showing concern for people. This discussion suggests the following hypothesis:

H1: There is a positive relationship between the degree to which group members perceive caring behavior as present in a group and the development of a group climate characterized by a shared sense of safety and trust.

#### Caring Behavior Builds Engaged Team Members

Caring behavior, along with the climate and relationships it produces, lead to team members putting their full selves into their work. Kahn (1990) finds that the sense of safety and trust generated by caring behavior leads to people being engaged in their work. Edmondson (1999) also finds that a sense of safe and trusting relationships are necessary for team members to engage in performance strategies that may feel risky such as discussing failures and seeking feedback.

This leads to the following hypothesis:

H2: There is a positive relationship between the degree to which group members perceive caring behavior as present in a group and the degree to which they are engaged in group task processes.

#### Caring Behavior Builds Relationships

Caring behavior is also instrumental for building relationships (Bennis, Berlew, Schein, & Steele, 1973; Fletcher, 1994; Golembiewski et al., 1975). Kahn (1996) argues that caring behavior builds workplace relationships that provide a "secure base" for workers, i.e., relationships in which they feel safe to take risks. Since caring behavior serves to build working relationships within a team, we would expect the level of group cohesion to increase with increased levels of caring behavior. For example, cohesion has been shown to result from behaviors such as empathy and

acceptance (Roark & Sarah, 1989): Both are dimensions of caring behavior, which leads to the following hypothesis:

H3: There is a positive relationship between the degree to which group members perceive caring behavior as present in a group and the level of group cohesion.

### Team Effectiveness

The outcomes of caring behavior, i.e., a climate of safety and trust as well as cohesive and engaged team members, lead to team effectiveness. The following sections delineate the mechanisms by which this is hypothesized to occur, but first I define effectiveness. I use a definition of team effectiveness based on Hackman (1987) who includes task outcomes (i.e., "task output acceptable to those who use or receive it"), and process outcomes (i.e., "capability of members to work together in the future is maintained or strengthened" and "members' needs are more satisfied than frustrated by the group experience"). In addition, an important category of effectiveness not explicitly considered by Hackman is the ability of a team to facilitate individual learning. Teams have been widely studied in the educational literature for their ability to enhance individual learning (Slavin, 1986), yet this outcome is often not considered in the organizational literature. Today, learning at all levels is important to cope with the complex and rapidly changing business environment (Hall, 1996; Vaill, 1996), thus I include it as a team outcome.

### Safety and Trust Lead to More Effective Performance Strategies

Effective performance strategies for teams performing in complex environments can often feel risky to participants (Edmondson, 1999) and thus require a sense of safety and trust for team members to fully engage in them. For example, seeking feedback and reflecting on performance are behaviors associated with learning (Senge, 1990; Vaill, 1996). To process the feedback and improve requires that group members challenge tacit beliefs and meaning systems and replace them with new meaning systems based on shared information and understanding (Barrett, Thomas, & Hocevar, 1995). Engaging in this type of discourse is not necessarily easy for people to do. Argyris (1990) has studied defensive routines for over two decades and has repeatedly



documented a reluctance to confront assumptions, beliefs, and actions that perpetuate errors; because doing so can lead to embarrassment or threats to one's self concept.

Another example of a performance strategy that may feel risky is experimenting and taking risks, a characteristic of highly effective groups (Edmondson, 1999). These behaviors involve the potential for failure, which also poses a possible threat to one's identity (Birney, Burdick, & Teevan, 1969). If team members are to engage in such performance strategies, they must feel safe in the group and trust their team members (Kahn, 1996), which leads to the following hypothesis:

H4: The more a group's climate is characterized by a shared sense of safety and trust, the more likely it will be to develop effective performance strategies.

#### Cohesion Leads to Satisfaction, Engagement with the Task, and Individual Learning

Cohesion has been shown to be connected to group task motivation and satisfaction with the group (Greene, 1989). Cohesion has also been shown to contribute to individual learning in groups (Gabbert, Johnson, & Johnson, 1986). This leads to the following hypotheses:

H5: There is a direct positive relation between cohesion and satisfaction.

H6: There is a direct positive relation between cohesion and group task motivation.

H7: There is a direct positive relation between cohesion and individual learning.

#### Engagement and Appropriate Performance Strategies Lead to Effective Outcomes

The final set of hypotheses relates the variables described above to task outcomes and individual learning. The appropriate processes needed for effectiveness depend on the nature of the task with complex and highly interdependent tasks requiring high information processing capability (Gladstein, 1984). Learning-oriented behaviors such as discussing failures, seeking feedback, constructive controversy, etc. (Edmondson, 1999) represent processes with high information processing capacity, thus, we would expect them to be appropriate for highly interdependent, complex tasks. Using appropriate performance strategies, however, is only half the picture. Group members may devote varying degrees of energy and themselves to these

behaviors (Kahn, 1990). The more highly engaged the group members, the more likely they will produce effective outcomes (Hackman, 1987). This leads to the following hypotheses:

H8: When group tasks are complex and require interdependence among group members for completion, groups that develop performance strategies characterized by learning-oriented behaviors will produce products that are more highly rated by those who receive or use them.

H9: The greater the degree to which group members are engaged in completing tasks, the more highly rated will be the products produced by the team.

Many learning-oriented behaviors have also been found to foster individual learning. For example, a team that engages in constructive controversy is integrating multiple perspectives through discussion. Johnson and Johnson (1985) found that the discussion process "promotes the discovery and the development of higher quality cognitive strategies" (p. 115), i.e., the exposure to different perspectives promotes cognitive development (Nastasi & Clements, 1991). Organizational research has also shown that exposure to perspectives other than one's own can lead to a more cognitively complex understanding. For example, Bartunek et al. (1996) found that people who participated in a change process, and thus were exposed to various perspectives on the change, developed a more complex understanding of the situation and were more able to delineate and differentiate the issues involved with the change.

It seems reasonable to expect that individual learning would be greater in teams that are more highly engaged in learning-oriented behaviors. Also, it seems reasonable to expect that teams where individual learning is greater are more effective at producing task outcomes. This discussion leads to the following hypotheses:

H10: Individual learning within a group is directly related to the level of learning-oriented behavior displayed by the group.

H11: The team's effectiveness at producing task outcomes is positively related to individual learning.

### Method

The research reported here was conducted in two phases and is a subset of a larger study (see Wolff, 1998). The first phase was a pilot test of a survey instrument used for data collection. The

second phase represented the focal study and used a revised survey instrument based on the pilot study.

### Phase I

#### Sample

Participants were 76 graduate students (31 males, 33 females, and 12 unspecified) enrolled in a required multi-discipline course at an East Coast University. The age of the students ranged from 21 to 56 with an average of 27.6. The course includes components of organizational behavior, information systems, and policy.

#### Measures of Caring Behavior

Since no previously validated scales for caring behavior existed, they were developed and tested in Phase I. Poorly worded questions and questions that did not clearly measure the intended caring behavior were identified. A principal components factor analysis with oblique rotation, along with informal conversations with students, provided information for refining the scales to be used in phase II.

### Phase II

#### Sample

Groups of MBA graduate students at an East Coast University were used as subjects for this phase of the study as well. Students were enrolled in one of seven sections of the same course used in phase I but in a subsequent semester. Students worked in teams to complete the group project described below. Out of a total of 385 students enrolled, 329 completed the survey, representing a response rate of 85%. These students formed 69 teams with groups varying from 4 to 7 members.

One issue that arises when using student teams is external validity. Because of this limitation, a number of measures were taken to improve the generalizability of the results. Generalizability of a study to a different setting depends upon the similarity between settings on key attributes (Locke, 1986). The teams in this course were chosen because of their similarities to self-managed teams in organizations. The teams were together for an extended period of

time, were responsible for completing the group project by a given deadline, had autonomy to determine how they carried out their tasks, and were dependent upon each other for successful project completion. The teams were fully responsible for managing their own performance (Hackman, 1987). In sum, similarity of key attributes in the experimental setting and those of self-managed work groups in work settings will likely yield generalizable results.

### Group Project

All groups worked together on two projects during the semester. The first project was ungraded and asked students to make a presentation applying McKinsey's 7S Model to a case study of Calyx & Carolla. The second project was more comprehensive and accounted for 20% of the overall course grade. The student team had to develop a strategic initiative in electronic commerce for a specified company. The team was then required to prepare and deliver a 30-minute presentation to the class. Students had to develop an understanding of electronic commerce, perform a strategic analysis, identify and describe business processes, and develop a plan for implementing changes in the organization's design.

The task was complex enough that the students were dependent on one another for successful completion. Students could divide the task into individual responsibilities and then integrate the pieces. All members of the team received one team grade, although some individual adjustments to this grade were made based on team member evaluation of each member's contribution to the team.

### Measures

A survey instrument was used to measure caring behaviors, the degree of safety and trust, performance strategies, group member engagement, as well as cohesion and satisfaction. Standardized individual and group grades were used as outcome measures. The final measures used for analysis were derived from these measures based on factor analyses of the data. The development of the final scales used for analysis is discussed in Wolff (1998). All questions kept for the analysis had primary loadings on factors representing the original dimension for which the question was intended. The final scales are shown in Table 2.

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Insert Table 2 About Here

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### Task Outcomes

The team grade on the project was used as an objective measure of task outcomes. The grades were standardized within each section to provide a uniform measure across all sections.

### Learning

Individual learning was measured by final course grade. Similar to the team grades, the individual grades were standardized within each section and averaged to develop one group-level measure of the team's average individual performance. Use of this measure as an indication of the team's influence on individual learning makes three assumptions: (1) all other things being equal, differences in mean GPA account for differences in mean team member performance, (2) groups consist of members with a random distribution of personal characteristics that affect individual performance, thus (3) group context is the primary source of variance in this measure when controlled for GPA. Since groups were chosen by the instructor to maximize heterogeneity and the course context was the same for all students, these assumptions are likely to be valid.

### Control Variables

Student grades are influenced by general level of ability, thus, students were asked for their undergraduate GPA to act as a control variable for outcome measures. Group size was measured by asking students how many people were in their group. This was cross-checked with data supplied by instructors. The composition of the group was measured on a number of dimensions including: gender, composition of international students, GPA (an approximation of skill levels), part-time or full-time status, English as a first language, and age. Organizational level variables were constant across sections. The project counted for the same percentage of the total grade in all sections.

## Results

The following results are based on group-level data. Since within group variance was significantly less than between group variance for all variables ( $p < .05$ ), individual responses were aggregated to the group level by taking the mean of all respondents in a given group (Rousseau, 1985). Two groups were deleted from the analysis because fewer than 50% of the members responded to the survey.

Table 3 shows correlations among variables, including control variables, and Cronbach's alpha for each scale. The model shown in Figure 1 was tested for goodness of fit to the data using LISREL8. Control variables significantly correlated with either independent or dependent variables were added to the initial model and then removed if the path coefficient was not significant. All control variables were eventually removed because they were non-significant.

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Insert Table 3 About Here

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The hypothesized model had  $\chi^2 = 80.22$  with 17 degrees of freedom, which is significant with  $p < .000$ . A good fitting model has a  $\chi^2$  value approaching the degrees of freedom and a non-significant p-value; thus, the above statistics indicate the model is a poor fit to the data.

A series of modifications using a model generating approach as suggested by Jöreskog & Sörbom (1993) were made to the model to improve fit (see Wolff, 1998 for details). The final model is shown in Figure 2. The fit statistics for the hypothesized and final models are shown in Table 4. The chi-squared statistic, along with the degrees of freedom, was an initial indication of model fit. The chi-squared measure, however, assumes that the model fits perfectly in the population; it does not take parsimony into account. The Root Mean Square Error of Approximation (RMSEA) is a measure that does not assume perfect fit in the population. It examines the error per degree of freedom. A good fitting model is considered to be one where RMSEA is less than .05 (Jöreskog et al., 1993). AIC and CAIC are goodness of fit indicators that are based on information theory and take parsimony into account. The better fitting model is the

one with the smaller value of these indices. The final two measures, the goodness of fit index (GFI) and the parsimony goodness of fit index (PGFI) compare how much better the model fits than no model at all. Larger numbers indicate a better fit.

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Insert Figure 2 and Table 4 About Here

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The final model (see Figure 2) fits quite well with  $\chi^2 = 18.94$  and 16 degrees of freedom, which is non-significant ( $p = .27$ , see Table 4). Table 5 summarizes the hypotheses and whether the final model supports them. Table 6 shows the standardized total effect of each variable, treated as an independent variable, on consequent variables taken as dependent variables. This allows us to compare the effect of any variable with that of another. For example, the total standardized effect of caring on standardized individual grade is .29 while the effect of safety/trust is .07 indicating that, overall, caring behavior has a greater impact than safety/trust on average standardized individual grade. We can also see that engagement has a much greater impact on average standardized individual grade (.43) than all but the standardized team grade (.59).

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Insert Table 5 and 6 About Here

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### Overall Results

The results support the hypotheses regarding the role of caring behavior on creating team effectiveness. It directly impacts safety and trust (H1), engagement with the task (H2), cohesion (H3), and satisfaction—a relationship not originally hypothesized. The results also support the hypotheses that individual learning is related to task outcomes (H11) and that satisfaction results from cohesion (H5).

Two hypothesized relationships were mediated by a third variable. The relationship between climate and performance strategies (H4) was mediated by cohesion, and the relationship between cohesion and task motivation (H6) was mediated by satisfaction.

Finally, the hypotheses suggesting performance strategies affect task outcomes (H8) and individual learning (H10) were not supported, nor was the hypothesis that cohesion affects individual learning (H7). As will be explained, it appears that learning-oriented behaviors, the measure of performance strategies used, may not have represented appropriate performance strategies for this task. For similar reasons, the hypothesis suggesting that engagement affects task outcomes (H9) was not supported, although it was found to affect individual learning.

#### The Role of Safety/Trust on Learning-Oriented Behavior

The mechanism by which caring behavior was hypothesized to influence team effectiveness was through a group climate of safety and trust, which in turn was hypothesized to facilitate development of appropriate performance strategies, in this case assumed to be learning-oriented behavior. Safety and trust did not directly lead to the development of learning-oriented behavior as hypothesized (H4), however, this relationship was mediated by cohesion. Thus, it appears that a shared sense of safety and trust serves to draw members closer together, and through this closeness they are more apt to develop learning-oriented behavior. Feeling safe may not be enough to foster learning-oriented behaviors as Edmondson (1999) concludes and this study hypothesized.

Safety and trust strengthen relationships among team members, but it appears to be the nature of relationships (cohesion being one indication) that directly affects the development of learning-oriented behaviors. Supporting this perspective is the unanticipated finding that engagement in the task also influences the development of learning-oriented behavior. Engagement was shown to partially result from satisfaction with the group—another measure of relationships within the group. Thus, caring behavior results in stronger relationships, as indicated by cohesion and satisfaction. The strength of relationships then affects the development of performance strategies both directly and indirectly through increased engagement in the task.



One explanation for this result comes from attachment theory (Bowlby, 1988). As Kahn (1996) explains, a sense of attachment is required to provide a “secure base” from which people can venture out and experiment with new behaviors. This study shows that a climate of safety and trust contributes to the development of cohesive and satisfying relationships, which are important elements of a “secure base.” Engaging in learning-oriented behavior is facilitated by the “secure base” provided by these relationships and not directly by the climate of safety and trust as originally hypothesized. Figure 3 modifies the model of the results shown in Figure 2 to depict a relational interpretation of the results.

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Insert Figure 3 About Here

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#### Relationships with Task Outcomes and Individual Learning

Hypothesized relationships with task outcomes (H8, H9) and individual learning (H7, H10) were not supported. The results show that learning-oriented behavior is not directly associated with outcomes. The hypotheses suggest that effective groups must (1) use appropriate performance strategies and (2) be engaged in these processes. It was hypothesized that engaging in learning-oriented behavior would be an appropriate strategy for the team's task, however, this is not supported by the data. Since there is strong evidence that learning-oriented behavior is characteristic of effective teams (Druskat, 1996a; Edmondson, 1999; Katzenbach & Smith, 1993), it is likely that other factors explain the failure to find a connection between learning-oriented behavior and team effectiveness.

Learning-oriented behaviors are appropriate performance strategies when the task is complex and group members are interdependent. Although this was believed to be the case with the class project, informal conversations with students suggest the possibility that the task could be accomplished through a “divide and conquer” approach. Students would need to work together to integrate their work: However, the type of reflection and dialogue typical of learning-oriented behavior would not be necessary for successful completion of the task.

The importance of individual work to the team's task outcome is further supported by the finding that team outcomes were only dependent upon average individual performance. If the task was accomplished through a "divide and conquer" approach, it seems reasonable that the team outcome would depend mainly on individual performance rather than learning-oriented behavior.

Since "divide and conquer" was not measured as a performance strategy in this study, the degree to which team members were engaged with the task is the only other factor hypothesized to impact task outcomes. The findings show that engagement in the task directly affects individual performance, which is consistent with a "divide-and-conquer" strategy. Individuals are mainly working alone, thus, they would be the primary beneficiaries of being engaged in the task. Individual learning, in turn, affects the team's outcome.

#### Discussion

This study examined the role of caring behavior—a set of behaviors that indicate respectful attention to others—on team effectiveness. This research contributes to our understanding of team effectiveness by showing that caring behavior represents individual acts that lead to team effectiveness by fostering: A climate of safety and trust (H1), and greater cohesion (H3), that lead to team members who are engaged in the group's task (H2). These characteristics facilitate the use of learning-oriented behavior, which did not impact task outcomes in this study but has been shown to be associated with high-performing teams performing complex interdependent tasks. Outcomes were, however, affected through increased engagement of team members in the task, which in this study led to greater individual learning.

The outcomes of positive relationships have been clearly documented; highly effective teams trust one another, are committed to each other, support each other, and provide feedback (Druskat, 1996b; Katzenbach et al., 1993). However, the mechanism by which these characteristics emerge is less well understood. The present research contributes to current knowledge by illuminating this mechanism and demonstrating that acts of caring affect the team's ability to generate characteristics that lead to effectiveness. This study also extends work

on caring behavior into the domain of teams and begins to balance what we know about contextual factors on team effectiveness with an understanding that team members are responsible for their choice of behaviors.

### Expanding Our Understanding of Effective Teams: The Role of Caring Behaviors

The present study begins to define factors that create group synergy, a topic that has alluded group scholars. Our current understanding of effective teams focuses mainly on identifying characteristics and routines used by effective teams as well as organizational and structural factors that management can control to influence team effectiveness (see Pearce & Ravlin, 1987 for a review). Hackman's (1987) model provides an excellent summary of the research on teams. His model suggests organizational context (e.g., reward system, education system) and group design (e.g., task structure, group composition) are inputs to process criteria of effectiveness (e.g., appropriateness of performance strategies, engagement in the processes); the relationship being mediated by group synergy (i.e., interaction processes that increase process gains and reduce process losses). The process criteria of effectiveness then lead to group effectiveness (e.g., task outcomes, viability). While most elements of the model are supported by research, our understanding is minimal when it comes to factors that create group synergy and the mechanism by which synergy affects group outcomes. This study begins to fill these gaps.

The findings of this research suggest that caring behavior is fundamental to the development of synergy, i.e., it creates conditions that allow group members to engage in appropriate routines. Prior research has examined competencies of effective teams (e.g., Druskat, 1996b), which helps us understand exactly what effective teams do. However, understanding what effective teams do may not be sufficient for understanding differences among teams of varying performance; this requires understanding relational factors within a team.

Edmondson's (1999) work on safety is an important first step in demonstrating that there is more to understanding effective groups than knowing what they do, we must know what members think about the group. She shows that collective cognition is an important influence

on the degree to which group members engage in learning-oriented behaviors. This study goes one step further and suggests that, not only must we know what the group does as a whole and what members think about the group, we must also understand the subtle relational aspects of individual behavior in the group.

The importance of relationships is highlighted by the unexpected finding that learning-oriented behavior was not directly related to safety as suggested by Edmondson (1999). Instead, safety appears to strengthen relationships as indicated by an increase in cohesion. It is the quality of the relationship (i.e., cohesion) that provides the "secure base" from which group members are willing to take risks involved with engaging in learning-oriented behavior.

Donnellon (1996) begins to recognize the importance of subtle relational acts in her work examining the language of team members. Group processes and collective behavior are important, but the language patterns in the group create an atmosphere that impacts the effectiveness of those behaviors. The results of this study demonstrate that caring behaviors, of which speech is a part, act in a similar fashion. They are central to the functioning of groups; they increase average levels of safety and trust, cohesion, satisfaction, and task motivation, which are all related to the nature of relationships in the group. The conclusion, therefore, is that as caring behavior increases, so does the quality of relationships in the team. And as the quality of relationships improves, so does team effectiveness. This builds on the qualitative work of Fletcher (1994) who found that relational skills contribute to building a sense of *team*. The present study illuminates the mechanism by which relational work creates conditions and characteristics conducive to effective team performance (see Figure 3) and empirically demonstrates that these conditions are associated with team effectiveness.

This discussion suggests a modification to Hackman's (1987) model of group effectiveness. The process outcomes (i.e., satisfaction and viability) shown in his model provide an indication of the quality of relationships within the team. This study shows that the quality of relationships emerges from synergistic processes in the group (i.e., caring behavior and its outcome of safety and trust) and that the quality of relationships affects the ability of the group to choose appropriate

performance strategies and to fully engage in those processes. These findings suggest that Hackman's process outcomes are precedent to the process criteria of effectiveness (i.e., choosing and engaging in appropriate performance strategies) not antecedent to it. Furthermore, the findings suggest that the synergistic process involves caring behavior leading to a sense of the group as safe and trusting, and is an input to the development of relationships. A suggested modification to Hackman's (1987) model is shown in Figure 4.

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Insert Figure 4 About Here

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The model shown in Figure 4 adds detail to our understanding of synergy, showing one mechanism by which it emerges. Synergy can be viewed as a relationship building process affecting the quality of relationships within a team, which in turn influences team effectiveness by moderating the development and engagement in appropriate task processes (Druskat & Wolff, 1999b).

The model suggests that we may need to rethink the role of relationships in a team. Perhaps relationships are not outcomes of team processes but rather team processes are a manifestation of relationships. Furthermore, the quality of relationships may be better understood as the result of individual processes, e.g., caring behavior than the outcome of group processes. Shifting our perspective on relationships from being a dependent variable influenced by group process to an independent variable that influences group process has a number of implications.

#### Implications for team development

Although managers play an important role in setting the environment for their teams and nurturing them, this study suggests that this is only half the picture. The strong connection between caring behavior and effectiveness suggests that individuals within groups play a large role in controlling their own destiny. Raising awareness of team members concerning the behaviors they choose and providing tools that make it more likely that team members will choose to display caring behavior may be important avenues for team development

Although contextual factors are important to team effectiveness (Gladstein, 1984) as are appropriate performance strategies (Hackman, 1987), relying on these to the exclusion of relational processes may lead to a mechanized and routinized approach to team development. For example, teams are often treated as though they can implement appropriate routines once they become known to the team (Edmondson, 1999). When the routines are not followed, training is often suggested based on the assumption the team must lack necessary skills.

Although training is important, this study shows characteristics of effective teams and their ability to engage members in appropriate performance strategies may have just as much to do with the quality of relational behavior (e.g., caring) as a lack of skill or knowledge. Importing routines shown to be effective in other groups and providing training cannot guarantee that group members will engage with those routines rather than half-heartedly go through the motions. The findings of this research suggest the reason such a strategy will work in some groups and not others is related to the team's ability to generate effective characteristics, which depends on the quality of relational processes in the group.

#### Implications for training programs

Training programs suggested for team development often include interpersonal skills. Although these are important, they may be focused in the wrong place. Good interpersonal skills translate into caring behaviors. When people actively listen, they are attending to and validating the speaker. When people raise issues in a non-judgmental way, they are avoiding behaviors that would be perceived as non-caring.

Caring behavior actually does not require much skill. It doesn't take much skill to tell someone you appreciate their efforts, to acknowledge their sacrifices, or to take responsibility for one's own behavior. What this takes is emotional intelligence (Goleman, 1995; Mayer & Salovey, 1997), i.e., people must be self-reflective and they must be able to control their instinctive emotional responses to exhibit caring behavior. Therefore, while people need to be aware of the importance of caring behaviors, they do not need much training to implement them. Instead, people need to be taught the behaviors seen as caring and those that are not as well as

develop their emotional intelligence. Training programs need to teach people to take responsibility for their situations, manage their emotions, and make effective choices about their individual behavior. Team members must understand that they *can* have an impact on the team if they understand the appropriate leverage points. Caring behavior provides such a lever.

#### Implications for research

Any research that examines relationships among variables runs the potential risk of spurious correlations (Davis, 1985). A spurious correlation occurs when a variable that has not been considered in the research is related to both independent and dependent variables. In this case, observed relationships may be the result of the variable that has not been considered. A classic example is the relationship between the number of fire trucks at a fire and the extent of the damage. As the number of fire trucks increases so does the damage, however, the relationship is caused by a third variable, the severity of the fire, which is related to both variables.

Much research on teams does not take the level of caring behavior into consideration. This study suggests that caring behavior is central to the functioning of a team and that it precedes, either directly or indirectly, other aspects of team functioning (e.g., climate, cohesion, satisfaction, task motivation etc.). Since much prior research on teams does not take the level of caring behavior into consideration, it is possible that relationships found are in part spurious. The effect of this is that conclusions about relationships among variables may need to be reevaluated.

#### Future research on effective teams

This research only begins to examine the role of caring behavior on team effectiveness. Caring behavior is an important variable in the study of teams, thus, future team research should at least control for levels of caring behavior in a team. Beyond this, there are many questions that still need to be explored. This study suggests that caring behavior is important to developing relationships and suggests relationships may be an independent variable that influences group processes as well as a variable dependent on group processes. Additional

research needs to be conducted to more fully understand how relationships impact the selection and engagement in group processes.

Another area for future research is to better understand the impact of caring behavior on a team. This study treats caring behavior as a group-level variable. Thus, it examines the impact of the average level of perceived caring in the team. It is conceivable that caring acts on a threshold basis, i.e., one person acting in a caring or non-caring manner might be all that is needed to impact the team. We need to explore the degree to which caring behavior has a linear effect on the team versus a threshold effect.

#### Expanding Our Understanding of Caring Behavior

In addition to contributions related to the main research question, this study also adds to our understanding of caring behavior. Kahn's (1993) work shows that the degree to which workers in a social service agency give and receive care from co-workers and supervisors is related to their ability to fully engage in their work. The current study extends this finding into the arena of groups. Caring behavior impacts the degree to which group members develop cohesive relationships and engage in learning-oriented behavior. The fact that caring behavior has an impact at multiple levels in an organization should not be surprising. These behaviors facilitate the formation of relationships, which are fundamental to complex adaptive systems such as groups and organizations (Lewin, 1992). The surprising thing is that caring behavior hasn't received more attention in the organizational and group literature.

Kahn's (1993) work identified eight caring behaviors—to which I added three. However, there were no previous scales to measure team member perceptions of these behaviors. The scales developed and tested in this study serve as a tool for future researchers wishing to incorporate caring behavior into their research.

In addition to developing measures for caring behavior, this study helps us understand which caring behaviors group members perceive as distinct. The 11 caring behaviors originally considered in this study were found to be difficult for team members to distinguish from each other. After three iterations of scale development and analysis, it was found that two dimensions



of caring behavior could be distinguished (although these were combined in the analysis for this study). These two dimensions can be labeled validation and recognition. The validation dimension is concerned with teammates seeking one's inputs, questioning for understanding, paraphrasing one's perspective, and providing information. These activities provide a feeling that one is important and has a valid perspective that teammates want to understand. The recognition dimension is concerned with teammates expressing appreciation, forgiving, acknowledging sacrifices, accommodating needs, and valuing contributions. These actions serve not only to recognize contributions and sacrifices, but to recognize team member needs and provide support in a way that is not demeaning.

#### Future research on caring behavior

Although the scales used in this study were carefully developed, they need to be validated in other settings. Furthermore, the scales were developed with the goal of distinguishing them from other variables in this study. This may have limited the number of caring behaviors that could be discriminated.

More work also needs to be done around examining the impact of the various behaviors. The analysis for this research combined the caring behaviors. This provided an overall indication of caring in the teams, but it did not allow a finer analysis of how each behavior affects the team.

#### Limitations

This research has a number of potential limitations. One concern is the generalizability of the results to an organizational environment. Although the sample was chosen because it has a number of characteristics that are similar to self-managed teams in organizations, the parallel is not perfect. Future research needs to be conducted in organizational settings. Additionally, the model generating approach used to develop the final model also increases concern over generalizability. Although the hypotheses involving caring behavior were confirmed, the model needs to be further tested to increase confidence in its generalizability.

Caring behavior was measured via a survey instrument. Although it is likely that perceptions of caring are more influential than objective measures of caring behavior, there were no

objective measures in this study. Future research should examine the correlation between observed caring behavior and member perceptions. We also need to understand whether objective measures of behavior show the same results as the perceived measures used in this study.

### Conclusion

Understanding the processes by which effective teams are created is becoming increasingly important. A complex-adaptive-system perspective of teams suggests that group level properties of a team emerge from individual behavior and relationships. This study examined the role of caring behavior, i.e., behaviors showing respectful attention to others, as an important factor in the development of effective teams. Caring behavior is associated with relationships, a group climate of safety and trust, and team members who are engaged in the task of the group. Relational behavior such as caring suggests a promising route toward better understanding the mechanism by which effective teams are created. We need to examine these more closely and develop theories of teams that integrate multiple levels.

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**Table 1: Definition Of Caring Behaviors****Kahn's (1993) Original Dimensions of Caregiving**

*Accessibility* is being available. In the context of a team this means attending group meetings, not being distracted during meetings, and being accessible outside of scheduled meetings.

*Inquiry* is asking about the needs and feelings of others.

*Attention* is actively taking an interest in others; listening to them, making eye contact, and showing that others are understood.

*Validation* is letting others know they are worthwhile, that their ideas and thoughts are valued.

*Empathy* is being able to take the perspective of others, putting oneself in their place.

*Feedback* is Kahn's dimension of support. As will be discussed below, I have chosen to break his support dimension into two areas. The first is providing feedback and useful information that aid individual understanding and development. The second is instrumental support, which is described below.

*Compassion* is displaying warmth, and showing kindness.

*Consistency* is maintaining a caring posture over time. One is more than just a "fair weather" friend.

**Added Dimensions of Caregiving in Teams**

*Forgiveness* is a willingness to forgive mistakes and unintended behaviors that are harmful to the group.

*Instrumental Support* is help provided to teammates to help them with their task if they are having difficulty. This is one dimension of organizational citizenship behavior described by Organ (, 1988 #1136).

*Responsibility* implies that a person is willing to take responsibility for their behaviors and change them to help the group more effectively meet its goals.

**Table 2: Measures**

All questions are measured on a 7-point Likert scale with the following anchors: 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, 7=strongly agree.

- **Caring Behavior** - Behaviors that validate others and demonstrate concern/empathy for them. Developed for this study.

*Questions in the caring behavior scale:*

- My teammates seek my inputs.
- My teammates ask me questions to make sure they understand what I have said.
- During discussion, my teammates accurately articulate my perspective.
- When I don't understand something, my teammates do not clear up my confusion (reverse scored).
- My teammates tell me they appreciate my efforts.
- My teammates forgive me when I do something that upsets them.
- My teammates acknowledge the sacrifices I make for the team.
- My teammates act in ways that show they care about me.
- My teammates accommodate my needs.
- My teammates do not let me know whether they value my contribution (reverse scored).

- **Safety/Trust** - The degree to which group members feel safe and trusting within the team. Based on Edmondson (1999) and called climate in original study (Wolff, 1998).

*Questions in the safety/trust scale:*

- In this team, making a mistake is viewed unfavorably (reverse scored).
- On our team, asking for help is viewed unfavorably (reverse scored).
- On our team, we do not feel we can trust that sensitive issues will remain confidential (reverse scored).
- In this team, it is safe to raise difficult issues.
- On our team, team members feel they can be themselves.

- **Performance Strategies** - Group behaviors such as reflection and discussion of errors that lead to team effectiveness. Based on the learning-oriented behaviors scale of Edmondson (1999) and called learning-oriented behaviors in original study (Wolff, 1998).

*Questions in the performance strategies scale:*

- In this team, we do not stop to reflect on the team's work process (reverse scored).
- In this team, we take time to explore ways to improve our work processes.
- This team handles differences of opinion privately or off-line, rather than addressing them as a group (reverse scored).
- In this team, we discuss our failures so we can learn from them.

- **Cohesion** - How much team members like working with this group of people, i.e., attraction to the team. Based on previously validated scale of Stokes (1983).

- **Satisfaction** - Overall satisfaction with this team and its work. Based on previously validated scale of Hackman (1988).

- **Engagement with Task** - Team's task focus and emphasis on performance. Based on previously validated task motivation scale of Zaccaro & McCoy (1988).

**Table 3: Correlations of Variables  
and Cronbach's alpha**

VARIABLE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b><u>Control Variables</u></b>															
1 Number in Group															
2 Gender (1=male, 2=female)	.06														
3 U.S. Citizen (1=yes, 2=no)	-.38	.02													
4 Eng. is 1st Lang. (1=yes, 2=no)	-.28	-.14	.75												
5 Full-time/Part-time (1=ft, 2=pt)	.21	.05	-.73	-.69											
6 Hours Spent Together as a Group	.18	-.03	.44	.36	-.55										
7 Average Team GPA	.05	.00	.02	.00	-.17	-.01									
8 Average Team Age	.15	-.26	-.45	-.42	.32	-.18	-.05								
<b><u>Study Variables</u></b>															
9 Caring Behavior	.23	.28	-.01	-.07	.05	.11	.03	-.09	(.84)						
10 Safety/Trust	.26	.08	-.07	-.15	.14	.17	.04	.08	.68	(.65)					
11 Performance Strategies	.16	.16	.08	.02	-.03	.30	.00	.03	.54	.58	(.63)				
12 Cohesion	.30	.20	.02	-.04	.05	.22	.08	-.10	.74	.76	.64	(.84)			
13 Satisfaction	.27	.17	-.13	-.13	.16	.13	.02	.04	.78	.75	.55	.88	(.86)		
14 Engagement with Task	.21	.06	-.18	-.16	.24	.09	.03	.07	.67	.59	.56	.65	.74	(.69)	
<b><u>Outcome Variables</u></b>															
15 Standardized Team Grade	-.01	.01	-.14	-.25	-.01	.09	.08	.03	.07	.07	.02	.12	.15	.21	
16 Standardized Individual Grade	-.08	.06	-.24	-.30	.02	.04	.12	.24	.26	.25	.15	.24	.37	.43	.77

Note: Numbers in () along the diagonal indicate Cronbach's alpha  
 $p < .05$  for correlations greater than or equal to .24  
 $p < .01$  for correlations greater than or equal to .30  
 $p < .001$  for correlations greater than or equal to .39

**Table 4: Comparison of Fit Statistics for Hypothesized and Final Models**

<b>Model</b>	$\chi^2$	df	p	RMSEA	AIC	CAIC	GFI	PGFI
1. Hypothesized Model (Figure 1)	80.22	17	0.00	.21	105.9	166.8	.80	.38
2. Final Model (Figure 2)	18.94	16	0.27	.042	57.79	121.9	.94	.42

**Table 5: Summary of Findings**

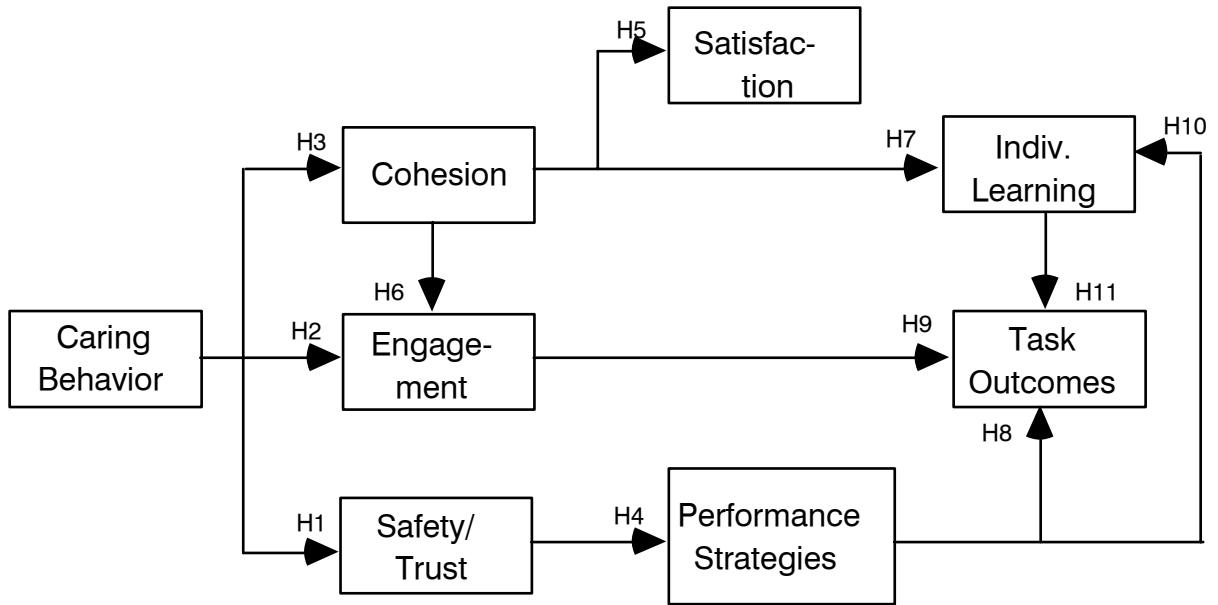
Hypothesis	Independent Variable	Dependent Variable	Finding	Comment
H1	Caring Beh.	Climate	Supported	
H2	Caring Beh.	Engagement	Supported	
H3	Caring Beh.	Cohesion	Supported	
H4	Safety/Trust	Performance Strategies	Indirect Relation Supported	Relation is mediated by cohesion
H5	Cohesion	Satisfaction	Supported	
H6	Cohesion	Engagement	Indirect Relation Supported	Relation is mediated by satisfaction
H7	Cohesion	Individual Learning	Not Supported	
H8	Performance Strategies	Task Outcomes	Not Supported	The measure of performance strategies (i.e., Learning-Oriented Behaviors) may not have been appropriate for the task.
H9	Engagement	Task Outcomes	Not Supported	Affects individual learning not team output. Lack of support likely related to the way task was accomplished.
H10	Performance Strategies	Individual Learning	Not Supported	The measure of performance strategies (i.e., Learning-Oriented Behaviors) may not have been appropriate for the task.
H11	Individual Learning	Task Outcomes	Supported	

**Table 6: Standardized Total Effects**

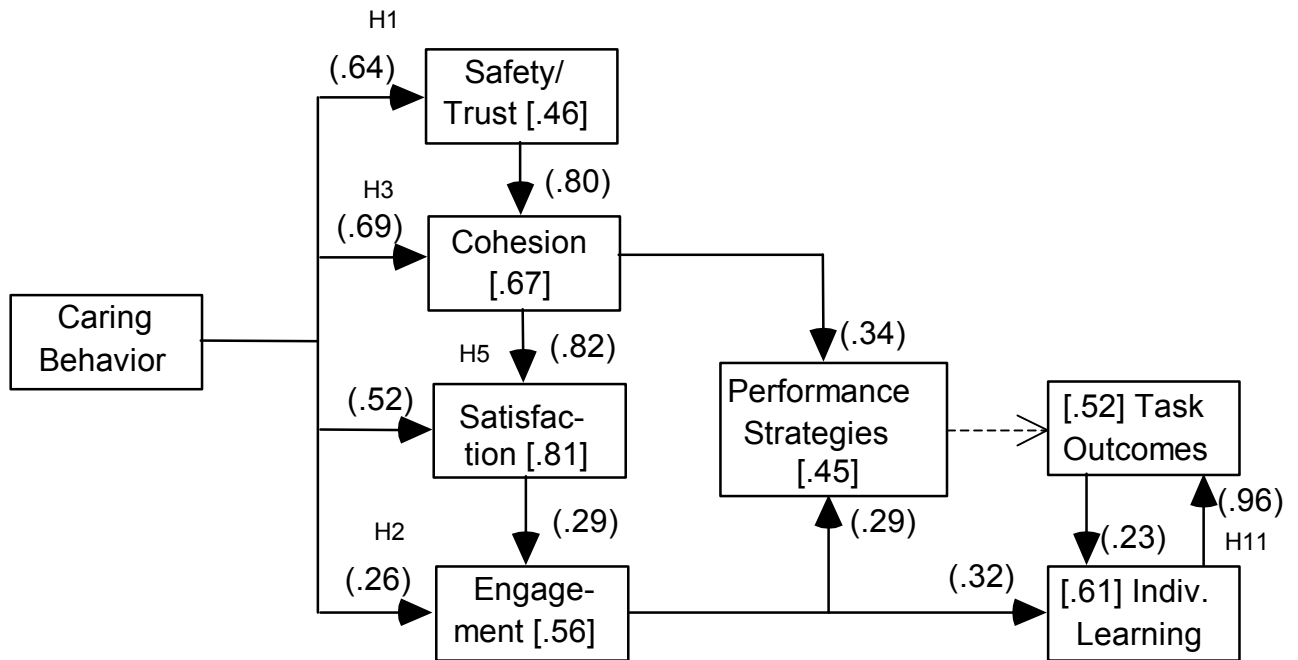
Dependent Var.	INDEPENDENT VARIABLE							
	CARING	SAFETY/ TRUST	PERF. STRAT.	COHESION	SATIS- FACTION	ENGAGE- MENT	STD. TEAM GR.	STD. INDIV. GR.
SAFETY/TRUST	.68	- -	- -	- -	- -	- -	- -	- -
PERF. STRATEGIES	.52	.27	- -	.57	.14ns	.26	- -	- -
COHESION	.74	.47	- -	- -	- -	- -	- -	- -
SATISFACTION	.78	.32	- -	.69	- -	- -	- -	- -
ENGAGEMENT	.67	.17	- -	.37	.54	- -	- -	- -
ST. TEAM GRADE	.14ns	.04ns	- -	.08ns	.11ns	.21ns	.29	.63
ST. IND. GRADE	.29	.07	- -	.23	.23	.43	.59	.29

Note: ns = not significant. All other effects are significant,  $p < .05$ .

Figure 1: Research Model of Group Effectiveness



**Figure 2: Final Model of Group Effectiveness**

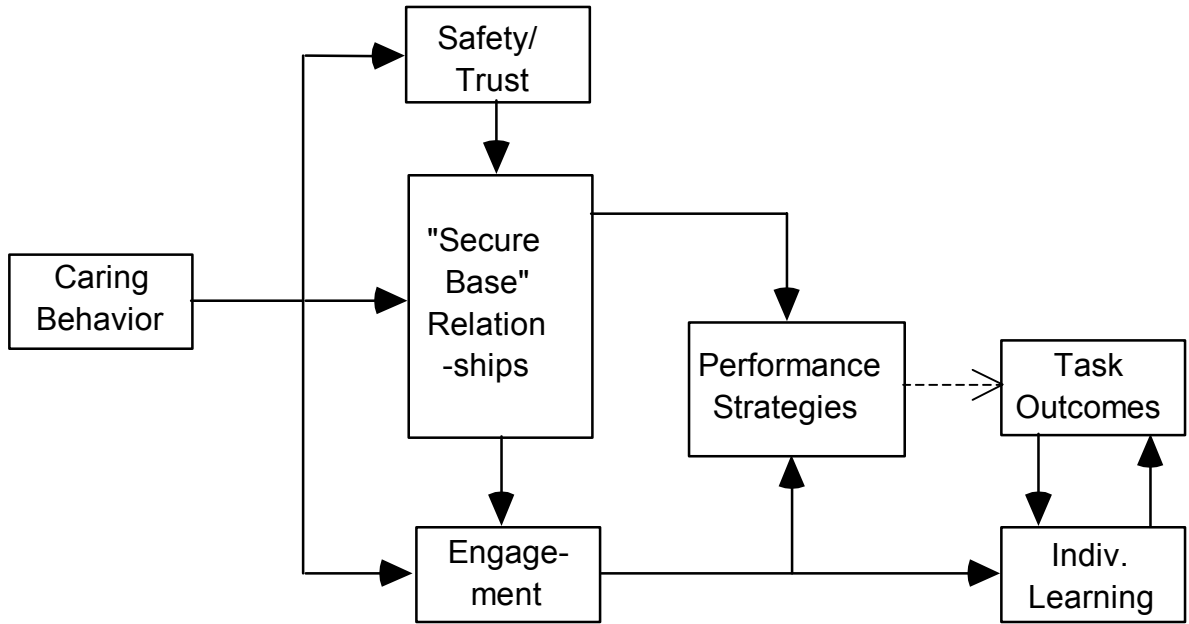


Numbers in ( ) indicate standardized path coefficients. All significant  $p < .05$ .  
 Numbers in [ ] indicate R-squared.  
 Hypotheses shown are fully supported.

-----> Indicates relationship not supported by findings of this research but likely a valid relationship based on past research.



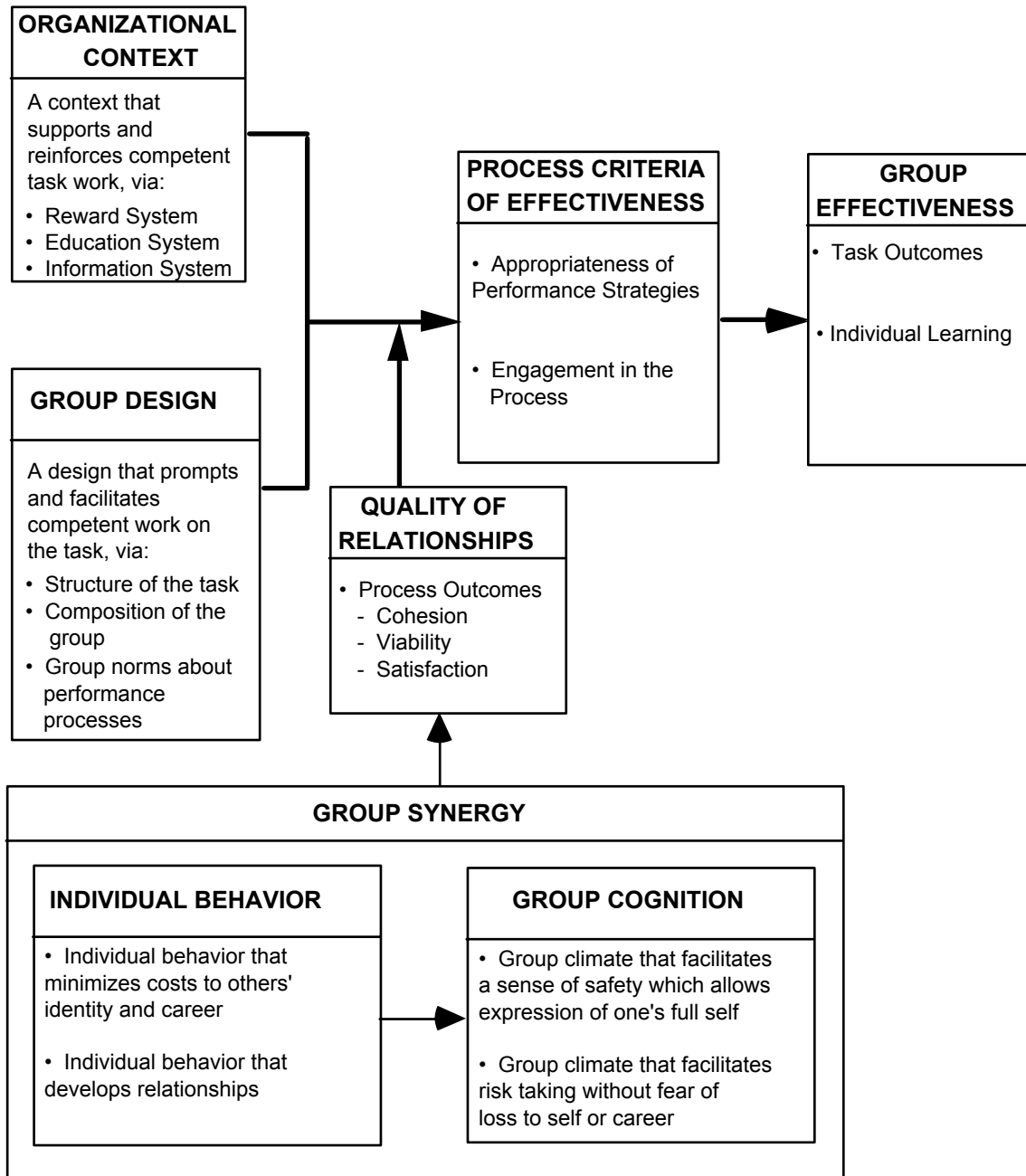
**Figure 3: Relational Model of Group**



-----> Indicates relationship not supported by findings of this research but likely a valid relationship based on past research.

**Figure 4: Relational Model of Group Effectiveness**

(based on Hackman, 1987)



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