Group cohesiveness of Home Economics Improvement Clubs in Taiwan

Erh-Rou Lai Hsieh
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Group cohesiveness of Home Economics Improvement Clubs in Taiwan

by

Erh-Rou Lai Hsieh

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of the
Requirements for the Degree of
DOCTOR OF PHILOSOPHY

Department: Sociology
Major: Rural Sociology

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Signature was redacted for privacy.

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Signature was redacted for privacy.

For the Major Department
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For the Graduate College

Iowa State University
Ames, Iowa

1995
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CHAPTER 1. INTRODUCTION

This exploratory study provides a measurement of group cohesiveness, depicts the degree of cohesiveness, and outlines the correlates of group cohesiveness of Home Economics Improvement Clubs in Taiwan. A Home Economics Improvement Club is a fundamental collectivity of rural women, organized as a group learning mechanism in every village around Taiwan. Within the system of agricultural extension, with the guidance and assistance of agricultural extension workers, these groups are the most popular and influential groups in the local community, providing social and educational learning opportunities for rural women, and helping them improve their family management and family functioning.

Background for the Study

Since 1956, Taiwan has initiated and gradually carried out its rural home economics extension programs by township Farmers' Associations within the agricultural extension system (see Appendix A). At first, the rural home economics extension program aimed at the betterment of living conditions for the populace by application of new knowledge, methods, and techniques of modern home management to rural family life. More specifically, the main objectives of the home economics extension program were to help rural women to: (1) improve nutrition, (2) improve health and sanitation, (3) save money or earn money by making needed improvements in various skills and knowledge, and (4) develop leadership and citizenship (Joint Commission of Rural
In the 1970s, programs of home economics were focused on nutrition, home improvement, clothing, parenting, household insect control, family planning, and environmental beautification. In the late 1980s, programs were gradually shifted to focus on the following topics (Council of Agriculture 1990): (1) environmental improvement in farm homes and villages (e.g., yard design, and the improvement of sanitation in farm homes and their surrounding areas); (2) nutrition and health education with an emphasis on a balanced diet; (3) family functioning (e.g., child-rearing, children's education, family relationships, and family's adjustment to modern life); (4) medical care and medical education; and (5) consumer education and environmental protection.

The rural home economics extension work in Taiwan is implemented through the mechanism of Home Economics Improvement Clubs in various townships. The number of clubs and members in the past several years is shown in Table 1.1.

Home Economics Improvement Clubs are the most important and major

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<tr>
<th>Year</th>
<th># of Clubs</th>
<th># of Participants</th>
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<td>1967</td>
<td>2,334</td>
<td>42,767</td>
</tr>
<tr>
<td>1972</td>
<td>3,043</td>
<td>40,061</td>
</tr>
<tr>
<td>1977</td>
<td>5,261</td>
<td>91,088</td>
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<td>1982</td>
<td>4,543</td>
<td>87,304</td>
</tr>
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<td>1987</td>
<td>9,796</td>
<td>154,826</td>
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Source: Taiwan District Farmers' Associations Statistical Yearbook, Published by Provincial Division of Agriculture and Forestry, and Provincial Farmers' Association.
groups of and for rural women in Taiwan. Through these groups, many short courses, training programs, and lectures are delivered to help rural women learn more about needed subject matters. The government and local communities have invested considerable money, human resources and effort to improve the physical and social well being of rural families by providing training and education opportunities to rural women.

One of the basic assumptions of home economics extension work is that, if women are more knowledgeable about health, nutrition, family functioning, family relationships, etc., their families would gain benefit through improved home management and housework. Although individual learning or self-directed learning can help achieve these goals, London (1964) has observed that group learning is more effective for adults and that adult educators are more effective working with people and operating in a social environment. Some scholars believe that the social interactions and social processes among learners greatly influence human behavior, motivational drives, and personality development. Hence, "educators of adults have often turned to social psychological and group dynamics literature for instruction concerning the teaching-learning transaction" (Long 1983:238). More specifically, one can argue that the level of group members' learning motivation and the effectiveness of group teaching would partly depend on how well these Home Economics Improvement Clubs are operating. In other words, how eager these women are to learn, how much they actually learn from being a group member and from attending the group activities, and how satisfied they are as group members would be partly determined by how well the group is functioning. Therefore, it is important to learn more about the group processes, how these groups function, and
what factors are associated or correlated with group processes in order to make more
effective groups.

Objectives of the Study

Group dynamics has been a focus of study in western society for several decades. Researchers have identified variables which have proved to be of significance to group
effectiveness, e.g. group size, group structure, leadership, communication, and
interaction processes. The perspective of group dynamics may be of value in helping
better understand the characteristics of Home Economics Improvement Clubs, and
providing some suggestions to improve home economics extension work. Since the
concept "group dynamics" is too broad to be manageable in an empirical study, the main
focus of this study will be on the group cohesiveness of Home Economics Improvement
Clubs in Taiwan. More specifically, the purposes are:

1. to develop a scale for the measurement of group cohesiveness of Home Economics
   Improvement Clubs in Taiwan,
2. to understand the degree of group cohesiveness of the Home Economics
   Improvement Clubs,
3. to examine the correlates of group cohesiveness of the Home Economics
   Improvement Clubs, with a special emphasis on the relationship between group
   cohesiveness and performance, and
4. to recommend improvements in home economics extension work in Taiwan.
Characteristics of Home Economics Improvement Clubs

A typical Home Economics Improvement Club consists of 15 to 30 rural women from the same village. There are several Home Economics Improvement Clubs in every township. The clubs are initiated and organized by home economics extension workers. Once the club is formed, the members elect their own leader, treasurer and scribe. All of the elected staff are volunteers. It is not uncommon for the group members to take turns serving as leader, treasurer, and scribe.

Initially, the formation of the group provides a mechanism to carry out home economics improvement activities under the guidance of an extension worker in order to achieve the objectives set forth by the extension worker. Gradually, as it develops, the group will undertake activities with less guidance from the extension worker. Eventually, group members are expected to initiate and conduct activities themselves based on their common goals with minimal input from the extension worker.

The club members typically get together in a formal meeting once every three to four months to undertake activities or projects. The meeting could be called by either the extension worker or the club leader. Communication occurs freely among the extension worker, club leader, club staff and members in either formal meetings or informal settings. Since the structure of the club is loosely organized and the leadership role is vaguely defined, the cohesion of the group appears to rely greatly upon interpersonal communication, interpersonal attraction and satisfaction of members' needs.

The Home Economics Improvement Club has both social and educational (task) functions. It has a specifically structured process for performing these functions and
reaching the designed goals. Group learning is both experiential and intellectual. Most of the time, the extension workers play the teacher's role. Occasionally, subject specialists or experts are invited to give lectures. The most commonly used teaching methods include demonstration tours, experience sharing, as well as lectures. In addition to the group-based learning programs, the extension workers also arrange larger scale learning programs in which members of the whole township may participate. Under these circumstances, the club as a unit of collectivity is not as important as in the regular group-based meetings. There are also several nationwide and county-level contests held every year. In some cases, the contests require individual members as representatives, whereas in others team representatives are organized. The winners at the township level would represent their township in competition with teams from other townships. Those who win the county prizes represent their county in competition with teams from other counties. These activities are very exciting for group members, and appear to have strong impacts on the cohesiveness of their groups.

Because the members are adults with diverse social experiences, the learning process is also based on mutual sharing of experiences in addition to classroom teaching. The process of mutual influence occurs not only in the group meetings but also during many informal occasions. As the participation by the members is voluntary, the leadership relies more on personal influence than on authority.

In the *Collection of Thirty-Year Anniversary of Home Economics Extension Education in Taiwan* (Council of Agriculture and others 1988), many members of Home Economics Improvement Clubs talked about their reasons for attending the groups. Most
members pointed to the acquisition of new knowledge and new skills, especially for improving cooking, child-rearing, environmental beautification, and interpersonal relationships. They applied what they learned to their daily lives to balance their nutrition, enhance their family relationships, improve their housing quality, and increase their family income. Some of them were eventually honored as distinguished and outstanding rural women by the government.

Exploratory interviews were conducted in May 1993 by the researcher in order to understand some of the important aspects of the group dynamics of Home Economics Improvement Clubs. Some extension workers pointed out that enthusiasm of the group leaders and the high motivation for learning were the two major factors leading to successful groups. They also mentioned that the two aspects of successful groups are a high participation rate and the auto-operation or auto-monitoring of the groups whereby group leaders arrange group activities based on members' needs with little supervision of extension workers. In a face-to-face interview, an extension worker pointed to the financial and emotional support from the head of agricultural extension division and from the chairperson of the Township Farmers' Association. In addition to these variables, family support (from husband, children and parents-in-law), time availability, the degree the member's needs being met, and the enthusiasm of extension worker were also important.

Compared to other groups often studied in group research (such as work groups, military groups and sports groups), a Home Economics Improvement Club demonstrates its uniqueness in the following aspects:
Group Structure

Members of a Home Economics Improvement Club are relatively loosely tied together. Most are voluntary participants with no strict regulations or group norms. The role of group leader is not as powerful and authoritarian as in many other groups.

Task Performance

As social and educational learning groups, the main function of these groups is to enhance members' knowledge, to change attitudes and to improve skills in everyday life. Therefore, they are less likely to have any concrete, specific or visible tasks performed by group members.

Members' Homogeneity

Members of Home Economics Improvement Clubs are all females. Although to some degree they differ in age, education, and family backgrounds, because they are "locality" groups, with members from the same neighborhood, it is likely that group members know each other before they join the groups and share some socio-economic characteristics. They are likely to have a higher degree of mutual influence from the shared experiences than members of many other groups.

Group Size

The typical group size of group research is from three to twenty (Mullen & Copper 1994). The size of Home Economics Improvement Clubs are significantly larger,
with an average of 20 to 25 members. One of the reasons for the larger group size is lack of resources, including money, facilities and human resources at the township level.

**Group Age**

Because residential migration does not occur frequently, most of the groups can last longer with same members than can other groups such as sports teams. There are advantages and disadvantages of low member turnover. On one hand, group members can develop very good relationships due to long time acquaintance. However, on the other hand, an emphasis on the social dimension among group members may sometimes lead to a lower level of group performance (Forsyth 1990; Shaw 1981). Furthermore, older groups may resist change or lose relevancy.

**Significance of the Study of Group Cohesiveness**

In the 1950s, group cohesiveness became a popular topic in social psychology, and research in this area attained a prominent place in the literature of the day. By the mid-1960s, however, this interest had waned, and cohesiveness became a largely forgotten topic. In recent years group cohesiveness has slowly re-entered the mainstream of contemporary research activity (Mudrack 1989a).

The importance of cohesiveness for understanding group dynamics is almost taken for granted (Evans & Jarvis 1980), and the notion of group cohesiveness has long been central to the study of group dynamics (Festinger et al. 1950; Mudrack 1989b; Zander 1979). Researchers are frequently given to speculating on the possible antecedents of
group cohesiveness. For example, House (1971) hypothesized that a leader's emphasis on the quality of interpersonal relations (i.e., consideration behavior) would result in increased cohesiveness when tasks were interdependent, varied, and ambiguous. On the potential consequences of group cohesiveness, it is also taken for granted that group cohesion would enhance group performance (Mudrack 1989a): military thinkers (e.g., Chodoff 1983), sport sociologists (e.g., Carron 1988; Gruber 1981), and sport psychologists (e.g., Straub 1975) all tend to view cohesiveness as necessary to effective and efficient performance. Furthermore, performance is not the only group outcome that has been associated with cohesiveness. With higher cohesion, there is greater effort toward the achievement of group goals (e.g., Ball & Carron 1976). Also, lower absenteeism/dropout rates and greater punctuality have been found for both team athletes and exercise group members who perceive high levels of group cohesion (e.g., Carron et al. 1988; Widmeyer et al. 1992).

Group cohesiveness remains a fascinating topic, in part because research in this area illustrates so effectively at least two generic problems endemic to research in the behavioral sciences: (1) constructs are seldom easy to define with precision and consistency; and (2) constructs are seldom easy to operationalize, measure, or manipulate in laboratory settings (Mudrack 1989a). This situation results in uncertainty and inconsistency in the conceptualization and measurement of this construct. As Mudrack (1989b) pointed out, "no two studies...operationalized cohesiveness in exactly the same way" (p. 771). Not surprisingly, research in this area has generated a number of inconsistent, or even conflicting findings (Mudrack 1989a).
Given the important role of the Home Economics Improvement Clubs in agricultural extension education in Taiwan, the group dynamics of these clubs are indeed worthy of study in order to better understand the mechanisms of group operation. Research on the cohesiveness of these groups may contribute valuable insights and thoughts to enhance group function. Because this is a totally new area of research in Taiwan, the findings of this study may also provide useful recommendations for further academic research and practical applications. However, given the ambiguity of the conceptualization and measurement of group cohesiveness, a more critical and in-depth review of the previous literature is also needed in order to better clarify this concept.

This dissertation consists of five chapters. Chapter 2 outlines the related literature, including theoretical orientations to group research, the conceptualization, measurement, correlates of group cohesiveness, and the relationship between group cohesiveness and group performance; Chapter 3 outlines the methodology of this study; Chapter 4 depicts the findings and applications of the study; and Chapter 5 provides conclusions from the empirical findings, with a discussion including some limitations of the study and directions for future research.
CHAPTER 2. LITERATURE REVIEW

Social groups occupy much of our day-to-day life. No matter who and what we are, we work, socialize, and play in groups. We express our views and attitudes through groups. Groups also largely determine what kind of people we are, what kinds of group members we meet, and what kinds of lives we live. Groups serve five important and related functions for us: they help us achieve desired goals and fulfill specific needs, give us a sense of identity, enable us to interact with others whom we perceive to be similar, offer us a feeling of belonging and acceptance, and allow us more potential to influence others (Hargie 1994). Given the prevalence and importance of groups to all of our lives, it is hardly surprising that the subject of group behavior has for decades greatly exercised the minds of psychologists, sociologists, and scholars from other disciplines.

The agenda of group dynamics since the 1940s has been to theorize about the actions, thoughts and feelings of interacting people in small groups such as neighborhoods, housing programs, student classes, sororities, therapy groups, sports teams, military units, decision-making groups, and work groups (Hogg 1992). Group cohesiveness is a central concept in the explanation of group dynamics and therefore in need of formal theoretical statement (Festinger et al. 1950). This chapter presents a detailed scrutiny of the conceptual and empirical research in group cohesiveness, beginning with a brief description of two theoretical orientations to group research, followed by a review of the conceptualization, a discussion of the measurement of group
cohesiveness, a depiction of correlates of group cohesiveness, and finally, an examination of the relationship between group cohesiveness and group performance.

Theoretical Orientations to Group Research

In group research, the scientist can function as an architect or as a laborer. The architect establishes a plan and implements it, whereas the laborer makes single bricks not necessarily destined for a particular building. According to McGrath (1984) and Zander (1979), group research has been highly fragmented with the collection of many "bricks" or data sets but no theory to systematically guide the collection, ordering, and interpretation of the results. Consequently, as Widmeyer et al. (1992) put it: "With so much atheoretical data collection, consistencies in group behavior are difficult to find" (p.176).

In fact, many scholars have been working for the development and utilization of theories. And each has made a contribution to the understanding of group behavior. For example, Cattell (1948, 1951a, 1951b) has formulated group syntality theory to explore the dimensions of groups and the dynamics of syntality. He suggests that groups with much interpersonal conflict are likely to be less effective in achieving group goals. In this section, Fundamental Interpersonal Relations Orientation, and social identity theory/social categorization theory will be briefly reviewed.
Fundamental Interpersonal Relations Orientation

As its name indicates, Fundamental Interpersonal Relations Orientation (FIRO) attempts to explain interpersonal behavior in terms of orientations to others. It was formulated by Schutz in 1955 and was later expanded and modified (Schutz 1958, 1967). This theory holds that people orient themselves toward others in certain characteristic patterns, which are major determinants of interpersonal behaviors.

The particular characteristics that an individual exemplifies can be explained in terms of three interpersonal needs: inclusion, control, and affection. Inclusion refers to the need for togetherness, and the need to associate with others. The need manifests itself through behaviors designed to attract the attention and interest of others. The person who has a strong need for inclusion will reveal it through striving for prominence, recognition, prestige, etc. Control refers to the decision-making process between people. The need for control varies from the need to dominate others to the need to be controlled. The person with a high need to control displays rebellion and refusal to be controlled, whereas the person with a high need to be controlled is compliant and submissive to others. Affection refers to close personal and emotional feelings between two individuals, and its extremes are represented by love on one side and hate on the other. People with a strong need for affection will be friendly, make overtures to others, and generally try to establish close emotional ties with others.

When people interact, the interaction patterns of any two given individuals may be either compatible or incompatible. If they are compatible, the interaction is likely to be easy and productive; if incompatible, difficult and unproductive.
Schutz (1958) identified three types of compatibility-incompatibility that could occur in each of the above three need areas: \textit{interchange compatibility}, \textit{originator compatibility}, and \textit{reciprocal compatibility}. Interchange compatibility is based upon the mutual expression of inclusion, control, or affection. Some people prefer many exchanges of behavior whereas others prefer few or none. Interchange compatibility exists when the two people interacting are similar with respect to the amount of exchange desired; incompatibility results from dissimilarity in this respect. Exchange compatibility depends upon the degree to which both members of a dyad agree with each other regarding the amount of mutual interaction that is desirable. Originator compatibility derives from the originator-receiver dimension of interaction. In general, two persons are compatible to the degree that the expression of inclusion, control, or affection of one person corresponds to the degree that the other person wishes to receive. What is important in a dyad relation is the degree to which the activities originated by one person are in accord with the needs of the other. Reciprocal compatibility reflects the degree to which two people "reciprocally satisfy each other's behavior preferences" (Schutz 1958:108). In general, reciprocal compatibility depends upon the degree to which each person's behavior is in accord with the other person's needs.

The general assumption of Schutz's theory is that compatible groups will be more cohesive and more efficient than incompatible groups. This effect is reflected in the initial formation of groups, in the degree to which the groups are likely to continue to function, and in the productivity of groups. Research reported by Schutz (1955, 1958, 1967) generally supports the theory.
Social Identity Theory and Self-Categorization Theory

Social identity theory (Abrams & Hogg 1990; Hogg 1987, 1992, 1993; Turner et al. 1987) can be described as a comprehensive social psychological theory of intergroup relations and group processes. The basic idea is that a self-inclusive social category (e.g., nationality, political affiliation, sports team, Home Economic Improvement Club, etc.) provides a category-congruent self-definition that constitutes an element of the self-concept. The category is represented in the individual member's mind as a social identity that both describes and prescribes one's attributes as a group member.

To account for social identity phenomena, social identity theory invokes the operation of the following two underlying processes: (1) categorization—which clarifies intergroup boundaries by producing group stereotypical and normative perceptions and actions, and assigns people (including self) to the contextually relevant category; and (2) self-enhancement—which guides the social categorization process such that ingroup norms and stereotypes are largely those that favor the ingroup.

Self-categorization theory (Hogg & McGarty 1990; Turner 1985; Turner et al. 1987) elaborates the operation of the categorization process as the cognitive basis of group behavior. The basic mechanism is the cognitive process of categorization. It accentuates both similarities among stimuli belonging to the same category (physical, social, or aspects of the self), and differences among stimuli belonging to different categories on dimensions which relate to the categorization. This process clarifies intergroup discontinuities and ultimately serves to render experiences of the world subjectively meaningful and to identify those aspects relevant to action in a particular
People can categorize themselves and others at many different levels of abstraction, of which the most relevant is the level of ingroup-outgroup (defining one's social identity). Categorization of self and others at this level accentuates the group prototypicality, stereotypicality, or normativeness of people. An individual is perceptually and behaviorally "depersonalized" in terms of the relevant ingroup prototype. According to Turner:

the depersonalization of self-perception is the basic process underlying group phenomena (social stereotyping, group cohesion and ethnocentrism, emotional contagion and empathy, collective behavior, shared norms, and mutual influence process, etc.). (1985:99-100)

For self-categorization theory, people cognitively represent social groups in terms of prototypes. A prototype is a subjective representation of the defining attributes (beliefs, attitudes, behaviors, etc.) of a social category, which is actively constructed and is context-dependent. People are able to assess the prototypicality of real group members, including that of themselves; that is, the extent to which a member is perceived to be close to or similar to the group prototype.

According to Hogg (1993), group cohesiveness has a number of components, including ethnocentrism, normative conduct, ingroup trust, respect and liking, and intergroup differentiation. All these effects are produced by self-categorization, but both immediate (or local) situational factors and the wider (or remote) context of intergroup relations may influence the specific mix of behaviors that are manifested. Interpersonal attraction among ingroup members is, nevertheless, an important aspect of group
Based on social identity theory's distinction between interpersonal and group behavior (e.g., Brown & Turner 1981), a clear distinction is drawn between social attraction and personal attraction. Both are positive affects felt by an individual for another, but the generative process underlying each is quite different. Social attraction—attraction among members of a salient social group—is different from genuine interpersonal attraction. Social attraction is depersonalized liking based upon prototypicality and generated by self-categorization. It is actually attraction-to-the-group as that group is perceived to be embodied, in terms of its defining attribute, by specific group members. The object of positive attitude and feelings is not any unique individual person, but the group prototype that a person embodies. Targets are relatively interchangeable; that is, they are depersonalized. How much individual group members are liked is thus a function of their perceived prototypicality and the degree to which the perceiver has a positive attitude towards the group as it is prototypically represented. The intragroup attraction aspect of group cohesiveness is depersonalized liking rather than personal attraction (the latter is personalized and tied to specific non-interchangeable targets).

The depersonalized attraction analysis of cohesiveness generates a number of testable hypotheses, but to date only a few have been examined directly (Hogg 1993). There is, however, indirect evidence for the general idea that psychological group formation and group solidarity are not dependent on mutual positive interpersonal attitudes. For the social attraction hypothesis, the most important and fundamental point
to demonstrate is that ingroup liking is depersonalized in terms of the ingroup prototype, and is entirely separate from interpersonal attraction. A number of studies have been conducted to address this issue and gain some support for the hypothesis (e.g., Hogg et al. 1993; Hogg & Hardie 1991, 1992).

Both of these theories attempt to explain group behaviors, but they differ in the emphasis on explanation and both have the precision problem. FIRO is relevant in explaining the interpersonal relationship, especially for its emphasis on members’ compatibility. However, it requires the measurement of needs and the combining of these measures to predict compatibility. And it appears not easy to achieve this goal (Shaw 1981).

Perhaps the more promising theory for group research (especially to group cohesiveness) is the social identity/social categorization theory, in that it is appropriate for exploring both the intra- and inter-group phenomena, regardless of group size. This theory emphasizes the "depersonalized" characteristic; therefore, Hogg and Associates (e.g., Hogg 1992, 1993; Hogg et al. 1993) assert that it really deals with the "group phenomena" rather than individual phenomena. However, as shown in a recent research by Hogg et al. (1993), the measurement of the so-called "depersonalized" prototype is still not clear.

The Conceptualization of Group Cohesiveness

Group cohesiveness is the descriptive and technical term used by social psychologists to refer to the essential property of social groups that is captured in
common parlance by a wide range of other expressions, such as solidarity, cohesion, comradeship, team spirit, group atmosphere, unity, oneness, we-ness, groupness, and belongingness (Hogg 1992).

At first glance, it seems to be a straightforward task to arrive at an acceptable definition of group cohesiveness, because the construct seems "intuitively easy to understand and describe" (Mudrack 1989a:39). A cohesive group is one that "sticks together"—one whose members are "bonded" to one another and to the group as a whole. Cohesiveness would probably be accompanied by feelings of solidarity, harmony, and commitment on the part of group members. A cohesive group should be characterized by "connectedness" (O'Reilly & Roberts 1977), and a sense of "we-ness" should emerge to transcend individual differences and motives (Owen 1985). Cohesiveness should be reflected by "strong ties" within a group (Granovetter 1973), and such a group's members should be "tightly coupled" (Weick 1976). A cohesive group should be attractive to both members and outsiders—in other words, members should be satisfied and proud of their membership, and desire to maintain their "in-group" status, whereas outsiders should be dissatisfied with their "out-group" status and might be eager to join the membership. However, this "ease of description" has failed to translate into an equivalent "ease of definition" (Mudrack 1989a:39).

A backward look to the literature on group cohesiveness shows a "diminishing popularity in the mainstream social psychology" (Hogg 1992:51). In the 1950s and early 1960s, it was a major focus. By the mid 1960s, however, most researchers had lost interest. The last extensive reviews of group cohesiveness are generally considered to be
those published by Lott & Lott (1965) and Cartwright (1968), except the recent
comprehensive review by Hogg (1992). Although group cohesiveness has been little
researched in mainstream social psychology since then, there is continuing interest in
special applications, such as to military units, sports teams, and therapy groups (e.g.,
Evans & Jarvis 1986; Gruber & Gray 1981; Hagstrom & Selvin 1965; Manning &
Fullerton 1988; Martens & Peterson 1971; Smith 1983; Stokes 1983b; Widmeyer et al.
1985; Yukelson et al. 1984). The focus of this research aims at making those groups
more successful by strengthening group cohesion. The main issue for this research is
"how the cohesion of a group should be conceptualized and/or measured" (Levine &
Moreland 1990:603).

The concept of group cohesiveness emerged from the burgeoning experimental
social psychological study of group processes in the 1940s and 1950s (Hogg 1992). The
term had already been introduced in the 1940s, before Festinger, Schachter and Back's
formal statement on group cohesiveness was published in 1950. This early work is
largely unsystematic and merely described how individuals tend to "stick together" in
groups. The early 1950s witnessed a concerted effort to construct a systematic theory of
group cohesiveness. It is Festinger and his colleagues who finally formalized a theory of
group cohesiveness. They set out to investigate how face-to-face, small, informal social
groups exert pressure upon their members to adhere to group standards (norms). In the
book Social Pressures in Informal Groups, Festinger et al. (1950) define cohesiveness as
"the total field of forces which act on members to remain in the group" (p.164).
Schachter et al. (1951) also write:
Cohesiveness as a concept...represents an attempt to formalize or simply verbalize the key group phenomena of membership continuity--the "cement" binding together group members and maintaining their relationships to one another. (p.229)

Festinger et al.'s theory is developed on the basis of small, face-to-face informal groups characterized by interpersonal friendships. As Hogg (1992) points out, "they presented their theory as a theory of group formation and cohesiveness, without explicitly specifying any limits of applicability or generalizability" (p.22). Gross and Martin (1952) criticize the Festinger et al. view of cohesiveness on the grounds that it fails to consider the group as a totality, and propose instead to view cohesiveness as "the resistance of a group to disruptive forces" (p.553). Gross and Martin’s alternative definition is similar to Festinger’s (1950) definition as "the resultant of all the forces acting on members of a group to remain in the group" (p.274).

There has since been a transformation of the definition of group cohesiveness from "the total field" to "attraction to the group." For example, Back (1951) defines cohesiveness as "the attraction of membership in a group for its members" (p.9); Libo (1953) as "the attraction of the group for its members" (p.1). This notion of cohesiveness as simple "attraction-to-group" dominates the late 1950s. Cartwright (1968) concludes from his comprehensive review of group cohesiveness that "most investigators have equated the term cohesiveness with 'attraction to the group'" (p.92). Cartwright's (1968) review further confirms that summation and averaging across members are the dominant procedures for producing an index of cohesiveness at the group level (Hogg 1992). Mudrack (1989a) has pointed out that the subtle shift of definitional emphasis
from "the total field" to "the resultant" or "attraction-to-group" opens the way for a conceptualization of the cohesiveness of the group as a whole in terms of the sum or average of the forces upon the individuals within the group.

Although group cohesiveness, as attraction-to-the-group, can be influenced by the attractiveness of the group's activities, goals, atmosphere, defining features, the attractiveness of the group members, and the degree to which the group mediates achievement of important individual goals, the conceptual and empirical emphasis is usually on the attractiveness of the group members: that is, interpersonal attraction (Hogg 1992). As Shaw (1976) points out:

One such interpersonal relationship is the degree to which the members of the group are attracted to each other, or the degree to which the group coheres or "hangs together." This aspect of the group is usually referred to as group cohesiveness. (p.197)

Perhaps the most explicit statement of group cohesiveness as interpersonal attraction is Lott's (1961) definition as "the group property which is inferred from the number and strength of mutual positive attitudes among the members of a group" (p.279). Scholars who adopt the same conceptualization include: Schachter et al. (1951), Bonner (1959), Carron (1980), Gruber and Gray (1981), Budge (1981). Empirical and conceptual reviews (e.g., Cartwright 1968; Lott & Lott 1965; McGrath & Kravitz 1982; Zander 1979) confirm that group cohesiveness is widely treated as equivalent to interpersonal attraction. For example, in the field of group-therapy, Bednar et al. (1974) concluded that "cohesiveness is usually defined as interpersonal trust, attraction, and involvement" (p.155). Hogg (1987) also demonstrates how overwhelmingly cohesiveness "has been
operationalized as, and identified theoretically with, attraction between group members, i.e. interpersonal attraction" (p.90; see also Hogg & Abrams 1988:92-115).

The conceptualization of group cohesiveness as interpersonal attraction has encountered many criticisms over the years (e.g., Carron 1982; Cartwright 1968; Evans & Jarvis 1980; Hogg 1987, 1992; Hogg et al. 1993; McGrath & Kravitz 1982; Mudrack 1989a; Turner 1982, 1984; Zander 1979). These criticisms can be roughly divided into two categories: (1) traditional criticisms grounded in general acceptance of the underlying model of the social group; and (2) radical criticisms predicated on dissatisfaction with, and sometimes rejection of, this model.

The traditional criticisms focus on the way in which group cohesiveness has been operationalized and measured, and on limitations of the interpersonal-attraction formulation, but "do not mount an assault on fundamental assumptions underlying the nature of the social group" (Hogg 1992:56). For example, investigations of correspondence among different operationalizations of group cohesiveness have indicated only weak or non-significant correlations (e.g., Carron & Ball 1977), or the existence of separate cohesiveness dimensions (Gruber & Gray 1981; Hagstrom & Selvin 1965; Hogg 1992; Widmeyer et al. 1985; Yukelson et al. 1984). Stokes distinguishes attraction-to-the-group and interpersonal attraction (1983b), and suggests that: (1) risk taking in a group, (2) attraction to individual members of the group, and (3) the instrumental value of a group might be considered to contribute to group cohesion (1983a).

The radical criticisms call into question underlying assumptions concerning the social psychological nature of the social group. Specific criticisms concern aggregate
versus structural attributes, reductionism, the molecule simile, sociometric choice, motivation, definition of "small group," and the relationship between groups, categories and roles (Hogg 1992:59-67; see also Hogg et al. 1993; Hogg & Hardie 1991). For example, Evans and Jarvis (1980) argue that:

cohesion is uniformly recognized as a group phenomenon, yet its measurement generally involves measuring the levels of attraction of individual group members and averaging them. This technique assumes, with little justification, that the whole is no greater than the sum of its parts. (p.359)

In a recent review article, Mudrack (1989a) also notes that:

researchers have perforce directed their investigations at individuals...and have attempted to induce feelings of cohesiveness among these individuals in a variety of ways...[and] are forced to examine individuals in order to gain a glimpse of the group. (p.38; original emphasis)

These arguments also resonate with Scott & Scott's (1981) distinction between aggregate attributes and structural attributes of collectivities. In fact, as Hogg (1992) argues, cohesiveness is "a structural attribute to do with affective relationships among group members, and thus may not be simply transformable into aggregate terms" (p.60).

There have been a number of attempts to reconceptualize cohesiveness. One of them is an attempt to explore its bi- or multidimensional nature. Efforts to statistically relate different items and measures of cohesion through correlational and factor analytic techniques have led to the conclusion that cohesion is a multidimensional construct (e.g., Hagstrom & Selvin 1965; Zaccaro 1991; Zaccaro & McCoy 1988). It seems to be another way of saying that "quite different, at times independent, concepts have been involved despite the fact that at some time they have all been labeled cohesion" (Piper et al. 1983:95).
A distinction is often made between task-related processes and social-related processes (e.g., Bales 1950; Carron 1982; Carron & Chelladurai 1981; Hagstrom & Selvin 1965; Homans 1950; Yukelson et al. 1984; Zaccaro & McCoy 1988). For example, Carron and colleagues argue for the distinction between the development and maintenance of an effective task-oriented group, and the maintenance of positive interpersonal relations within a group (Carron et al. 1985; Widmeyer et al. 1985). The research team of Brawley, Carron and Widmeyer have developed an 18-item 4-scale Group Environment Questionnaire for sports teams (Widmeyer et al. 1985; see also Brawley et al. 1987; Carron et al. 1985). Their measurement is guided by a multidimensional conceptualization that group cohesiveness consists of two concepts: group integration and individual attraction-to-the-group. Group integration refers to "the perception of the closeness, similarity, and bonding within the group as a whole" and "the perception of the degree of unification of the group field" (Widmeyer et al. 1985:16) whereas individual attraction-to-the-group refers to "the interaction of motives acting on individuals to remain in the group" and "the composite of individual members' feelings about the group, desire to be accepted, and other group members" (ibid). These two constructs are parallel to Evans & Jarvis' distinction between "cohesion" and "attraction-to-group" (1980:366). Widmeyer et al. (1985) go one step further to argue that both of the two categories of perceptions can each be focused on task and social aspects. Thus, in their conceptual framework four constructs are identified: Group Integration--Task (GI-Task), Group Integration--Social (GI-Social), Individual Attraction to Group--Task (ATG-Task), and Individual Attraction to Group--Social (ATG--Social) (pp.16-18).
A different direction in reconceptualizing group cohesiveness is taken by those who feel that there are insurmountable problems in theorizing or describing cohesiveness as a group-level phenomenon on the basis of an attraction-to-group formulation. For example, Goodman et al. (1987) recommend a specific focus on "commitment to the group task." According to them, commitment "refers to the binding of the individual to behavioral acts...[and] is increased to the extent that the act is (1) explicit, (2) irrevocable, (3) public, and (4) done freely" (p.149). Mudrack (1989b) agrees with the Goodman et al. notion by arguing that "such a definition connects cohesiveness more closely with actual group behavior and performance" (p.780).

A somewhat similar notion by Piper et al. (1983) suggests that the term cohesive group could be defined as "a group where the various bonds in the group are strong, e.g., where a majority of the participants possess a commitment to the group, to each other, to the leader" (p.106). Among these three factors emerging from the group as a whole, Piper et al. maintain that commitment to the group as a basic bond represents their conception of cohesion. Unfortunately, as the authors point out, substantial portions of the variance were not represented by the factors of their study and there were significant decreases over time. Piper et al. conclude that this is "a weakness in test-retest reliability" (ibid).

Another method has been proposed by Budge (1981). Applying the more radical alternative to traditional approaches, Budge urges a dialectical approach that focuses on the impact of interindividual dynamics within the group as a whole on cohesiveness.

Recently, Hogg and associates (e.g., Hogg 1992, 1993; Hogg et al. 1993; Hogg
& Hardie 1991) suggest an extension and development of social identity theory. For example, Hogg et al. (1993) argue that "whereas interpersonal attraction may well occur...in small interactive groups, there is also a quite separate mechanism, called self-categorization, that operates in psychologically salient groups to which people belong" (p.452). Self-categorization produces an array of distinctly group phenomena, including group-based, or intragroup attraction. In a study of mixed-sex interactive groups, Hogg et al. (1993) found that group liking was independent from interpersonal liking and was positively associated with perceptions of self and others that were depersonalized in terms of the group prototype and with perceptions of elevated group cohesiveness and a clear group prototype. Interpersonal attraction was unrelated or negatively related to these variables but more strongly associated with perceptions of interpersonal similarity.

In sum, group cohesiveness has been a key theoretical construct not only to describe the "groupness" of individuals constituting an interactive small group, but to theorize about underlying psychological processes. As a psychological theory, it was intended to be able to account for the group level of cohesiveness in terms of the operation of individual psychological processes. Because it was initially a mainly descriptive term with no consensual or formal definition, and seems to remain so in recent research, it is no easy matter to achieve this goal. There have been many attempts to clarify the definition of this construct. Hopefully, these issues will be clarified through the advancement of conceptualization and measurement.
The Measurement of Group Cohesiveness

The history of group cohesiveness is a continuous and unresolved debate about how to define and operationalize the concept (Hogg 1992). Because of the lack of a clear and unambiguous conceptual definition, there are no obvious criteria for admissible or inadmissible operationalizations. Thus, as Forsyth (1983) concluded, "the question of how to measure cohesiveness remains open, and in consequence different researchers have operationalized cohesiveness in different ways" (p.349).

Although group cohesiveness has been studied for more than 40 years, there are almost as many measures as there are people who have researched cohesiveness, and no consensus on even the parameters defining an appropriate measure (Hogg 1992). While cohesiveness remains imprecisely defined, it continues to be open season for the measurement of cohesiveness. This section will describe the approaches to measuring group cohesiveness and present some important multi-item scales in the literature.

Approaches to Measuring Cohesiveness

There are two different approaches to measuring group cohesiveness (Hogg 1992). The first approach includes monitoring or observing overt behavior, verbal and non-verbal behaviors. In the aspect of overt behavior, some scholars have focused on membership turnover (Mobley et al. 1979); whereas others (e.g., Yalom & Rand 1966) have focused on attendance at group-therapy sessions. There have also been attempts to monitor non-verbal indexes of cohesiveness, such as tendencies for group members to stand or sit close together, focus their attention on one another, show signs of mutual
affection, and display coordinated patterns of behavior (Piper et al. 1983; Tickle-Degen & Rosenthal 1987). Measures of verbal behavior have also been developed and used, for example, monitoring the proportion of "we" and "I" remarks made by group members (e.g., Atthowe 1961).

The second and by far most common approach has been to use some form of self report measures (Drescher et al. 1985), focusing on different aspects of group behavior. What is usually measured is interpersonal attraction among group members. This has been done via sociometric choice (e.g., Dimock 1941) or by the very popular method of simply having subjects rate how much they like one another (e.g., Bovard 1951; Jackson 1959).

Another method in the self-report approach assumes that group members are able to accurately perceive and represent the cohesiveness of their group as a whole. For example, Mann and Baumgartel (1952) asked group members to report whether they felt that their group was "better than others at sticking together," and Martens and Peterson (1971) monitored members' perceptions of the "closeness" of the group.

A third method assesses expressed desire to remain in the group. For example, Schachter (1951) simply asked subjects "Do you want to remain a member of this group?" "How often do you think this group should meet?" and "If enough members decide not to stay so that it seems this group might discontinue, would you like the chance to persuade others to stay?"

A final method involves monitoring identification or closeness with the group via self-reported expressions of belongingness and commitment. For example, Indik (1965)
asked: "How strong a 'sense of belonging' do you feel you have to the people you work with?"

While some researchers employ only a single measure of cohesiveness (e.g., Festinger et al. 1950), and some employ multiple measures of the same aspect of cohesiveness (e.g., Schachter 1951), the majority employ composite indices calculated from members' evaluations of each other and the group as a whole (e.g., Keller 1986). Some of the important scales are reviewed next.

Composite Indices of Group Cohesiveness

(1) The Gross Cohesiveness Scale and its variants

The Gross Cohesion Questionnaire (Gross 1957, in Schutz 1966), "the most widely used measure of cohesion in the literature" (Stokes 1983a:166), has been used by a number of researchers (e.g., Bednar & Battersby 1976; Crews & Melnick 1976; Evensen & Bednar 1978; Krishner et al. 1978; Lee & Bednar 1977; Stokes 1983a). The original Gross scale consists of the first seven questions in Stokes' scale shown in Table 2.1.

Two studies have been conducted to test the assumption that cohesion, as measured by the Gross Cohesion Questionnaire and its variants, is a reliable measure of a single construct. The first study was examined by Lieberman, Yalom, and Miles (1973). The research team used questions 1, 2, 4, 6, 8, 9, and a seventh item, a rewording of item 6 from Table 2.1, to measure cohesion in a data set of 161 encounter group participants. A principal component analysis of the 7-item scale yielded only one factor
Table 2.1. Stokes' scale for measuring cohesiveness in personal change groups

<table>
<thead>
<tr>
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<th>Question</th>
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<tbody>
<tr>
<td>1</td>
<td>How many of your group members fit what you feel to be the ideal of a good group member?</td>
</tr>
<tr>
<td>2</td>
<td>To what degree do you feel that you are included by the group in the group's activities?</td>
</tr>
<tr>
<td>3</td>
<td>How attractive do you find the activities in which you participate as a member of your group?</td>
</tr>
<tr>
<td>4</td>
<td>If most of the members of your group decided to dissolve the group by leaving, would you try to dissuade them?</td>
</tr>
<tr>
<td>5</td>
<td>If you were asked to participate in another project like this one, would you like to be with the same people who are in your present group?</td>
</tr>
<tr>
<td>6</td>
<td>How well do you like the group you are in?</td>
</tr>
<tr>
<td>7</td>
<td>How often do you think your group should meet?</td>
</tr>
<tr>
<td>8</td>
<td>I feel that working with the particular group will enable me to attain my personal goals for which I sought the group.</td>
</tr>
<tr>
<td>9</td>
<td>Compared to other groups like yours, how well would you imagine your group works together?</td>
</tr>
</tbody>
</table>


which accounted for 57.8% of the variance of cohesion. The Cronbach's alpha is .861. Omitting the seventh item, the Cronbach's alpha was .820 (see Stokes 1983b:454). The second test was conducted by Stokes (1983b). Using the 9-item scale with 177 members of a wide range of personal change groups (including psychotherapy groups, encounter groups, counseling groups, and self-help groups), the result produced a single factor accounting for only 42.6% of the variance, and a relatively high coefficient alpha of .812 (Stokes 1983b:454-455).

Yalom et al. (1967) modified the Gross Cohesiveness Scale for use with therapy groups by omitting questions 3 and 5 in Table 2.1, and adding questions 8 and 9, and four other items asking participants' feelings about their contributions to the group work, about the length of group meetings, toward the group therapists, and about being in group therapy. This 11-item scale has been widely used in many therapy group studies (e.g., Bugen 1975; Stokes et al. 1983; Wright & Duncan 1986).
In order to examine the internal structure of a modified version of the Gross Cohesiveness Scale, Johnson and Fortman (1988) administered their scale to 72 male and 72 female undergraduate students. In their modified version, question 7 in Table 2.1 was eliminated, and two items were added: one inquiring about feelings of belongingness on a scale from below average to above average, and the other about personal feelings toward the group on a scale from negative feelings to positive feelings. A principal component factor analysis using varimax rotated solution and a complete-link cluster analysis were performed on the inter-item correlations. The authors maintained that the modified scale consisted of two separate and distinct factors: affective and cognitive components. These two factors accounted for 52.3% of the variance of group cohesiveness. They proposed that the content of the Gross Cohesiveness Scale assessed the social cohesion component rather than task cohesion component (p.151). Their conclusion is different from the single factor notion of Lieberman et al. (1973) and Stokes (1983b).

(2) Evans and Jarvis' Group Attitude Scale

Evans and Jarvis (1986) conceptualized cohesiveness as "attraction-to-group," with a definition of "an individual's desire to identify with and be an accepted member of the group" (p.204). They constructed a 40-item scale with a 9-point Likert response format. The scale was administered to 178 members of growth and therapy groups to arrive at a 20-item scale (Table 2.2). To examine the reliability, a final scale was then administered to 56 members of growth groups at the beginning, middle, and end of the life of their groups, and to 27 members of task-oriented educational groups at four points
Table 2.2. Evans and Jarvis' questions for growth and therapy groups

1) I want to remain a member of this group.
2) I like my group.
3) I look forward to coming to the group.
4) I don't care what is happening in my group.
5) I feel involved in what is happening in my group.
6) If I could drop out of the group now, I would.
7) I dread coming to this group.
8) I wish it were possible for the group to end now.
9) I am dissatisfied with the group.
10) If it were possible to move to another group at this time, I would.
11) I feel included in the group.
12) In spite of individual differences, a feeling of unity exists in my group.
13) Compared to other groups I know of, I feel my group is better than most.
14) I do not feel a part of the group's activities.
15) I feel it would make a difference to the group if I were not here.
16) If I were told my group would not meet today, I would feel badly.
17) I feel distant from the group.
18) It makes a difference to me how this group turns out.
19) I feel my absence would not matter to the group.
20) I would not feel badly if I had to miss a meeting of this group.


in the life of the group. The correlations with other scales and indexes of cohesion (such as process consultants' assessments of members' levels of attraction-to-group and the cohesion scores of the subscale of Moos et al.'s [1974] Group Environment Scale) are analyzed to confirm the validity of the final scale. The examinations of reliability and validity demonstrate that this scale has high internal consistency and external validity (Evans & Jarvis 1986:206-212).
(3) Rosenfeld and Gilbert's Classroom Cohesion Questionnaire

No instrument existed for measuring cohesion in the classroom setting prior to 1989. The original version of Rosenfeld & Gilbert's (1989) Classroom Cohesion Questionnaire was basically a combination of items from Gross (1957, in Schutz 1966), Libo (1953), Moos (1979), Piper et al. (1983), Stokes (1983a), Stokes et al. (1983), and Yukelson et al. (1984). A total of 36 items were included in the original scale. Content and construct validity were assessed with a pilot study employing Darnell's (1970) Best/Worst procedure and factor analytic techniques. Items that loaded highly on a factor determined to represent cohesion and had the greatest mean difference between the Best and Worst were selected for inclusion in the final instrument. The 10 items shown in Table 2.3 were selected from the original factor analysis with factor loadings ranging from .63 to .84. The factor analysis of the final 10 items resulted in a single-factor solution with loadings of .9 and above (Rosenfeld & Gilbert 1989).

Table 2.3. Rosenfeld and Gilbert's questionnaire for classroom settings

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<table>
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<tbody>
<tr>
<td>1</td>
<td>Compared to other groups like mine, members of my group worked together well.</td>
</tr>
<tr>
<td>2</td>
<td>Many of the members fit what I feel to be the idea of a good member.</td>
</tr>
<tr>
<td>3</td>
<td>I like the group I was in.</td>
</tr>
<tr>
<td>4</td>
<td>If I were to participate in another group like this one, I would want it to include people who are very similar to the ones in this group.</td>
</tr>
<tr>
<td>5</td>
<td>The group was composed of people who fit together.</td>
</tr>
<tr>
<td>6</td>
<td>I enjoyed interacting with this group very much.</td>
</tr>
<tr>
<td>7</td>
<td>I trusted group members.</td>
</tr>
<tr>
<td>8</td>
<td>I wanted to remain a member of this group.</td>
</tr>
<tr>
<td>9</td>
<td>I felt attracted to the group.</td>
</tr>
<tr>
<td>10</td>
<td>There was a feeling of unity and cohesion in this group.</td>
</tr>
</tbody>
</table>

(4) Yukelson, Weinberg and Jackson's Multidimensional Group Cohesion Instrument

Yukelson et al. (1984) developed a 22-item Multidimensional Group Cohesion Instrument to examine the cohesiveness of intercollegiate basketball teams (see Table 2.4). The original scale consisting of 41 items, with an 11-point scale response format, was administered to 196 basketball players. A factor analysis resulted in four subscales:

Table 2.4. Yukelson, Weinberg and Jackson's Multidimensional Group Cohesion Instrument

<table>
<thead>
<tr>
<th>A) Quality of teamwork</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Teamwork</td>
</tr>
<tr>
<td>2) Role compatibility</td>
</tr>
<tr>
<td>3) Support and mutual respect</td>
</tr>
<tr>
<td>4) Degree of unselfishness</td>
</tr>
<tr>
<td>5) Conflict resolution</td>
</tr>
<tr>
<td>6) Well-defined roles</td>
</tr>
<tr>
<td>7) Closely knit</td>
</tr>
<tr>
<td>8) Team task discipline</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B) Attraction to the group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Feelings of enjoyment</td>
</tr>
<tr>
<td>2) Continue group membership</td>
</tr>
<tr>
<td>3) Feelings of acceptance</td>
</tr>
<tr>
<td>4) Pride in group membership</td>
</tr>
<tr>
<td>5) Value placed on membership</td>
</tr>
<tr>
<td>6) Significant and worthwhile</td>
</tr>
<tr>
<td>7) Satisfied with friendships</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C) Unity of purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Team preparation</td>
</tr>
<tr>
<td>2) Commitment to team operations</td>
</tr>
<tr>
<td>3) Team goal clarity</td>
</tr>
<tr>
<td>4) Method to reevaluate goals</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D) Valued roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Role valued by teammates</td>
</tr>
<tr>
<td>2) Role valued by coaches</td>
</tr>
<tr>
<td>3) Sense of belongingness</td>
</tr>
</tbody>
</table>

quality of teamwork, attraction to the group, unity of purpose, and valued roles. The four factors accounted for 62% of the total variance. The entire scale had a very high Cronbach's alpha (.93), and the alphas for the subscales were .86, .88, .86, and .79 respectively (pp.110-112). Although the Yukelson et al. scale seems to have high reliability, it has been criticized by Widmeyer et al. (1992) as data-driven (as opposed to theory-driven) and its definition of cohesion as not being "clearly linked to its measurement" (p.174).

(5) Widmeyer, Brawley and Carron's Group Environment Questionnaire

Perhaps the most promising scale is the Group Environment Questionnaire developed by the research team of Widmeyer, Brawley, and Carron (1985) for the study of sports groups. As mentioned in the previous section, the researchers first developed a conceptual model which consists of two concepts: group integration and individual attraction-to-the-group, each focused on task and social aspects. Guided by this conceptual model, they conducted a series of studies to construct the instrument. The final version of this 18-item instrument with a 9-point response format (see Table 2.5) is reduced from an initial 354-item pool, and is comprised of four scales reflecting the constructs of Group Integration-Task (GI-Task), Group Integration-Social (GI-Social), Individual Attraction-to-Group-Task (ATG-Task), and Individual Attraction-to-Group-Social (ATG-Social). The reliability of these four subscales is relatively high (.70, .76, .75, and .64 respectively) (Carron et al. 1985:263). Along with the content and factorial validity reported in Carron et al. (1985), Brawley et al. (1987) were able to further
Table 2.5. Widmeyer, Brawley and Carron’s Group Environment Questionnaire

<table>
<thead>
<tr>
<th>Scale Type</th>
<th>Items</th>
</tr>
</thead>
</table>
| A) Individual Attraction to Group-Task scale (ATG-Task): | 1) I am not happy with the amount of playing time I get.  
2) I am unhappy with my group’s level of desire to win.  
3) This team does not give me enough opportunities to improve my personal performance.  
4) I do not like the style of play on this team. |
| B) Individual Attraction to Group-Social scale (ATG-Social): | 1) I do not enjoy being part of the social activities of this team.  
2) I am not going to miss the members of this team when the season ends.  
3) Some of my best friends are on this team.  
4) I enjoy other parties more than team parties.  
5) For me this team is one of the most important social groups to which I belong. |
| C) Group Integration-Task scale (GI-Task): | 1) Our team is united in trying to reach its goals for performance.  
2) We all take responsibility for any loss or poor performance by our team.  
3) Our team members have conflicting aspirations for the team’s performance.  
4) If members of our team have problems in practice, everyone wants to help them so we can get back together again.  
5) Our team members do not communicate freely about each member’s responsibilities during the competition or practice. |
| D) Group Integration-Social scale (GI-Social): | 1) Members of our team would rather go out on their own than get together as a team.  
2) Our team members rarely party together.  
3) Our team would like to spend time together in the off season.  
4) Members of our team do not stick together outside of practice and games. |


confirm a very high concurrent, predictive, and construct validity of this instrument.

The Widmeyer et al. Group Environment Questionnaire has been adopted by Hogg, Cooper-Shaw, and Holzworth (1993) in their investigation of interactive groups. Their study aimed at testing the self-categorization theory hypothesis that positive attitude (liking) among group members is depersonalized in terms of the group prototype. Most of the items were slightly reworded to apply to their specific groups. The subjects were
instructed to answer questions first as a unique individual, then to consider the "team spirit" (p.455). The results generally supported their hypotheses.

There are many other group scales which are not singled out here, for example, the scales of Scott (1965), Hagstrom & Selvin (1965), Martens & Peterson (1971), and Gruber & Gray (1981). Generally speaking, there is no consistent conclusion of whether group cohesiveness is a unidimensional or multidimensional construct. Furthermore, among those who advocate multidimensions, there is also no consensus about what are the most adequate dimensions. To conclude this section, some of the measuring scales and their subscales (factors) are summarized in Table 2.6.

Correlates of Group Cohesiveness

Few studies systematically examine the correlates of group cohesiveness (Hogg 1992; Carron 1982; Widmeyer & Williams 1991). One of the earliest models for the analysis of group cohesion is presented by Cartwright (1968). He advances four main determinants of cohesion, which are: (1) the individual's motive base for attraction (e.g., need for affiliation, recognition, security, money, or other values that can be mediated by the group); (2) the incentive properties of the group (e.g., the group's goals, programs, style of operation, prestige, or other properties which are of significance to the individual); (3) the individual's expectancy that the group membership will have beneficial or detrimental consequences; and (4) the individual's comparison level or conception of the level of outcomes that should accrue from group membership.

On the basis of previous research and theoretical viewpoints advanced by a
Table 2.6. Some Multi-item Scales Measuring Group Cohesiveness

<table>
<thead>
<tr>
<th>Researchers</th>
<th>Groups</th>
<th># of items</th>
<th>Subscales (factors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott (1965)</td>
<td>College fraternities and sororities</td>
<td>7</td>
<td>(single scale)</td>
</tr>
</tbody>
</table>
| Hagstrom & Selvin (1965)     | Female college students’ living groups | 19         | 1) Social satisfaction  
2) Sociometric cohesion                                                               |
| Martens & Peterson (1971)    | Sports teams                  | 8          | 1) Individual to individual relations  
2) Individual to group relations  
3) Group as a unit                                                                      |
| Gruber & Gray (1981)         | Basketball players (students)  | 13         | 1) Team performance satisfaction  
2) Self performance satisfaction  
3) Value of membership  
4) Task cohesion  
5) Desire for recognition  
6) Affiliation cohesion                                                             |
| Stokes (1983)                | Personal change groups        | 9          | (single scale)                                                                    |
| Yukelson, Weinberg & Jackson (1984) | Intercollegiate basketball teams | 22         | 1) Quality of teamwork  
2) Attraction to the group  
3) Unity of purpose  
4) Valued roles                                                                   |
| Widmeyer, Brawley & Carron (1985) | Athlete teams               | 18         | 1) Individual attraction to group-social  
2) Individual attraction to group-task  
3) Group integration-social  
4) Group integration-task                                                           |
| Evans & Jarvis (1986)        | Growth and therapy groups     | 20         | (single scale)                                                                    |
| Rosenfeld & Gilbert (1989)   | Undergraduate classes         | 10         | (single scale)                                                                    |
number of authors, Carron (1982) proposes a general model structured in a linear fashion to encompass what Stogdill (1959) refers to as inputs, throughputs, and outputs. He argues that the inputs are the antecedents of group cohesiveness; the outputs, the consequences; and the throughputs, the types of cohesiveness present in sport teams. Specifically, the potential factors in his theoretical framework include: (1) environmental factors, which are the most remote factors, including contractual responsibility and organizational orientation; (2) personal factors, such as the individual's orientation/motivation toward group membership, individual satisfaction, and individual differences; (3) leadership factors, such as leader behavior, leadership style, coach-athlete interpersonal relationship, and coach-team relationship; and (4) team factors, such as group task, group orientation, group norm for productivity, desire for group success, team ability, and team stability (Carron 1982). In this model, environmental factors provide a social setting for the group, personal factors are the input which group members bring into the group as group resources or group synergy (Catell, 1948), leadership and team factors are the throughput of group functioning. Output is the group outcomes such as cohesiveness and performance.

To test a variant of Carron's model in the coacting groups, Widmeyer and Williams (1991) interviewed 85 female golfers to examine the effects of group characteristics on group cohesion. The group characteristics they examined include: team size, members' satisfaction with opportunities provided by team membership, similarity of members, coaches' efforts to foster cohesion, prior team success, existence of team goals, importance of team goals, intrateam task communication, and prior liking.
Stepwise regression analyses reveal that the nine independent variables collectively predict a significant amount of the variance in each of the four aspects of cohesion: members' attraction to the social aspects of their group (ATG-S, 72%), members' attraction to their group's task (ATG-T, 66%), members' perceptions of their group's social integration (GI-S, 56%), and members' perceptions of their groups' social integration around its task (GI-T, 70%). The best single predictor of each cohesion aspect is total satisfaction (R square ranged from 32% to 58%). They assess satisfaction as how satisfied the group members are with (1) the recognition they are receiving by being a member of the team, (2) the opportunities that the team provides for developing their golf skills, (3) their social interaction with teammates, and (4) the competition they are experiencing by being a member of the team (p. 553). They also find that some variables are more highly related to task cohesion (e.g., prior performance) and others to social cohesion (e.g., prior liking).

Although Widmeyer and Williams (1991) treat members' satisfaction as one of the potential predictors of group cohesiveness, some might argue that satisfaction is almost synonymous with cohesion, especially the measures of members' attraction to their group's social and task aspects. Given the high correlations of satisfaction with the four aspects (ranging from .56 to .68), it is possible to claim that members' satisfaction and the four aspects of group cohesiveness are reflecting the same construct of group cohesiveness. Still others might argue that satisfaction is one of the personal outcomes resulting from group cohesiveness (e.g., Carron 1982). Therefore, treating satisfaction as a predictor of group cohesiveness is questionable.
This review about predictors of group cohesiveness has demonstrated a general picture of some of the important factors affecting group cohesiveness. However, groups differ in their nature. For example, work groups, task groups, military groups, sports teams, and social educational groups may be quite different in terms of interaction required, group size, degree of emphasis on task, etc. In other words, social educational groups such as Home Economics Improvement Clubs might also have unique qualities predicting group cohesiveness. Therefore, there is a need to specifically identify the potential factors of cohesiveness for this kind of group from related literature.

Factors Predicting Cohesiveness of Social Educational Groups

Social educational groups for adults are basically voluntary groups. Members attend group activities for the purposes of learning, sharing experiences, or solely for being a member. The potential factors affecting cohesiveness of these groups will be reviewed next.

(1) Leadership

Although there is some classical evidence that democratic leadership is associated with positive mutual attitudes among group members (e.g., Bovard 1951; Preston & Heintz 1949; White & Lippit 1968), more detailed analysis indicates that leadership style per se may not be the causal agent. Rather, groups which achieve their goals, due to any effective leadership regime, are characterized by greater attraction (Hogg 1992). As Cartwright (1968) noted, a democratic form of organization that encourages widespread
participation in decision-making appears generally to induce more attraction to the group than does one in which decisions are centralized. However, "this conclusion must be tempered by the finding that people with different values and attitudes may react quite differently to the same type of leadership" (Cartwright 1968:101).

Putti (1985) examined the relationship between leaders' behavior and group characteristics of 18 work improvement teams with 100 employees in a large Singapore organization. The work improvement teams were formed voluntarily and functioned informally. Team members got together after office hours, discussed their work-related problems and arrived at solutions after a series of meetings. He found that:

ability of the leader to coordinate activities of the group and make them work as a team (integration) is strongly related to group cohesiveness, productivity, drive, loyalty and pressure to conform...cohesive groups can function effectively with capable leadership and at the same time effective leadership can contribute to group cohesion. (p.305)

More specifically, Chen (1990) also demonstrated the importance of leadership style and enthusiasm of the leaders to the success of agricultural extension educational groups.

(2) The Role of Teachers/Facilitators

Teachers and facilitators of adult groups behave as role models and objects of social identity to group members, and encourage group interaction and enhance group learning. If they are enthusiastic in personality, master of subject matters, and have competent communication skills, group members will benefit from their instructions and guidance. Two recent studies in the specific area of agricultural extension have found that attitudes of extension workers (Chang et al. 1993) and time spent by extension
workers with groups (Chen 1990) are influential to group success. Therefore, the role of teachers/facilitators is crucial to group cohesion.

(3) Organizational Support

Organizational support provides a possibility for social educational groups to form and to develop. Gladstein (1984) has maintained that top management is more likely to produce group cohesiveness than are the actions of group leaders. Chang et al. (1993) also found that support from the Farmers' Association leads to success of adult learning groups in agricultural extension education in Taiwan. Some groups continue to exist, it appears, because the support they receive from outside their boundaries helps them to prosper and keep their members (Zander 1979). Funding is one of the factors that Kaufman (1976) suggested contributes to the survival of an agency. Longevity of a group often depends, apparently, on the support it obtains from its environment (Zander 1979).

Furthermore, members' learning motivation will be enhanced if they recognize that top management values and respects this club, which in turn results in a high level of group cohesiveness. Therefore, support from the organization is critical to the closeness of these groups.

(4) Family Support

Participation in social educational groups is voluntary rather than compulsory. Groups with female members are also likely to be unique because of characteristics
associated with gender roles. For example, because most women are expected to be responsible for family domestic work, they usually participate in group meetings or group activities after finishing their family chores. Family support, especially support from husband, parents-in-law, and children, is very important. Family complaints often lead to hesitation to participate, or even withdrawal or dropout from the groups. Members who insist on attending group activities regardless of family objection might encounter family conflicts, and consequently experience uneasiness and lower degree of satisfaction as group members. Therefore, even though there has been no research to demonstrate any significant relationship between family support and group cohesiveness, it is still reasonable to argue that family support is one possible factor affecting group cohesiveness.

(5) Members' Homogeneity

Two different but related concepts have been studied in the research regarding members' characteristics: similarity and compatibility (see discussion of Schutz' FIRO theory earlier in this chapter). Many studies of similarity and compatibility do not resolve the question of whether similarity or compatibility creates attraction, or whether the opposite is the case (Hogg 1992).

Actual or perceived similarity in religion, occupation, race, and socioeconomic status has been found to enhance attraction among members of schools, sororities, training groups, work groups and laboratory groups (e.g., Eitzen 1973). However, whether such "background" variables influence cohesiveness depends on the importance
of the variables to the group or the individual group member. For example, Seashore (1954) found attraction to be uninfluenced by similarity in age or socioeconomic status in industrial work groups. Rather, length of service in the group, which was significantly more central to group functioning, was the more important influence on liking. Similarly, Lazarsfield and Merton (1954) found enormous variation in the influence of "background" factors on liking among members of housing communities.

Actual and perceived attitudinal and value similarity has also been found to enhance cohesiveness among members of housing projects, military groups, organizational groups, laboratory groups, college populations, and industrial relations groups (e.g., Anderson 1975).

Although assumed or actual compatibility of personality tends to enhance group cohesiveness, the term compatibility is rather ambiguous and unclearly defined. In fact, sometimes dissimilarity may be a source of attraction. For example, Gross (1956) has found that symbiotic relationships provide a more stable basis for attraction than do consensual ones. Liking for work partners is influenced by the degree to which they are instrumental in achieving group-mediated goals. Personality similarity or dissimilarity may promote such achievement. Lerner & Becker (1962) and Israel (1956) report data showing that for cooperative interaction, personality similarity enhanced liking, while for more competitive interaction, personality dissimilarity enhanced liking.
(6) Group Size

What constitutes a "small" group, and what is the conceptual basis for separating "small" groups from "large" groups? In general, most researchers are not explicit about this parameter and simply assume that sports teams, therapy groups, tank crews, sororities, and the like are small and thus amenable to a group cohesiveness analysis. Attempts to specify a rigorous size criterion are generally unsuccessful (Hogg, 1992). For example, although convinced that 10 people constitute a small group and 30 a large group, Shaw (1981) concedes that a cohesive 25-person group is "small" while a non-cohesive 15-person group is "large."

Groups in most studies attempting to examine group size effect are often of smaller size, usually less than 20 members (Hare 1981; Mullen & Copper 1994; Widmeyer et al. 1990). In fact, large groups also exhibit solidarity and cohesiveness. As Hogg (1992) argues, "the underlying psychological processes responsible for cohesiveness in large and small groups are identical" (p.66). In other words, group cohesiveness is a parameter of all kinds of groups, regardless of their size. Therefore, it is logical to reconceptualize group cohesiveness in terms of processes equally applicable to groups of all sizes (Hogg et al. 1993).

(7) Group Age

The longevity or duration of time the members have remained together is another important factor contributing to cohesiveness (Carron 1980; Zander 1976). Insko & Wilson (1977) also assume that individuals become more friendly as they spend more
time together; this time must be filled, however, with interpersonal activities such as talking, responding, gesturing, and so on. In a study that allowed each participant to talk separately with each other, and to observe each of his colleagues talking with the others, these assumptions were supported. As Zander (1979) concludes, "During the time they spent in conversation, members sought to discover common interests conducive to harmony between them" (p.435). Therefore, "the longer the team stays together, the greater the opportunity for social and task cohesiveness to develop" (Carron 1982:133).

(8) Members' Interaction

Recall that some researchers believe that social interaction and processes among learners have greater influence upon behavior, motivation, and personality development than norms, environment, and a person's inner drive (Long 1983). Carron (1988) further argues that through members' interaction "group members come to possess similar beliefs, hold similar attitudes, and increase the pressures on conformity to the group norms" (p.168). Research also has shown that communication can enhance liking among individuals (Insko & Wilson 1977) and a feeling of group closeness (Plutchik 1981). Even though some might argue that members' interaction can be an outcome of group cohesiveness, it is also logical to treat this variable as a predictor. McGrath (1984) hypothesized member interaction to be the central factor in group life. He proposed that interaction is influenced by member characteristics, group structure, environmental properties, and processes internal to interaction itself. In turn, interaction can influence group members, the environment, and group relationships (Widmeyer et al. 1992).
(9) Members' Learning Motivation

Learning motivation can be defined as the motives of group members to acquire new knowledge and new skills. Knox (1978-79) has noted that "the motives cause adults to devote their time and attention to learning episodes and should be a major determinant of learning outcomes" (Long 1983:244). The recent pilot study of Home Economics Improvement Clubs in Taiwan by Chang et al. (1993) also showed that members' learning motivation is important for predicting the closeness of group members and the success of group performance.

To conclude this section, there have been some attempts to examine the factors of group cohesiveness. The most systematic examinations are from sports sociology and sports psychology. Because groups are different in their natures, the potential factors predicting group cohesiveness of social educational groups are proposed as including leadership, the role of teachers/facilitators, organizational support, family support, members homogeneity, group size, group age, members' interaction, and members' learning motivation. The specific conceptual model of factors affecting group cohesiveness of Home Economics Improvement Clubs will be based on this framework. The definitions and measurement of the predicting variables and the hypothesized relationships between these variables and group cohesiveness will be depicted in next chapter, and the model will be tested in Chapter 4.
Relationship between Group Cohesiveness and Group Performance

It has been almost taken for granted that group cohesiveness is highly correlated with group performance (Hogg 1992; Mullen & Copper 1994). The concept of cohesiveness has an important potential practical application in the areas of group productivity and performance (e.g., Keller 1986; Miesing & Preble 1985; Mudrack 1989b). If cohesiveness is the defining feature of a group, then variations in the cohesiveness of small, interactive, task-oriented groups (particularly in work and sports contexts) might have a direct and predictable impact on productivity or performance of such groups. Perhaps it is possible to increase the productivity of work groups in industrial settings, or the success of sports teams, by increasing their cohesiveness (Hogg 1992). However, some classical research (e.g., Seashore 1954; Schachter et al. 1951) has found that "so long as group norms encourage high productivity, cohesiveness and productivity are positively related...If group norms encourage low productivity...the relationship is negative" (Forsyth 1990:87). To explore empirical results regarding the relationship between group cohesiveness and group performance, this section deals with the existence and magnitude of the cohesiveness-performance effect, and the causal ordering of these two constructs.

Existence and Magnitude of the Group Cohesiveness-Performance Effect

There have been several narrative reviews of the group cohesiveness-performance research (e.g., Hogg 1992; Lott & Lott 1965; Mudrack 1989b; Steiner 1972; Summers et al. 1988; Tziner 1982). These reviews demonstrated various and conflicting conclusions.
For example, Steiner asserted that the positive relationship between the two constructs was not supported by research findings. In contrast, Summers et al. (1988) maintained that "cohesion promotes productivity" (p.631).

There are also contradictions in the scholarly literature and an inconclusive stance presented in textbooks from diverse subfields in psychology (Mullen & Copper 1994). The most negative notions can be found in the field of organization behavior: "the major output of interest--performance--has not been positively related to the level of attraction" (Mitchell 1982:217). Other portrayals that are almost as discouraging can be found in the textbooks on group dynamics: "the implications of these findings are clear: cohesive groups are often more enjoyable, but they aren’t always more productive" (Forsyth 1990:87). Somewhat more encouraging descriptions are sometimes found in social psychology textbooks: "...we can conclude that cohesiveness usually increases group’s productivity. However, there are exceptions to this rule that must also be considered" (Worchel et al. 1991:448). Perhaps the most sanguine considerations of the effect can be found in textbooks of sport psychology: "...there tend to be more studies supporting a positive relationship between these variables" (Widmeyer et al. 1992:137).

There have been preliminary efforts toward meta-analytical studies of the cohesiveness-performance effect. These studies analyze the research findings from empirical studies regarding the relationship between group cohesiveness and performance. The results demonstrate a moderate effect. For example, based on 14 studies of real groups, Oliver (1990, in Mullen & Copper 1994) reported a mean effect size of .320. Similarly, Evans and Dion (1991) reviewed 16 studies and reported a mean effect size of
Recently, Mullen & Copper's (1994) meta-analysis reviewed 49 studies prior to 1992, which included 66 separate tests of the cohesiveness-performance effect, representing the responses of 8,702 subjects. Of the 66 hypothesis tests, 61 (92%) reported a positive cohesiveness-performance effect. This result provides a substantial support for the general relation between cohesiveness and performance. However, contrary to the reports of a moderate magnitude of effect in previous meta-analysis, the effect appears to be of small magnitude (mean effect size .248). Therefore, Mullen and Copper (1994) conclude that "...future summaries of this phenomenon might be best advised to no longer refer to the effect as 'controversial,' 'ambiguous,' or 'unsubstantiated' and begin to refer to it as a small but significant effect" (p.222).

Nevertheless, the overall "small and significant" effect between group cohesiveness and group performance should be scrutinized in further detail because there are moderators affecting the cohesiveness-performance effect. The operationalization of cohesiveness, nature of the groups, and components of cohesiveness will be reviewed next.

**Effects of operationalization of cohesiveness**

There was a significant tendency for the cohesiveness-performance effect to be stronger in the correlational paradigm than in the experimental paradigm. The correlational paradigm (e.g., Darley et al. 1952) examines the cohesiveness-performance effect by measuring the level of cohesiveness as perceived by members of the group and then examining whether this measurement correlates with group performance. The experimental paradigm (e.g., Schachter et al. 1951) examines the cohesiveness-
performance effect by experimentally inducing high or low levels of cohesiveness in ad hoc groups, and then examining whether the performance of the high cohesiveness induction groups is greater than that of the low cohesiveness induction groups. The overall mean magnitude of the cohesiveness-performance effect is .252 for groups of the correlational paradigm, .223 for groups of the experimental paradigm, and .156 for artificial groups (Mullen & Copper 1994).

Contributions of the nature of the group

Interaction requirement, group size and type of group are three moderators in this category. In terms of group interaction requirement, Mullen and Copper (1994) pointed out:

The implicit assumption...seems that cohesiveness can enhance performance for those groups in which suboptimal performance results from inadequate coordination between group members...this hypothesis suggests that a stronger cohesiveness-performance effect in groups that require a greater degree of interaction would indicate that cohesiveness exerts its effects on performance by improving coordination among group members and thereby enhancing the smooth operation of the group as a system. (p.213)

However, meta-analytical results demonstrate that groups with high interaction requirements (such as hockey, football, and basketball teams) did not exhibit a stronger cohesiveness-performance effect. This argues against the notion that cohesiveness affects performance by enhancing coordination and "lubricating" the group as a social system.

The typical group size in Mullen and Copper's study ranged from three to twenty. There was a significant negative relation between group size and the magnitude of the cohesiveness-performance effect, revealing that the effect is generally stronger among
smaller groups and weaker among larger groups. The reason is:

In larger groups, both cohesiveness and performance are probably reduced to low levels, and the resultant lack of variability in cohesiveness and performance in large groups results in smaller cohesiveness-performance effects (Mullen & Copper 1994:213).

Recall that the typical group size of Home Economics Improvement Clubs is about 15 to 30 members, indicating that these clubs may tend to have a weaker cohesiveness-performance effect.

In addition to group interaction and group size, the type of group plays an important role in moderating the cohesiveness-performance effect. Sports teams exhibit the strongest effect (.537), followed by military groups (.229) and nonsport, nonmilitary groups (.198). Social and educational groups belong to the category that might have much weaker cohesiveness-performance effect.

Contributions of the components of cohesiveness

Three variables are taken into consideration as the components of cohesiveness (Mullen & Copper, 1994). Commitment to the task seems to be the most important component of cohesiveness in the cohesiveness-performance effect, compared to interpersonal attraction and group pride. This finding contradicts earlier assertions (e.g., Schachter 1951) that the consequences of increasing cohesiveness are identical regardless of which specific component of cohesiveness is increased. However, it resonates to similar calls (e.g., Carron 1982; Tziner 1982) for researchers to pay closer attention to the multidimensional nature of cohesiveness. Practically, these results indicate that
efforts to enhance group performance by fostering interpersonal attraction or "pumping up" group pride may not be effective. Researchers and practitioners who are interested in the problems of bolstering group performance might most efficiently direct their effort toward determining how to increase people's liking for or commitment to group tasks (Mullen & Copper, 1994).

Causal Ordering between Group Cohesiveness and Group Performance

Few studies have attempted to examine the direction of effect in the correlational paradigm. In a recent overview article, Levine and Moreland (1990) argued that the results are still inconclusive. For example, the results of Dorfman and Stephan (1984) suggest a more direct link from cohesiveness to performance, whereas Bakeman and Helmreich (1975) suggest a link from performance to cohesiveness.

Few studies involving causal modeling of the relationship between cohesion and performance are available (e.g., Lander et al. 1982; Williams & Hacker 1982), and their results are inconclusive. The cohesiveness-performance effects are complex: they depend on such factors as the abilities of group members (Tziner & Vardi 1983), the leader's style (Tziner & Vardi 1983), the type of task the group is performing (e.g. Carron & Chelladurai 1981; Zaccaro & McCoy 1988), or which aspects of group cohesion are assessed (Levine & Moreland 1990). Only when cohesion is manipulated experimentally, can its effects on performance be interpreted more clearly.

In a longitudinal two-wave study of 54 work groups, Greene (1989) identified the group's acceptance of organizational goals and, to a lesser extent, group drive (as defined
by the arousal level, motivation to work, and enthusiasm of the group) as sources of variance in productivity. They found that causation between cohesion and productivity was reciprocal, primarily when the group exhibits high goal acceptance and group drive (and drive is a result of goal acceptance).

The results from Mullen and Coppers' (1994) temporal investigation about the effect are more consistent with the "performance influences cohesiveness" interpretation than with the "cohesiveness influences performance" interpretation. The mean magnitude of the Time 1 cohesiveness-Time 2 performance effect in the meta-analytic CLPC (cross-lagged panel correlations) is .246. However, the magnitude of the Time 1 performance-Time 2 cohesiveness effect is much stronger, with a mean effect size of .505.

As a summary of this section, it appears that the relationship between group cohesiveness and group performance has no simple answer. The existence and magnitude of the cohesiveness-performance effect depends on the operationalization of the groups (i.e., artificial or real groups), the nature of the groups (e.g., degree of interaction required, group size, types of groups), and the conceptualization of group cohesiveness and group performance. However, if temporary ordering is not a problem (e.g., as measured in a longitudinal study), then the cohesiveness-performance effect can be understood more clearly. This issue will be further discussed in Chapter 5.
CHAPTER 3. METHODS AND PROCEDURES

This chapter deals with the methods and procedures of the study. First of all, the basic assumptions are articulated. Second, the conceptual model and hypotheses for testing are presented. Next, the procedures are delineated, followed by a section on the measures used in this study.

Basic Assumptions of the Study

Are groups real? Although there are some scholars (e.g., Horowitz & Perlmutter 1953) asserting the realist doctrine, four basic propositions in social science have been claimed as the bases for arguments against realism:

1) We can see persons, but we cannot see groups except by observing persons.
2) Groups are composed of persons.
3) Social phenomena have their reality only in persons, this is the only possible location of such phenomena.
4) The purpose for studying groups is to facilitate explanations and predictions of individual behavior. (Warriner 1956:550-551)

Since the individual is the fundamental unit of a group or a society, the final and basic explanations of a group or society are obtained only when these explanations are couched in terms of individual psychology. As Allport (1924:688) said: "The work of sociology is to describe collectives of social behavior and social change resulting from it in terms of the group, and to explain these phenomena in terms of 'the individual'."

Accepting individuals as the basis of social interpretation and explanation has to assume that individual behaviors are measurable through observation and interview.
Therefore, it is clear that the first assumption of the study of group behavior is that people's behaviors are measurable. A second assumption is that group phenomena can be investigated by observing or measuring individuals' behaviors.

With regard to the area of group dynamics, although it makes perfect sense to describe a group in terms of its cohesiveness, it is not so meaningful to do so at the individual level. One can sensibly say that a group is more or less cohesive, but not that an individual is more or less cohesive. Thus, using the group as unit of analysis is more sensible than using the individual as unit of analysis. However, a group is an aggregate of more than one person, and it cannot respond whether it is cohesive or not. Group members are the fundamental source for answering this question. Researchers must ask individuals to evaluate the degree of cohesion of their groups. Thus, a third assumption critical to this study is that cohesion can be assessed through the perceptions of individual group members. In other words, an individual's evaluation of a group can reflect the degree of cohesiveness of that group. As Widmeyer et al. (1985) put it:

Forces outside and within the group influence the binding that is referred to as cohesiveness. Perceptions develop, within the individual, that the group is fulfilling personal needs and that it is united around its goals and objectives. If neither perception is held by the individual, it can be assumed that the binding quality will not be longlasting. Thus, each group member's perception becomes important in any conceptual model of cohesiveness. (p.15)

Conceptual Model and Hypotheses

The analytical model proposed to be tested in this study is based on the framework of factors affecting group cohesiveness for social educational groups. The
variables incorporated in the model are operationalized according to the characteristics of Home Economics Improvement Clubs. This model is shown in Figure 3.1. There are nine exogenous variables in the model, including club leadership, leadership of extension workers, organizational support, family support, members' homogeneity, group size, group age, members' interaction, and members' learning motivation. The endogenous variables include group cohesiveness and group performance.

Group performance is not the primary interest of this study. It is included in the model in order to clarify the existence and magnitude of the cohesiveness-performance relation. There is no attempt to argue for the causal ordering between group cohesiveness and group performance, because a cross sectional study is not an appropriate design to answer this question. Therefore, the two paths between group cohesiveness and group performance (i.e., cohesiveness ---> performance and performance ---> cohesiveness) are set at zero, and the residuals are correlated. The model is identified in this manner and will be tested at the group level; that is, the unit of analysis of this study is the group. Ten hypotheses will be tested simultaneously with one model. They are:

**Hypothesis 1:** The higher the club leadership score, the higher the level of group cohesiveness this club will have (path A).

**Hypothesis 2:** The higher the extension workers' leadership score, the higher the level of group cohesiveness this club will have (path B).

**Hypothesis 3:** The higher the degree of organizational support, the higher level of group cohesiveness this club will have (path C).
Figure 3.1. Conceptual framework of the study
Hypothesis 4: The higher the degree of family support, the higher the level of group cohesiveness this club will have (path D).

Hypothesis 5: The higher the degree of members’ homogeneity, the higher the level of group cohesiveness this club will have (path E).

Hypothesis 6: The larger the group size, the lower the level of group cohesiveness this club will have (path F).

Hypothesis 7: The older the group age, the higher the level of group cohesiveness this club will have (path G).

Hypothesis 8: The higher the degree of members’ interaction, the higher the level of group cohesiveness this club will have (path H).

Hypothesis 9: The higher the degree of members’ learning motivation, the higher the level of group cohesiveness this club will have (path I).

Hypothesis 10: There will be a positive and weak correlation between group cohesiveness and group performance (relationship J).

The Procedures

Questionnaire Construction

Two questionnaires were developed, one for club leaders and club members, the other for township home economics extension workers. The original version of the questionnaire was evaluated by five experts, including one professor from the Department of Agricultural Extension at National Taiwan University and four high level home economics administrators and officials. Among the four administrators and officials, one
came from Council of Agriculture, two from the Provincial Farmers' Association, and the fourth from the Provincial Department of Agriculture and Forestry. The five experts were asked to evaluate the appropriateness of the questionnaire items and to provide suggestions about the questions. Full agreement was attained to confirm the content validity of the questionnaire. The original questionnaire was then administered as a pilot test to six group leaders and 12 group members from six Home Economics Improvement Clubs in two representative townships. The final versions of the questionnaires are shown in Appendix B.

**Sampling Design**

In order to diversify the sample, the total of 279 townships which carry out home economics extension work around Taiwan was divided into three categories in terms of the percent of farming population: (1) those with less than 20%, (2) those with 20% to 39.9%, and (3) those with 40% or more. Twelve townships were drawn from each category through random sampling. In each township three Home Economics Improvement Clubs were recommended by the extension worker as the sample groups. Among these three groups, one group came from each of the following three categories of group age: (1) 1-2 years, (2) 3-9 years, and (3) 10 years or over. Clubs interviewed in the pilot test were excluded to avoid a bias of the re-survey effect. For each Home Economics Improvement Club, the group leader and two group members were selected as informants to the survey. The home economics extension workers of these townships were also asked to provide the background information for every group, and to evaluate
the leadership of club leader, the level of group cohesiveness and performance of each group. Therefore, for every club, four informants were interviewed—the club leader, two club members, and the extension worker.

Data Collection

The questionnaires designed for this study were approved by the Human Subjects Review Committee at Iowa State University in January 1994 (see Appendix C). Fifteen students from National Taiwan University were trained to conduct the interviews. The interviews were implemented during the winter break of the university, and were completed by the end of February in 1994. A total of 108 group leaders, 216 group members and 36 extension workers were administered the questionnaires. Telephone double-checks and a careful logic checking were conducted by the researcher to reconfirm the reliability and validity of the answers. Telephone interviews were conducted for every questionnaire to complete some unclear or incomplete answers. The general information such as group age and group size of these 108 groups was also reported by the extension workers.

Data Analysis

Data were analyzed using SPSS (Statistical Package for Social Science) and LISREL (LInear Structural RELationships) computer programs (Bollen 1989). General information including mean, standard deviation, zero-order correlations, reliability, and exploratory factor analysis is calculated using SPSS. Confirmatory factor analysis (CFA)
and structural equation models are estimated using LISREL 7 (Joreskog & Sorbom 1989). The CFA models were estimated using covariance matrix in conjunction with maximum likelihood estimation. The structural equation modeling allows separating random measurement errors as well as some systematic sources of error from the assessments of constructs (Judd et al. 1986), and provides the most appropriate method for testing hypotheses concerning the dimensionality of a construct, an issue that has been frequently raised in the case of cohesiveness and scales to measure it (Dion & Evans 1992). Although all the variables except group size and group age were measured by multiple items and reported by three informants, because the sample size (N=108) is not large enough to allow the estimation of a structural equation model with multiple reporters and/or multiple indicators, all variables except those identified specifically, are the aggregate from the three informants (see next section in detail).

The Measures

Group Cohesiveness

Group cohesiveness is defined as the degree of closeness and bonding within a group as assessed by the group members. It is seen as a construct consisting of two concepts: group integration and individual attraction-to-the-group. Group integration refers to the closeness, similarity, and bonding within the group as a whole—the degree of unification of the group field. Individual attraction-to-the-group refers to the interaction of the motives working on the individual to remain in the group—the composite of the individual members' feelings about the group, their personal role involvement, and
involvement with other group members (Widmeyer et al. 1985:16). These definitions reflect the arguments of social identity theory (see Chapter 2) in that the individuals commit themselves to the groups, identify themselves as group members, and remain in the groups not for some specific targets but for the group as a whole.

The items measuring group cohesiveness were constructed basically based on the above two concepts. An original pool of 21 items (see Appendix B) were administered to the club leaders and club members. These items were measured on a 4-point scale (with 1 indicating "strongly disagree," 2 indicating "disagree," 3 indicating "agree," and 4 indicating "strongly agree"). The following eight items were selected to measure cohesiveness in this study.

(1) Many other people would like to join this group.

(2) The attendance rate of this group has always been very high.

(3) Once the decision is made, our group members always try to implement it together.

(4) Our members always find opportunities to get together aside from formal group meetings.

(5) Our group has higher solidarity than other groups.

(6) I am proud of being a member of this group.

(7) I like this group very much.

(8) I would like to be a member of this group as long as I can.

Table 3.1 shows the correlation matrix of these eight items. Table 3.2 presents the results of exploratory factor analysis. Two factors emerged from principle component analysis. Factor 1 (group integration) consists of five items (from item 1 to item 5), and
Table 3.1. Correlation matrix of items measuring group cohesiveness (N=108)

<table>
<thead>
<tr>
<th>Items</th>
<th>Item 1</th>
<th>Item 2</th>
<th>Item 3</th>
<th>Item 4</th>
<th>Item 5</th>
<th>Item 6</th>
<th>Item 7</th>
<th>Item 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Many other people would like to join our group.</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The attendance rate of this group has always been very high.</td>
<td>.463**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Once the decision is made, our group members always try to implement it together.</td>
<td>.481**</td>
<td>.675**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Our members always find opportunities to get together aside from formal group meetings.</td>
<td>.507**</td>
<td>.484**</td>
<td>.466**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Our group has higher solidarity than other groups.</td>
<td>.530**</td>
<td>.670**</td>
<td>.671**</td>
<td>.611**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I am proud of being a member of this group.</td>
<td>.322**</td>
<td>.326**</td>
<td>.392**</td>
<td>.414**</td>
<td>.508**</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I like this group very much.</td>
<td>.428**</td>
<td>.483**</td>
<td>.545**</td>
<td>.470**</td>
<td>.541**</td>
<td>.712**</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>8. I would like to be a member of this group as long as I can.</td>
<td>.436**</td>
<td>.499**</td>
<td>.466**</td>
<td>.485**</td>
<td>.561**</td>
<td>.681**</td>
<td>.710**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

** significant at .01 level
Table 3.2 Factor Loadings and percent variance explained of group cohesiveness (N=108)

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1 (group integration)</th>
<th>Factor 2 (attraction-to-group)</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Many other people would like to join our group.</td>
<td>.706</td>
<td>.205</td>
<td>.540</td>
</tr>
<tr>
<td>2. The attendance rate of this group has always been very high.</td>
<td>.822</td>
<td>.199</td>
<td>.715</td>
</tr>
<tr>
<td>3. Once the decision is made, our group members always try to implement it together.</td>
<td>.791</td>
<td>.261</td>
<td>.693</td>
</tr>
<tr>
<td>4. Our members always find opportunities to get together aside from formal group meetings.</td>
<td>.663</td>
<td>.336</td>
<td>.552</td>
</tr>
<tr>
<td>5. Our group has higher solidarity than other groups.</td>
<td>.782</td>
<td>.376</td>
<td>.753</td>
</tr>
<tr>
<td>6. I am proud of being a member of this group.</td>
<td>.175</td>
<td>.904</td>
<td>.847</td>
</tr>
<tr>
<td>7. I like this group very much.</td>
<td>.371</td>
<td>.813</td>
<td>.798</td>
</tr>
<tr>
<td>8. I would like to be a member of this group as long as I can.</td>
<td>.372</td>
<td>.798</td>
<td>.775</td>
</tr>
</tbody>
</table>

Eigenvalue                                      4.653                         1.021
% Variance explained                           58.2                          12.8
Cumulative % variance explained               58.2                          71.0
factor 2 (attraction-to-group) consists of three items (item 6 to item 8). These two factors account for 71% of the variance of group cohesiveness. The relationship between these two factors is .583 (from factor analysis with oblimin rotation, data not presented). The Cronbach’s alphas of these two subscales are .859 and .875, respectively.

A summation from item 1 to item 5 from three informants (the club leader and two club members of each group) yields the score for group integration (factor 1), and a summation from item 6 to item 8 represents attraction-to-group (factor 2). A higher score stands for a higher degree of group cohesiveness. The same procedures for developing measures were followed throughout this study except when otherwise noted.

The extension workers were also asked to give an overall evaluation of the level of group cohesiveness for each of the three clubs in their townships on a 10-point response format (see extension workers’ questionnaire in Appendix B). A higher score also reflects a higher degree of group cohesiveness of the club.

**Group Performance**

Group performance is the outcome of group operation and group functioning as reported by group members. It was measured in three ways in this study. First, it was measured by a summation of activities participated in by group members (named as Group Performance 1), including the training programs provided by the Farmers’ Associations, different kinds of performances, contests, results demonstrations, demonstration tours, and community service activities. Second, it was measured by the degree of improvement as perceived by group leaders after attending the above activities
(named as Group Performance 2). Because different Farmers' Associations held different numbers of activities during the year before survey, this measure was adjusted by the number of group activities of each Farmers' Association, and only the club leader's report was used in the analysis. Third, it was measured simply as an overall evaluation of group performance reported by extension worker (named as Group Performance 3). These three measures are conceptually different from one another: the first is a quantitative measurement reported by group members and group leaders, the second is a subjective quality evaluation of group performance, and the third is an evaluation from a third party. Higher scores on these three measures represent higher degrees of performance. The three measures were put into the conceptual model one at a time to examine the cohesiveness-performance relationship.

**Club Leadership**

Many different conceptions of leadership have been used to measure the leader behavior (e.g., leadership style, in terms of democratic, authoritarian or laissez-faire). Some theorists prefer to include in defining leadership "the performance of a more limited set of group functions such as planning, decision-making, and coordinating" (Cartwright & Zander 1968:305). Such a stance is adopted in this study. Because this factor is an evaluation of the behavior and performance of club leaders, this measure was administered to the club members and the extension workers but not the club leaders. The following six items were selected from an original pool of 21 items to measure this variable. A summation of these six items from the three informants yields the score for
this variable. A higher score stands for a better evaluation of the group leader’s performance.

(1) This club leader is good in encouraging members to express their opinions.

(2) This club leader always leads this group to achieve group goals.

(3) The leadership of this club leader is superior to other leaders.

(4) This club leader is highly regarded by her supervisors.

(5) This club leader emphasizes team work.

(6) This club leader is skillful in encouraging members.

A confirmatory factor analysis model was estimated to investigate the single-factor latent construct. The standardized loadings for these six items are .771, .689, .771, .813, .740, and .781 respectively, indicating a good measure of the latent factor. The internal consistency (alpha) of this single factor scale is .891.

Leadership of Extension Worker

The roles of extension workers are multifold—as teachers, facilitators, and mentors to Home Economics Improvement Club members. No matter what roles they play, they are likely important to the cohesiveness of these clubs. An original scale of 20 items utilizing the same 4-point format was administered to the club leaders and club members. The following six items were selected to measure this variable. A higher score also stands for a higher level of perception of extension workers’ leadership.

(1) Our extension worker is always empathetic to the group members.

(2) Our extension worker always asks opinions from members before making
decisions.

(3) Our extension worker can always arrange for us the subject matters we like to learn.

(4) Our extension worker always encourages us to attend various activities.

(5) Our extension worker emphasizes team work.

(6) Our extension worker is skillful in encouraging members.

A confirmatory factor analysis was estimated to examine the single-factor latent construct. The standardized factor loadings of these six items are: .785, .816, .674, .814, .700, and .801, respectively. The Cronbach’s alpha of this scale is .894.

Organizational Support

Organizational support basically includes financial and emotional support from the top management. An original pool of 11 items were administered to the club leaders and club members. A five-point format was used with 1 indicating "strongly disagree," 2 indicating "disagree," 3 indicating "don't know," 4 indicating "agree," and 5 indicating "strongly agree." The following five items are selected to measure this variable. A summation of these five items from the three informants yields the score for this variable. A higher score stands for a higher degree of perception of organizational support.

(1) The head of our extension department is very supportive of home economics activities.

(2) Our Farmers’ Association always provides full financial assistance needed for our club’s activities.

(3) Our Farmers’ Association holds demonstration tours and contests very often.
(4) When our club participates in contests, our Farmers' Association always provides financial support.

(5) In our Farmers' Association the budget of home economics extension is increasing year by year.

A single-factor confirmatory analysis was conducted and it yielded the following factor loadings for each items: .629, .755, .736, .653, and .660, respectively. The reliability of this scale is .799.

**Family Support**

An original pool of six items was administered to the club leaders and club members on a 4-point format. The following four items are selected to measure this variable. All four are negative statements and therefore are reversely coded. A higher score indicates a higher level of family support as perceived by group leaders and members.

(1) Sometimes our meeting cannot be held due to lack of support from members' families (-).

(2) Most members' families do not consider our activities as beneficial to their families (-).

(3) Somehow I feel the support from most members' families is still insufficient (-).

(4) Often there are some members who cannot attend club activities due to lack of support from their families (-).

A single-factor model was estimated and it yielded a set of standardized loadings: .461, .506, .628, and .642, respectively. The reliability of this scale is .646.
Members' Homogeneity

Members' homogeneity is measured by the individual's evaluation of group members' similarity of an original pool of seven items on a 4-point scale. These items were administered to the club leaders and to the club members. Three items are selected to measure this variable. A summation of the three items from three informants yields the score for the variable. A higher score reflects a higher degree of members' homogeneity.

(1) Our club members are quite similar in personality.

(2) Our club members are quite similar in interest.

(3) Our club members are quite similar in things we like to learn.

A single-factor model measured by the three items was estimated and produced the following set of standardized loadings: .549, .667, and .742. The Cronbach's alpha of this scale is .680.

Group Age and Group size

Group age is simply the number of years since these clubs were formed. Group size is the number of club members at the time of survey. These two variables were reported by the extension workers.

Members' Interaction

The following three items were administered to the club leaders and club members on the same 4-point format. A higher score indicates a higher degree of interaction
among club members.

(1) Members often make telephone calls to each other.

(2) Members often chit-chat with one another.

(3) Members often have mutual visits as inter-family activities.

A single-factor confirmatory analysis was estimated and it yielded the following factor loadings: .680, .698, and .630, respectively. The Cronbach’s alpha of this scale is .705.

**Members’ Learning Motivation**

An original pool of nine items were answered by the club leaders and club members. Three items were selected to measure the level of learning motivation of the clubs in this study. The same 4-point format was applied to these items. Item 4 was a negative statement and was reversely coded. A higher score stands for a higher degree of learning motivation.

(1) Most our club members show a high degree of learning interest.

(2) Our members often ask the extension worker to invite experts to our meetings.

(3) Even though the club members have to pay their own bills, we welcome demonstration tours in other counties.

A single-factor model was estimated and it yielded the following standardized loadings: .689, .605, and .869, respectively. The reliability of this scale is .761.

This chapter describes the basic assumptions, the conceptual framework and hypotheses, the procedures, and the measures of this study. The ten hypotheses are tested simultaneously and the results will be presented in next chapter.
CHAPTER 4. FINDINGS AND APPLICATIONS

This chapter consists of five sections. The first section provides a description of the informants of this study. The second section presents the level of group cohesiveness of Home Economics Improvement Clubs. The third section includes the results of model testing. A summary of the findings of this study is outlined in the fourth section, followed by some recommendations for home economics extension work in Taiwan.

Characteristics of the Informants

As mentioned in Chapter 3, 36 extension workers, 108 club leaders and 216 club members were interviewed in this study. Most of the extension workers had long years of service, with an average of 14.75 years in the Farmers' Association, and an average of 14.29 years serving in the current institute. Among them, 44.4% worked as "full time" home economics extension workers; that is, no other unrelated responsibilities were assigned to them. The other 55.6% extension workers were assigned to do some work other than home economics extension, such as agricultural produce marketing and promotion. The average time devoted to home economics extension is 87.5% of work time.

In terms of education, 40.8% of the club leaders had education beyond high school level compared to only 26.4% of the club members. The average age of club leaders was 48.4 years, with an average 9.6 year length of membership. The average age of the club members was 47.1 years, with an 8 year length of membership. Among
the club leaders and members, about 40% were farm wives. Most of their families had
farms, with 52% of the club leaders and 40% of the club members reporting that they
participated in farming. The percent of farm income relative to the total family income
was 46.5% for club leaders and 60% for club members.

**Group Cohesiveness of Home Economics Improvement Clubs**

Table 4.1 presents the means and standard deviations of the items measuring
group cohesiveness of Home Economics Improvement Clubs. The total score of each
item is the sum of the responses of three people, including the club leader and two club

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Many other people would like to join our group.</td>
<td>9.79</td>
<td>1.28</td>
</tr>
<tr>
<td>2. The attendance rate of this group has always been very high.</td>
<td>10.00</td>
<td>1.28</td>
</tr>
<tr>
<td>3. Once the decision is made, our group members always try to</td>
<td>10.07</td>
<td>1.05</td>
</tr>
<tr>
<td>implement it together.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Our members always find opportunities to get together aside</td>
<td>9.29</td>
<td>1.35</td>
</tr>
<tr>
<td>from formal group meetings.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Our group has higher solidarity than other groups.</td>
<td>9.94</td>
<td>1.30</td>
</tr>
<tr>
<td>6. I am proud of being a member of this group.</td>
<td>10.61</td>
<td>1.12</td>
</tr>
<tr>
<td>7. I like this group very much.</td>
<td>10.58</td>
<td>1.09</td>
</tr>
<tr>
<td>8. I would like to be a member of this group as long as I can.</td>
<td>10.39</td>
<td>1.11</td>
</tr>
</tbody>
</table>
members. Recall that the potential score range for each item is from 1 to 4. Therefore, the total potential range of the score is from 3 to 12, with a mid-point of 7.5. The higher the score, the higher the level of group cohesiveness. A closer look at the items shows that the level of group cohesiveness of these Home Economics Improvement Clubs is relatively high. The means of all eight items are larger than 7.5, indicating that the perceived level of group cohesiveness is higher than the potential average score for each item.

The extension workers were also asked to evaluate the level of group cohesiveness of these clubs on a 10-point scale. The mean score given by the extension workers was 8.60 with a standard deviation of 1.26, indicating a high level of group cohesiveness of these clubs perceived by extension workers—consistent with the level of group cohesiveness perceived by club leaders and club members.

Results from Model Testing

This section explores the findings from model testing. First, the basic information including means, standard deviations, and ranges of the indicators of all latent constructs is outlined. Next, the correlation matrix of all the indicators is examined. Finally, the results of hypotheses testing are presented.

Table 4.2 shows the means, standard deviations, and ranges of the indicators. Note that the mean group size of these Home Economics Improvement Clubs is 25.61 members with a range from 14 to 88. A closer look at the distribution of group size shows that the "very large group" is uncommon (data not presented). Only 3 clubs have
Table 4.2. Means, standard deviation, and range of indicators (N=108)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>S.D.</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Club leadership</td>
<td>57.44</td>
<td>5.12</td>
<td>40-69</td>
</tr>
<tr>
<td>Leadership (extension worker)</td>
<td>60.54</td>
<td>5.35</td>
<td>51-72</td>
</tr>
<tr>
<td>Organizational support</td>
<td>62.14</td>
<td>5.64</td>
<td>46-75</td>
</tr>
<tr>
<td>Family support</td>
<td>35.72</td>
<td>3.08</td>
<td>27-46</td>
</tr>
<tr>
<td>Members' homogeneity</td>
<td>26.54</td>
<td>2.37</td>
<td>20-32</td>
</tr>
<tr>
<td>Group size</td>
<td>25.61</td>
<td>10.51</td>
<td>14-88</td>
</tr>
<tr>
<td>Group age</td>
<td>9.33</td>
<td>7.49</td>
<td>1-32</td>
</tr>
<tr>
<td>Members' interaction</td>
<td>29.87</td>
<td>3.54</td>
<td>18-36</td>
</tr>
<tr>
<td>Members' learning motivation</td>
<td>28.23</td>
<td>2.61</td>
<td>18-34</td>
</tr>
<tr>
<td>Group integration (Factor 1)</td>
<td>49.09</td>
<td>5.02</td>
<td>33-60</td>
</tr>
<tr>
<td>Attraction-to-group (Factor 2)</td>
<td>31.58</td>
<td>2.96</td>
<td>25-36</td>
</tr>
<tr>
<td>Group performance 1 (quantitative measure)</td>
<td>56.65</td>
<td>18.53</td>
<td>14-131</td>
</tr>
<tr>
<td>Group performance 2 (qualitative measure)</td>
<td>2.34</td>
<td>0.38</td>
<td>1.89-3</td>
</tr>
<tr>
<td>Group performance 3 (ext. workers' evaluation)</td>
<td>8.60</td>
<td>1.26</td>
<td>5-10</td>
</tr>
</tbody>
</table>

more than 50 members. Reasons for the existence of these "very large clubs" may be lack of resources (including economic and human resources), lack of support from Farmers' Associations, etc.

The average age of these clubs is 9.33 years with a range from 1 year to 32 years, implying that these Home Economics Improvement Clubs can be longlasting groups and provide lifelong benefit to rural women as a learning mechanism and source of social
Identification.

Table 4.3 presents the correlation matrix of the indicators of this study. The correlations among all of the nine exogenous variables were first examined. The significant and moderate correlation coefficients (with a highest coefficient of .620) of most of the exogenous indicators (except group size and group age) raise the question of multicollinearity. After centering the data (i.e., subtracting the mean of each indicator from the corresponding original value), an examination of multicollinearity shows that this is not a problem at all (Kleinbaum et al. 1988; Weisberg 1985).

The correlation coefficient between the two factors of group cohesiveness is then compared to the coefficients between these two factors and the exogenous variables to investigate the convergent and discriminant validity (Campbell & Fiske, 1959). Table 4.3 shows that the coefficient between attraction-to-group and leadership of extension workers (.650) is higher than the coefficients between the two factors (.638). One concern is that perhaps the measurements of group cohesiveness and extension workers' leadership do not entirely discriminate from each other. A closer look at the items measuring extension workers' leadership appears no potential suspicious items exited. Therefore, the same items are used in data analysis.

A detailed examination of the correlation coefficients between the exogenous variables and the two factors of group cohesiveness shows that seven of the nine exogenous variables have significant (at .01 level) positive relations with group cohesiveness. They are: club leadership, leadership of extension workers, organizational support, family support, members' homogeneity, members' interaction, and members'
Table 4.3. Correlation matrix of indicators (N=108)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Club leadership</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>2. Leadership (extension worker)</td>
<td>.484*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>3. Organizational support</td>
<td>.425**</td>
<td>.613**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>4. Family support</td>
<td>.299**</td>
<td>.480**</td>
<td>.370**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>5. Members' homogeneity</td>
<td>.285**</td>
<td>.538**</td>
<td>.458**</td>
<td>.351**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Group size</td>
<td>-.024</td>
<td>-.100</td>
<td>-.051</td>
<td>-.038</td>
<td>-.036</td>
<td>1.000</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7. Group age</td>
<td>.083</td>
<td>.028</td>
<td>.047</td>
<td>.168</td>
<td>-.008</td>
<td>.067</td>
<td>.067</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Members' interaction</td>
<td>.256**</td>
<td>.300**</td>
<td>.154</td>
<td>.240*</td>
<td>.202*</td>
<td>-.018</td>
<td>-.036</td>
<td>1.000</td>
<td></td>
<td></td>
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<tr>
<td>9. Members' learning motivation</td>
<td>.446**</td>
<td>.620**</td>
<td>.615**</td>
<td>.427**</td>
<td>.572**</td>
<td>.025</td>
<td>.068</td>
<td>.184</td>
<td>1.000</td>
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<tr>
<td>10. Group integration (Factor 1)</td>
<td>.412**</td>
<td>.522**</td>
<td>.478**</td>
<td>.435**</td>
<td>.427**</td>
<td>-.101</td>
<td>.090</td>
<td>.301**</td>
<td>.618**</td>
<td>1.000</td>
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<td></td>
</tr>
<tr>
<td>11. Attraction-to-group (Factor 2)</td>
<td>.421**</td>
<td>.650**</td>
<td>.423**</td>
<td>.338**</td>
<td>.375**</td>
<td>-.070</td>
<td>.211*</td>
<td>.362**</td>
<td>.563**</td>
<td>.638**</td>
<td>1.000</td>
<td></td>
<td></td>
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<td>12. Group performance 1</td>
<td>.216*</td>
<td>.170</td>
<td>.152</td>
<td>.154</td>
<td>.151</td>
<td>.033</td>
<td>.150</td>
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<td>.292**</td>
<td>.354**</td>
<td>.290**</td>
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</tr>
<tr>
<td>13. Group performance 2</td>
<td>.285</td>
<td>.224*</td>
<td>.250**</td>
<td>.192*</td>
<td>.267**</td>
<td>.040</td>
<td>-.044</td>
<td>.121</td>
<td>.241*</td>
<td>.205*</td>
<td>.157</td>
<td>.050</td>
<td>1.000</td>
</tr>
<tr>
<td>(qualitative measure)</td>
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<tr>
<td>(ext. workers' evaluation)</td>
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* significant at .05 level; ** significant at .01 level
learning motivation. The correlations between group size and the two indicators of group cohesiveness are negative but not significant (-.101 and -.070, respectively). The correlation between group age and group integration (.090) is positive but not significant, whereas the correlation between group age and attraction-to-group (.211) is positive and significant at .05 level. The direction of all of these correlations is consistent with the hypotheses (Hypothesis 1 to Hypothesis 9) proposed in Chapter 3.

The correlations between each of the two indicators of group cohesiveness and the three measures of group performance show consistent results. Group Performance 1 (the quantitative measure) has positive and weak correlations with the two indicators of group cohesiveness (.354 and .290, respectively). Both of the coefficients are significant at the .01 level. Group Performance 2 (the qualitative measure) also has a positive relationship with indicators of group cohesiveness (.205 and .157, respectively), and only the former one is significant at the .05 level. Group Performance 3 (the extension workers' evaluation) has positive and weak relationship with both the two indicators of group cohesiveness (.197 and .210, respectively) and is significant at .05 level. The direction of these coefficients is also the same as that proposed in Hypothesis 10. The cohesiveness-performance relations with these three different measures of group performance are calculated using confirmatory factor analysis. The results are presented in Appendix D.

The conceptual framework was then estimated with structural equation model first using the quantitative measure (Group Performance 1) as the measurement of group performance. The LISREL output provides standardized regression coefficients for
indicators of latent construct and for structural equations, and overall model fit information. Whether an overall model fits the data can be evaluated by examining the chi-square value, probability (p-value) and goodness-of-fit index (GFI).

The results of this model (Model 1) are presented in Figure 4.1. The chi-square value is 18.94 (p=.026) with 9 degrees of freedom, and the goodness-of-fit index is .974, indicating that this model fits the data. The results of hypotheses testing are discussed in the rest of this section.

**Test of Hypothesis 1 (path A)**

It has been hypothesized that the higher the score of club leadership, the higher the level of group cohesiveness a club will have. The standardized regression coefficient of this path in Model 1 is .086 (t=1.026), indicating that the hypothesis is not supported by the data. That is, a higher score of club leadership does not necessarily lead to a higher level of group cohesiveness of the Home Economics Improvement Clubs.

Note that the club leaders of Home Economics Improvement Clubs serve voluntarily without any payment. The mission of the leader is to help the extension workers by coordinating and assisting with group affairs. These responsibilities often lead to the situation that being a club leader is more or less unattractive. Consequently, club members must take turns serving as the club leader. This makes the role of club leader unstable.

One of the reasons for saying that being club leaders is unattractive may be that the so-called "club leader" is a misnomer. Perhaps in function they are just "group
Figure 4.1. Standardized coefficients of Model 1 (N=108)
helpers" or "club assistants." If a club leader cannot serve long enough to become familiar with group affairs and to master leadership skills, it is unlikely that the leader would be influential to her group members and influence group functioning and cohesiveness. If this explanation is correct, a question raised here is: Why do club leaders become group helpers? A possible explanation is that the leader role is not clearly defined. Another reason is that may be some extension workers take control. Other questions which merit investigation are: How can the leadership role (with no compensation) be made more rewarding and more attractive to these women? Can more leadership skill training help achieve the goal?

A related reason for explaining why club leadership does not affect group cohesiveness significantly may be lack of leadership skills of the club leaders. In fact, most of the club leaders are not as competent as an "independent" leader--one who can initiate and run the club programs by herself with little guidance from the extension worker. This implies that the club leaders need further training in leadership skills and group techniques. Putti (1985:305) has proposed that proper people must be chosen as leaders and that training programs be provided that focus on the following aspects: (1) resolving conflicts and reducing disorder in the team, (2) providing information to team members as to what is expected of them, (3) developing mutual respect and showing concern for team members, (4) motivating team members to meet goals, (5) anticipating problems and making accurate decisions, and (6) coordinating the activities of the group and keeping the group members working as a team.
Test of Hypothesis 2 (path B)

It has been hypothesized that the higher the score of extension workers' leadership, the higher the level of group cohesiveness of the club. The standardized regression coefficient of this path is .371 (t=3.369), indicating that the hypothesis is supported at the .05 level.

The role of extension workers is somewhat similar to that of the coach of a sports team. In sports team dynamics, the coach-team relationship is an important mediating factor of group cohesiveness. As Carron (1982) argued:

If the coach-team relationship is good, the coach is simply considered to be another member (with more power) of the collective whole. If the team is in direct conflict with the coach or the organization generally (e.g., mutiny, rebellion), the coach is excluded from membership in that collective whole. (p.133)

If the extension workers have a good relationship with the club members, and have good leadership skills, it is more likely to enhance the group cohesiveness of the Home Economics Improvement Clubs.

Adult learners prefer teachers with whom they can identify and who are competent in both subject matter and interpersonal skills. In other words, an individual who is incompetent in his/her work cannot overcome that deficit by being a "jolly good fellow" (Long 1983:237). Therefore, extension workers also need opportunities to strengthen their content knowledge and social skills. One way for enhancing group functioning is to emphasize the facilitating role rather than that of teacher and leader. That is, extension workers should learn about (and help club leaders to understand) group dynamics in order to better improve group problem solving, better manage members'
conflicts, etc. Of course, organizational support may be important in motivating the work morale and in increasing job satisfaction of extension workers.

**Test of Hypothesis 3 (path C)**

It has been hypothesized that the higher the degree of organizational support, the higher the level of group cohesiveness a club will have. The standardized regression coefficient of this path is -.012 (t=-.129), indicating that the hypothesis is not supported by the data. That is, the degree of financial and perceived emotional support from the supervisors does not necessarily enhance the level of group cohesiveness of Home Economics Improvement Clubs. One reason for this finding may be because the organizational support is more remote, and its impact on group cohesiveness may be exercised indirectly through the effect on the work morale and job satisfaction of extension workers. This hypothesis is in need of further refinement.

**Test of Hypothesis 4 (path D)**

It has been hypothesized that the higher the degree of family support, the higher the level of group cohesiveness a club will have. The standardized regression coefficient of this path is -.014 (t=-.168), indicating that this hypothesis is not supported by the data. That is, the degree of family support does not necessarily produce group cohesiveness of Home Economics Improvement Clubs. Family support is necessary for group formation, but does not necessarily produce group cohesiveness. Hence, it seems logical to reconsider this hypothesis—that is, to hypothesize that there is no relationship
between family support and group cohesiveness of Home Economics Improvement Clubs.

**Test of Hypothesis 5 (path E)**

It has been hypothesized that the higher degree of members' homogeneity, the higher level of group cohesiveness a club will have. The standardized coefficient of this path is -.016 (t=-.183), indicating that this hypothesis is not supported by the data. That is, the degree of members' homogeneity does not necessarily produce group cohesiveness of Home Economics Improvement Clubs.

Recall that a Home Economics Improvement Club is a locality group with members coming from the same village and sharing a similar socio-economic background. The degree of homogeneity of these groups is believed to be relatively higher than that of other groups such as work groups, sports teams, and military groups. Because the relatively higher level of homogeneity, the degree of members' diversity among all the clubs might be very low—that is, lack of variance of group members' background, and it results in a nonsignificant effect on group cohesiveness.

**Test of Hypothesis 6 (path F)**

Group size is hypothesized to be negatively related to group cohesiveness. The standardized regression coefficient of this path is -.082 (t=-1.152), implying that group size is not a significant factor in decreasing the level of group cohesiveness of Home Economics Improvement Clubs.

Note that the Home Economics Improvement Clubs are significantly larger (with
an average around 25) than typical groups in small group research (usually ranging from 3 to 20). The group size effect on group cohesiveness may not be significant due to the fact that most of the clubs in this study are located in the large size extreme (and it is a unique characteristic of Home Economics Improvement Clubs). Studies show that small groups are advantaged from frequent members’ interaction, whereas large groups are advantaged from sufficient human resources (Hare 1992). Questions raised by these findings are: What is the optimal group size of Home Economics Improvement Clubs? Is the optimal size for group cohesiveness also appropriate for group performance, group teaching, experience sharing, and group functioning? All these questions call for further investigation.

Test of Hypothesis 7 (path G)

It has been hypothesized that the older the group age, the higher the level of group cohesiveness a club will have. The standardized regression coefficient of this path is .165 (t=2.264), indicating that the hypothesis is supported by the data. That is, group age has a significant positive effect on group cohesiveness of the Home Economics Improvement Clubs. As a club grows older, the level of group cohesiveness will increase. This result provides a cue for enhancing group cohesiveness by extending the group life as much as possible. This raises the question of how an extension worker can help make the groups more enduring while at the same time recognizing that older groups may be more likely to resist change and lose relevancy, and there might be other ways for group members to spend their time. Therefore, how to solve these problems in order
to continue group momentum, and to motivate members sustaining a high level of learning interest, is also critical to extension workers and club leaders.

**Test of Hypothesis 8 (path H)**

This hypothesis assumes that the higher the degree of members’ interaction, the higher the level of group cohesiveness a club will have. The standardized regression coefficient of the path is .214 (t=2.800), indicating that the hypothesis is supported by the data. That is, members' interaction will help produce group cohesiveness of Home Economics Improvement Clubs.

Recall that McGrath (1984) has suggested that members’ interaction is central to group process, and is influenced by members' characteristics, group structure, environmental properties, etc. Given the unique characteristics of Home Economics Improvement Clubs, possible ways for the club leaders or extension workers to enhance members’ interaction are to decrease group size and to increase the opportunity for participation—that is, to carry out more activities or programs for these women. In addition, a leadership style which is suitable to group members is also important.

**Test of Hypothesis 9 (path I)**

It has been hypothesized that the higher the degree of learning motivation, the higher the level of group cohesiveness a club will have. The standardized regression coefficient of this path is .422 (t=3.880), indicating that the hypothesis is supported by the data.
Motivation of adult learning in the Home Economics Improvement Clubs is one of the central issues for the extension workers. Herem (1978) has synthesized a list of conditions of learning that are applicable to adult education:

1. Learning requires motivation to change.
2. Active involvement of the learner promotes effective learning.
3. Learning depends on past experiences.
4. Learning effectiveness depends on feedback.
5. An informal atmosphere aids the learning process. (p.9)

The above conditions are useful in discussing club members' learning motivation. For example, because active involvement is so important it is vital to involve club members in the process of program planning. Furthermore, effective teaching methods and media aids such as video tapes, movies, slides, exhibits, and printed materials are essential in motivating group learning. In addition, it is also crucial that members' goals are met. Therefore, extension workers should know how to do needs assessment, to design programs based on group members' needs, to implement these programs, and to evaluate program outcomes.

Test of Hypothesis 10 (path J)

It has been hypothesized that there will be a positive and weak cohesiveness-performance relation. The standardized coefficient between group cohesiveness and group performance estimated in Model 1 is .116 (t=1.763, see Figure 4.1) after controlling for other variables, and is not significant. That is, Hypothesis 10 is not supported by the data.

Although the paths from all the exogenous variables to group performance are not
the focal interest of this study, they are useful in explaining the cohesiveness-performance relationship. Note that there are two common factors affecting both group cohesiveness and group performance. They are: members' interaction, and members' learning motivation. This means that there may be spurious relations between group cohesiveness and group performance. An association between two variables is said to be spurious if both variables are dependent on another one or more variables, so that the association disappears when the common factors are controlled (Agresti & Finlay 1986; Bohrnstedt & Knoke 1988; Bollen 1989). This result implies that group cohesiveness neither enhances nor decreases the group performance of Home Economics Improvement Clubs. The significant correlation coefficients in Table 4.3 (.354 and .290) may be due to two common causes: members' interaction, and members' learning motivation. When these variables are incorporated into the model, the relationship between group cohesiveness and group performance drops significantly.

This model was next tested using two different measures of group performance—a qualitative evaluation perceived by club leaders (group performance 2) and an overall evaluation from the extension workers (group performance 3) as described in Chapter 3. The estimates of the model with qualitative measure (Model 2) are shown in Figure 4.2; and the model with extension workers' evaluation (Model 3) is presented in Figure 4.3.

The coefficients between group cohesiveness and group performance in Model 2 and Model 3 are .000 and .001 respectively. Neither is significant at .05 level. These results are consistent with the finding in Model 1, which uses a quantitative measure as the measurement of group performance. Note that there are no common significant
Figure 4.2. Standardized coefficients of Model 2 (N=107)

*significant at .05 level

χ²₉ = 18.06 (p=0.034)
GFI=.975
AGFI=.781
Figure 4.3. Standardized coefficients of Model 3 (N=108)
factors for both group cohesiveness and group performance in Model 2 and Model 3. However, Model 2 and Model 3 show a similar pattern of factors affecting group performance, in which club leadership has a significant positive effect on group performance.

Although the cohesiveness-performance relationship is not significant in all the three models, the estimation of these three models using different measurement of group performance complicates the results. One reason for the inconsistent results for the non-significant cohesiveness-performance relation may be that group performance is not a concern of group members. In other words, being a group member may itself be the objective. That is, group membership may be a goal rather than a means. This explanation is in need of further investigation.

Another reason may be that the three measurements of group performance are conceptually different. Their zero-order correlations are low (see Table 4.3): .05 (not significant) for performance 1-performance 2, .273 (significant at .01 level) for performance 1-performance 3, and .280 (significant at .01 level) for performance 2-performance 3. In fact, the conceptualization and measurement of the term "group performance" are in need of further investigation. Only when this construct is clearly defined and adequately measured, can the true cohesiveness-performance effect be verified in empirical studies.
Summary of Major Findings

The measurement of group cohesiveness developed in this study consists of two related factors: group integration (factor 1) with 5 items and attraction-to-group (factor 2) with 3 items. These two factors accounted for 71% of the variance of group cohesiveness. The relationship between these two factors is .583. The level of group cohesiveness of Home Economics Improvement Clubs in Taiwan is high, both as measured by the items developed in this study and as reported by the extension workers. With regard to the factors affecting group cohesiveness, an overall goodness-of-fit test demonstrates that the model proposed in the study fits the data. Four of the ten hypotheses are supported by the data. The four variables which have significant effects on group cohesiveness are: extension workers' leadership, group age, members' interaction and learning motivation. The expected direction and the results of hypothesis testing are summarized in Table 4.4.

Recommendations for Home Economics Extension Work

Based on the findings of this study, the following recommendations are proposed for the implementation of home economics extension work:

To Strengthen the Vertical and Horizontal Linkages

Vertical and horizontal linkages within and beyond the agricultural extension system are crucial to local extension work. Strong linkages with upper level agencies (vertical linkages) make necessary resources available. For example, township extension
Table 4.4. The expected directions and results of hypotheses testing

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Expected direction</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1 (Club leadership)</td>
<td>positive</td>
<td>not supported</td>
</tr>
<tr>
<td>Hypothesis 2 (Extension workers’ leadership)</td>
<td>positive</td>
<td>supported</td>
</tr>
<tr>
<td>Hypothesis 3 (Organizational support)</td>
<td>positive</td>
<td>not supported</td>
</tr>
<tr>
<td>Hypothesis 4 (Family support)</td>
<td>positive</td>
<td>not supported</td>
</tr>
<tr>
<td>Hypothesis 5 (Members’ homogeneity)</td>
<td>positive</td>
<td>not supported</td>
</tr>
<tr>
<td>Hypothesis 6 (Group size)</td>
<td>negative</td>
<td>not supported</td>
</tr>
<tr>
<td>Hypothesis 7 (Group age)</td>
<td>positive</td>
<td>supported</td>
</tr>
<tr>
<td>Hypothesis 8 (Members’ interaction)</td>
<td>positive</td>
<td>supported</td>
</tr>
<tr>
<td>Hypothesis 9 (Members’ learning motivation)</td>
<td>positive</td>
<td>supported</td>
</tr>
<tr>
<td>Hypothesis 10 (Cohesiveness-performance relation)</td>
<td>positive &amp; weak</td>
<td>not supported</td>
</tr>
</tbody>
</table>

workers with strong vertical linkages may find it easier to gain guidance, teaching materials, as well as emotional and financial support from their supervisors. Strong linkages with other local level agencies (horizontal linkages) make extension programs more easy to carry out. Resource exchange, cooperation, and integration between the related agencies often make things more effective.
To Carry Out More Activities/Programs for Group Member Participation

More activities and learning programs are suggested by most of the club leaders and club members in the open-ended questions. These learning activities are better designed based on members' interests and needs. These programs can be very different for different target groups and in different areas. Therefore, the extension workers must know how to do needs assessment, know how to involve their clientele during the planning processes, how to carry out these programs, and how to evaluate the performance of the programs.

To Enhance Training Programs for Extension Workers

The role of home economics extension workers is often defined as teacher of and facilitator for rural women. Over time, the teacher role has been the primary emphasis and expectation. This was perhaps appropriate for women with low educational levels and families with low incomes. However, this is not appropriate today in Taiwan when most women have higher levels of education, have been exposed to new technology and mass media, and have a variety of expectations and needs. It is not easy for the extension workers to meet various club members' needs and interests. Because other competent people from the local community are often available to contribute to adult education, and group members with special ability or skills can serve as resource people, the role of facilitator becomes more important to the extension workers than the role of teacher. Therefore, training programs in group dynamics (e.g., communication, leadership, conflict management, problem solving) and program planning techniques (e.g,
needs assessment, decision making, program evaluation) are essential to prepare them to be effective facilitators. Of course, emotional and financial support from the top management is also very important.

To Enhance Training Programs for Club Leaders

Without competent extension workers and club leaders, the goal of group self-monitoring would not have been achieved. Hence, the leadership of club leaders is very influential to group functioning. Two kinds of training programs are appropriate for leader development: (1) for those who have special talents and skills, a training to improve their teaching skills and presentation techniques; and (2) for those who have good personal relationships, and favorable personality (e.g., enthusiastic, hard working), programs for enhancing their communication skills and leadership abilities.

This chapter outlines the level of group cohesiveness of Home Economics Improvement Clubs, the results of hypotheses testing, a discussion of these results, and some practical recommendations for home economics extension work in Taiwan. The conclusions, limitations of this study and some recommendations for future study will be presented in next chapter.
Conclusions

The Home Economics Improvement Club is one of the most important groups of and for rural women operating within the agricultural extension educational system in Taiwan. Through this mechanism, adult women learn new knowledge, skills, and techniques to improve their lives. Recognizing that group process is very influential to the effectiveness of adult group learning, educators of adults have often turned to the literature of social psychology and group dynamics for principles and guidance concerning the teaching-learning transaction. Because group dynamics is too broad to be managed in one empirical research study, this exploratory study aimed at developing a measurement of group cohesiveness, describing the level of cohesiveness, delineating the correlates of cohesiveness of Home Economics Improvement Clubs, and providing some useful recommendations for home economics extension work in Taiwan.

Based upon previous research on group cohesiveness and a preliminary study of the Home Economics Improvement Clubs, two questionnaires were designed, one for club leaders and club members, the other for extension workers. A pilot study was conducted to verify the appropriateness of the questions. Nine hypotheses were proposed to investigate the factors affecting group cohesiveness of these groups. Another hypothesis was proposed to clarify the cohesiveness-performance effect. One hundred and eight club leaders, 216 club members and 36 extension workers were administered the questionnaires.
Exploratory factor analysis was used to simplify the measurement of group cohesiveness. Confirmatory factor analysis was estimated to verify the reliability and validity of the measures of this study. Structural equation models were estimated to test the 10 hypotheses simultaneously. The major findings and recommendations for home economics extension work are as follows:

1. The results of exploratory factor analysis show that the 8 items measuring group cohesiveness consist of two factors—group integration and attraction-to-group. These two factors account for 71% of the variance of group cohesiveness.

2. The means of the 8 items measuring group cohesiveness show that the level of group cohesiveness is high as perceived by club leaders and club members. The mean score of the objective evaluation from extension workers shows a similar result.

3. Among the nine paths from exogenous variables to group cohesiveness estimated in structural equation model, four paths are supported by the data. Extension workers' leadership, group age, members' interaction, and members' learning motivation all have significant positive effects on group cohesiveness.

4. With regard to the cohesiveness-performance relationship, the model using the quantitative measure of group performance (Model 1) demonstrates that the relation is spurious. After controlling for the common factors, the significant zero-order correlation between these two constructs disappears. The cohesiveness-performance relationship in the model with the qualitative measure (Model 2) and with the extension workers' evaluation (Model 3) are also not significant. However, no common factors exist in either Model 2 or Model 3.
5. Based on the findings of this study, recommendations for the home economics extension work are proposed. They include: (1) to strengthen the vertical and horizontal linkages, (2) to carry out more activities and programs for group member participation, (3) to enhance training programs for extension workers, and (4) to enhance training programs for club leaders.

Limitations of the study

This exploratory study seems to have raised more questions than it has answered. Several limitations merit mention.

Lack of theoretical guidance is the first limitation of this study. Although there are many theories in the general area of social psychology (such as reinforcement orientation, field theory, cognitive orientation, role theory, etc. [see Shaw & Costanzo 1982]), and also many theories in the specific area of group behavior (such as social comparison theory, cognitive dissonance theory, self-presentation theory, drive theory, etc. [see Mullen & Goethals 1987]), no specific theory was found suitable to guide this study. FIRO, as discussed in Chapter 2, is limited by its emphasis on the interpersonal relationship. A new theory—social identity/categorization theory—recently developed by Hogg and Associates to guide the interpretation of group cohesiveness, although has significant potential, is more appropriate to the explanation of intergroup relations rather than intragroup relations.

Although qualitative analysis was done in the preliminary stages in this study, this research is primarily a quantitative study focusing on the development of an appropriate
measurement scale of group cohesiveness, and the examination of its affecting factors. In
order to operationalize the abstract construct into testable hypotheses, it was assumed that
the group phenomenon can be measured as the aggregate of its representatives'
perceptions.

One question raised here is: Are groups real? The roots of group dynamics in
both psychology (individualist approach) and sociology (group-oriented approach)
produces two different orientations to the study of groups. The individualistic approach
asserts that: "the actions of all are nothing more than the sum of the actions of each taken
separately" (Allport 1924:5), and that: "a full understanding of the behavior of
individuals in groups could be achieved simply through studying the psychology of the
group members" (Forsyth 1990:17). In contrast, the group-oriented approach maintains
that: "The whole is greater than the sum of the parts" (Lewin 1951), and that: "...when
individuals merged into a group something new was created and that the new product
itself had to be the object of study" (Forsyth 1990:18). Campbell (1958) argues that
groups become real when they possess the characteristics of entities, and suggests that
groups vary in realness depending on the observer's perspective. He uses the term
entitativity to describe the extent to which something seems to be a unified entity. Even
though a group may exist only in the eyes (and mind) of its members, the feeling of unity
may still have profound consequences (Forsyth 1990:18-20). Only when this issue has
been clarified and consensus gained, can the measurement of group phenomena such as
cohesiveness be accurately obtained.

The use of self-report measures also raises the question of how much of the
explained variance is common-method variance and how much is true variance.
Although multiple reporters were administered the questionnaires in this study, the data analysis did not benefit from this research design due to small sample size. Generally speaking, small sample size is appropriate for small model testing. One commonly used criterion is that one parameter needs ten (or at least five) cases to obtain a stable solution (Bollen 1989). However, this goal could not be achieved due to lack of resources.

Finally, a cross-sectional study has the limitation of treating group cohesiveness as a static phenomenon. The problem of causal ordering between group cohesiveness and group performance cannot be solved in an analysis using cross-sectional data.

Recommendations for Future Research

To understand the changing and reciprocal relationships among input and output variables, it will be necessary to conduct prospective, longitudinal studies (Widmeyer et al. 1992). The snapshot design must be coupled with the longitudinal approach in future research.

A longitudinal or panel study can help illuminate the changing phenomena of group cohesiveness throughout the group life, and help clarify the causal ordering of the group cohesiveness-performance effect. Two-wave data can derive cross-lagged panel correlations (CLPC). This is a technique whereby two variables are measured at two points in time, and the resultant correlations between measurements within and across the time lag are used to explore the possible directions of influence between the two variables. The three sets of six correlations can be tested to confirm the stability effect
and causal order/reciprocal effect (Mullen & Copper 1994; Greene 1989). These three sets of correlations are: (1) two autocorrelations (the correlations between cohesiveness at Time 1 (T1) and cohesiveness at Time 2 (T2) and between performance at T1 and performance at T2, or the test-retest reliability or stabilities of the two variables); (2) two synchronous correlations (the correlation between cohesiveness and performance at T1 and the correlation between cohesiveness and performance at T2); and (3) two cross-lagged correlations (the correlations between cohesiveness at T1 and performance at T2 and between performance at T1 and cohesiveness at T2).

Budge (1981) urges a dialectical longitudinal approach that focuses on the impact of interindividual dynamics within the group on cohesiveness as a whole. However, there are a number of limitations to Budge’s analysis. For example, it is catered to the relatively specific and unique circumstances of psychotherapy groups (Hogg 1992). It is important to study cohesiveness as a dynamic property of groups that is both responsive to and influential of inter- and intra-group dynamics.

To guide future research in this area, a "three-generation hierarchy" of research questions is suggested (Widmeyer et al., 1992). The first generation (and simplest) question is: Does a relationship exist between variables x and y? For example, does a relationship exist between cohesiveness and performance? What is its magnitude and direction for the specific groups under study (such as social educational groups, sports teams, etc.)?

The second generation question is one that encourages an examination of conditions moderating the relationship: Under what conditions does x relate to y? Two
examples are: (1) task cohesiveness may relate to performance in team sports groups but not in coactive sports groups (Mullen & Copper 1994), and (2) for task groups, if group norms encourage high productivity, cohesiveness and productivity are positively related; however, if group norms encourage low productivity, the relationship is negative (Forsyth 1990). The spurious cohesiveness-performance relation of Home Economics Improvement Clubs in this study is also a good example. When the answers to these two generations of questions are provided, the boundaries of the phenomenon are better known and may be placed within some potential theoretical framework (Carron 1988).

However, explanations for why these boundaries occur are still tentative unless the third generation question is asked and answered: Why does variable x relate to y under some conditions but not others? What are the causes of these relationships? It is only by answering the three-generation questions that can we understand the cohesiveness-performance relationship and make progress toward a theory.

What is required is a multivariate approach, involving several independent predictors in a model. This approach takes into account the complexity of group phenomena and acknowledges interrelationships among group variables that occur simultaneously (Widmeyer et al. 1992). Also, multimethod measurements of the major constructs using observation, behaviorally anchored scales, group surveys, and individual surveys filled out by group members may help provide a more accurate picture of group behavior (Gladstein 1984).

As an exploratory study, nine independent variables are incorporated to predict group cohesiveness and the cohesiveness-performance effect in this dissertation. There
are still many other variables which are crucial to group outcomes (e.g., members’ communication, goal attainment, group norms, members’ satisfaction, etc.) and worthy of investigation. The group phenomena will be better understood if these variables are taken into consideration and applied to different groups in future research.
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APPENDIX A. AGRICULTURAL EXTENSION EDUCATION IN TAIWAN
A Brief History of Agricultural Extension Education in Taiwan

Since the restoration of Taiwan to the Republic of China in 1945, many agricultural agencies have carried out agricultural extension programs in one field or another, and most have asked the extension workers of township farmers’ associations to do the work with farmers.

Much of the progress in agriculture in Taiwan has been due to the efforts of these workers, assisted by specialists of the Joint Commission on Rural Reconstruction (JCRR, co-sponsored by American and Chinese government) and other agencies concerned.

However, in the past these extension workers handled mostly regulatory work which provided little time to work with farmers. In most cases, they dealt with only one phase of agriculture and not with farm enterprise as a whole. As time went on, it was a felt need to have a type of educational program that would deal with the problems of the whole farm, including adult farmers, farm women and rural youth.

In 1952, the new type of extension work began with rural youth, and many 4-H clubs were organized in the vocational agricultural schools and villages under the guidance of Mr. A. J. Brundage, an American Rural Youth Specialist of JCRR. In 1955, a pilot farm extension education program with adult farmers was started with the guidance of Mr. J. D. Pope and the support of JCRR and PDAF (Provincial Department of Agriculture and Forestry). After one year, the home economics extension program for farm women was also initiated and gradually carried out with the assistance of Miss B. Billings, the JCRR Home Economics Extension Specialist.

Before the initiation of extension education work, many extension programs
simply asked farmers to adopt whatever the practices were recommended. They usually offered money or materials for subsidy. The number of farmers who could be reached through this extension approach was very limited and these farmers sometimes became dependent and passive because they often expected continuing subsidy from the government. Since the implementation of educational programs, efforts have made to transfer to farm people "new knowledge," "new skills" and "new attitudes." Therefore, subsidy is no longer an important means to carry out demonstration projects. Instead, use of visual aids and reference materials, conducting of training meetings, method and result demonstrations, and frequent contacts with farmers through farm and home visits have been emphasized. Use of local leaders and organization of extension groups and clubs is essential.

The Agricultural Extension System

According to the provisions of the provincial regulations governing the implementation of agricultural extension education work in Taiwan, stipulated by the Provincial Government in 1965, the PDAF and County/City governments act as sponsoring agencies respectively at the provincial and county levels, and the three levels farmers' associations as executing agencies (Chen, 1989). The township public offices act as cooperating agencies, and other local agencies concerned provide necessary assistance. The District Agricultural Improvement Stations (DAIS) and other research institutions (e.g. agricultural universities and various specialized crop research institutes) play an important role in providing technical support to extension work (see Figure A.1).
Figure A.1. Organizational chart of agricultural extension education
The Organization and Functions of Farmers' Association in Taiwan

Farmers' Associations are essentially voluntary organizations. It is one type of business firm serving farmers directly by handing their products and filling their service needs. It is an organization of the farmers, by the farmers and for the farmers.

Taiwan Farmers' Associations operate on three levels—provincial, county or city and township. The township level association is the basic farmers' association (see Figure A.2). It maintains a direct contact with the farmers and serves them.

Membership can be divided into both regular members and associated members. They are also known as farmer-members and nonfarmer-members. Only one person for each farm household can join as the member (Lin, 1979).

According to the Farmers' Association Law (1974), a number of functions of the

![Diagram of the structure of Township Farmers' Association]

Figure A.2. The structure of Township Farmers’ Association
farmers' association can be described as follows (Lin, 1979:51-53):

1. Protection of farmers' right and interests, dissemination of agricultural laws and regulations and arbitration of farming disputes.

2. Assistance in the improvement of land-use, farm irrigation, soil conservation, forest protection and reforestation.

3. Extension for improved seeds and fertilizers.

4. Guidance in agricultural production and demonstration, multiplication of improved varieties and promotion in the management of the specialized agricultural areas.

5. Encouragement of agricultural extension, training and production.

6. Promotion of agricultural mechanization and raising of farm labor productivity.

7. Handling of entrusted agricultural business and rendering of farming services.

8. Marketing, warehousing, processing and manufacturing of farm and livestock products as well as their market management.

9. Import, processing, manufacturing, distribution and sales of agricultural material and supply of daily necessities for members.

10. Management of agricultural warehouses and other facilities commonly used by members.

11. Financial service for members.

12. Handling of agricultural insurance service as entrusted.

13. Assistance of handling farmers' insurance program as entrusted.

14. Promotion of rural cooperative and social service activities.

15. Promotion of rural vocations and industries.

16. Promotion of rural education, health, welfare and relief work.

17. Improvement of farm land uses.

18. Prevention, control and relief of agricultural disasters.
19. Acting for township public treasuries and execution of consignments as entrusted by government or by other public and private organizations.

20. Handling of other functions and services as specially authorized by the competent authorities.
APPENDIX B. LETTER TO EXTENSION WORKERS AND QUESTIONNAIRES
January 26, 1994

Dear Extension Worker:

My name is Erh-Rou Hsieh, currently teaching at the Department of Agricultural Extension of National Taiwan University. Under the sponsorship of the Council of Agriculture, Executive Yuan, I am conducting a study on the group dynamics of home economics improvement clubs. The purposes of this study are threefold: (1) to understand the group cohesiveness and performance of the clubs, (2) to identify the factors affecting group cohesiveness and performance, and (3) to provide recommendations on the improvement of home economics extension work.

Your township was one of the 36 townships selected for the study. We would like to interview members of three home economics improvement clubs. In each club we need to interview one club leader and two members. I would appreciate very much your help in providing the information of these three clubs. The answers which you give to us will be kept strictly confidential. The results are a statistical tabulation of everyone's answers, and no names are ever connected with the survey results. Part of the data will be analyzed in my dissertation as I am working on my Ph.D. degree in Sociology at Iowa State University. If you are interested in the findings of this study, please tell our interviewer when s/he comes to interview. I will be happy to send it to you upon completion. Thank you for your assistance.

Best Regards

Sincerely,

Erh-Rou Hsieh
Department of Agricultural Extension
National Taiwan University
Dear Extension Worker:

I am a student of the Department of Agricultural Extension, National Taiwan University. Under the sponsorship of Council of Agriculture, we are conducting a study concerning the group dynamics of home economics improvement clubs. We would like you to provide some information about three clubs. Thank you for your assistance.

1. Name: ____________________

2. Telephone: (O) ______________ (H) ________________

3. Farmers' Association (FA): ________________

4. Total service years as home economics extension worker in this FA: _______ years.
   Total service years as home economics extension worker including service in other FAs: _______ years.

5. How many percent of your time is devoted to home economics extension? ______ %.

6. How many home economics improvement clubs do you have in this FA? ______ clubs.
   How many members and voluntary advisors? ______ members, ______ voluntary advisors.

7. What was the total budget for home economics extension? ________ Dollars.

8. Do you want to have a summary of this study? ______ yes, ______ no.

Time interview began: ______ a.m. ______ p.m.   Date: ________________________

Time interview ended: ______ a.m. ______ p.m.

Questionnaire checking: ______ complete, ______ incomplete.

Interviewer's signature: ____________________
GROUP #1.

1. Name of club leader: ________________________________.

2. Number of members: _______________ persons.

3. Club age: _______ years.

4. How would you assess the degree of group solidarity of this club? (Please circle one number):

<table>
<thead>
<tr>
<th>Very low</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2  3  4  5  6  7  8  9  10</td>
</tr>
</tbody>
</table>

5. How would you assess the degree of group outcome of this club? (Please circle one number):

<table>
<thead>
<tr>
<th>Very low</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2  3  4  5  6  7  8  9  10</td>
</tr>
</tbody>
</table>

6. Following are some statements about this club leader. Please indicate your level of agreement or disagreement with each statement. (4=Strongly Agree; 3=Agree; 2=Disagree; 1=Strongly Disagree)

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>1) This club leader has good common sense. (+)</td>
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<tr>
<td>2) This club leader is weak in communication skills.</td>
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<td>3) This club leader has good social skills. (+)</td>
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<td>4) This club leader does not devote enough time and effort to group affairs.</td>
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<tr>
<td>5) This club leader cares about members' personal issues as well as group affairs. (+)</td>
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<td>6) Sometimes this club leader tends to run into conflict with other group members.</td>
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<tr>
<td>7) This Club leader is always empathetic to other group members. (+)</td>
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<tr>
<td>8) This club leader always asks opinions from members before making decisions. (+)</td>
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<tr>
<td>9) The leadership style of this club leader is not well accepted by group members.</td>
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<tr>
<td>10) This club leader does not always call sufficient members for meetings.</td>
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<td>11) This club leader is weak in obtaining subsidies from the supervisor.</td>
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<td>12) This club leader sometimes loses her temper in front of members.</td>
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<tr>
<td>13) This club leader is good in encouraging members to express their opinions. (+)</td>
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<tr>
<td>14) This club often cannot reach consensus in the meeting.</td>
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<tr>
<td>15) This club leader always leads this group to achieve group goals. (+)</td>
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<tr>
<td>16) The leadership of this club leader is superior to others leaders. (+)</td>
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<tr>
<td>17) This club leader is highly regarded by her supervisors. (+)</td>
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<tr>
<td>18) This club leader is weak in organizing ability.</td>
<td></td>
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<tr>
<td>19) This club leader emphasizes team work. (+)</td>
<td></td>
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<tr>
<td>20) This club leader is skillful in encouraging members. (+)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>21) This club leader is indispensable to the operation of this group. (+)</td>
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</tbody>
</table>
GROUP #2.

1. Name of club leader: ____________________________.

2. Number of members: __________ persons.

3. Club age: ______ years.

4. How would you assess the degree of group solidarity of this club? (Please circle one number):

   Very low                                Very high
   1  2  3  4  5  6  7  8  9  10

5. How would you assess the degree of group outcome of this club? (Please circle one number):

   Very low                                Very high
   1  2  3  4  5  6  7  8  9  10

6. Following are some statements about this club leader. Please indicate your level of agreement or disagreement with each statement. (4=Strongly Agree; 3=Agree; 2=Disagree; 1=Strongly Disagree)

   1) This club leader has good common sense. (+)        1  2  3  4
   2) This club leader is weak in communication skills.  1  2  3  4
   3) This club leader has good social skills. (+)       1  2  3  4
   4) This club leader does not devote enough time and effort to group affairs. 1  2  3  4
   5) This club leader cares about members' personal issues as well as group affairs. (+)  1  2  3  4
   6) Sometimes this club leader tends to run into conflict with other group members. 1  2  3  4
   7) This Club leader is always empathetic to other group members. (+)  1  2  3  4
   8) This club leader always asks opinions from members before making decisions. (+)  1  2  3  4
   9) The leadership style of this club leader is not well accepted by group members. 1  2  3  4
  10) This club leader does not always call sufficient members for meetings. 1  2  3  4
  11) This club leader is weak in obtaining subsidies from the supervisor. 1  2  3  4
  12) This club leader sometimes loses her temper in front of members. 1  2  3  4
  13) This club leader is good in encouraging members to express their opinions. (+)  1  2  3  4
  14) This club often cannot reach consensus in the meeting. 1  2  3  4
  15) This club leader always leads this group to achieve group goals. (+)  1  2  3  4
  16) The leadership of this club leader is superior to others leaders. (+)  1  2  3  4
  17) This club leader is highly regarded by her supervisors. (+)  1  2  3  4
  18) This club leader is weak in organizing ability. 1  2  3  4
  19) This club leader emphasizes team work. (+)  1  2  3  4
  20) This club leader is skillful in encouraging members. (+)  1  2  3  4
  21) This club leader is indispensable to the operation of this group. (+)  1  2  3  4
GROUP #3.

1. Name of club leader: ____________________________ .

2. Number of members: ____________ persons.

3. Club age: ________ years.

4. How would you assess the degree of group solidarity of this club? (Please circle one number):

   Very low
   1  2  3  4  5  6  7  8  9  10

   Very high

5. How would you assess the degree of group outcome of this club? (Please circle one number):

   Very low
   1  2  3  4  5  6  7  8  9  10

   Very high

6. Following are some statements about this club leader. Please indicate your level of agreement or disagreement with each statement. (4=Strongly Agree; 3=Agree; 2=Disagree; 1=Strongly Disagree)

   1) This club leader has good common sense. (+) 1 2 3 4
   2) This club leader is weak in communication skills. 1 2 3 4
   3) This club leader has good social skills. (+) 1 2 3 4
   4) This club leader does not devote enough time and effort to group affairs. 1 2 3 4
   5) This club leader cares about members' personal issues as well as group affairs. (+) 1 2 3 4
   6) Sometimes this club leader tends to run into conflict with other group members. 1 2 3 4
   7) This Club leader is always empathetic to other group members. (+) 1 2 3 4
   8) This club leader always asks opinions from members before making decisions. (+) 1 2 3 4
   9) The leadership style of this club leader is not well accepted by group members. 1 2 3 4
  10) This club leader does not always call sufficient members for meetings. 1 2 3 4
  11) This club leader is weak in obtaining subsidies from the supervisor. 1 2 3 4
  12) This club leader sometimes loses her temper in front of members. 1 2 3 4
  13) This club leader is good in encouraging members to express their opinions. (+) 1 2 3 4
  14) This club often cannot reach consensus in the meeting. 1 2 3 4
  15) This club leader always leads this group to achieve group goals. (+) 1 2 3 4
  16) The leadership of this club leader is superior to others leaders. (+) 1 2 3 4
  17) This club leader is highly regarded by her supervisors. (+) 1 2 3 4
  18) This club leader is weak in organizing ability. 1 2 3 4
  19) This club leader emphasizes team work. (+) 1 2 3 4
  20) This club leader is skillful in encouraging members. (+) 1 2 3 4
  21) This club leader is indispensable to the operation of this group. (+) 1 2 3 4
GENERAL COMMENTS

1. Please provide your suggestions on how to improve home economics activities and performance.

________________________________________________________________________

2. Please provide your suggestions on enhancing members’ harmony and team spirit.

________________________________________________________________________

3. Please provide your suggestions on how to improve the leadership of club leader and staff.

________________________________________________________________________

4. Please provide your suggestions on increasing learning motivation and participation.

________________________________________________________________________

5. Please provide your suggestions on how to assist extension workers:

1) subject matters

________________________________________________________________________

2) organization of home economics extension

________________________________________________________________________

3) teaching methods

________________________________________________________________________

4) training for club leaders and members

________________________________________________________________________

5) other items

________________________________________________________________________

THANK YOU FOR YOUR ASSISTANCE!
GROUP LEADERS' AND MEMBERS' QUESTIONNAIRE
Department of Agricultural Extension, National Taiwan University

ID No._________________________  
Interviewer:______________________

Dear leader (member):

I am a student of the Department of Agricultural Extension, National Taiwan University. Under the sponsorship of Council of Agriculture, we are conducting a study concerning the group dynamics of home economics improvement clubs. The objective of this study is to understand the factors affecting group cohesiveness and group performance. The findings of this study will make an important contribution to the understanding of current status of home economics improvement clubs and provide valuable recommendations for further improvements. The answers which you give to us will be kept strictly confidential. The results are a statistical tabulation of everyone's answers, and no names are ever connected with the survey results. The interview takes around 45 minutes to complete. Your participation is completely voluntary and highly appreciated. I will be pleased to answer any questions that you have. Thank you for your cooperation.

Respondent's name:______________________________  
Address:__________________________________________  
Telephone number:( )___________________________

Time interview began:______a.m.______p.m. Date:__________________________  
Time interview ended:______a.m.______p.m.

Questionnaire checking:______complete,______incomplete.  
Interviewer's signature:__________________________

DEMOGRAPHIC INFORMATION

1. Township:___________________.

2. Years of membership:______years.


4. Age:______.

5. Education:______less than 6 years,______primary school graduate,______junior high school graduate,______senior high school graduate,______college graduate,______university graduate.

6. Husband's occupation:________________________
   Farming income as a percent of total family income:______%.
   Do you participate in farming?______yes,______no.

7. Do you have a full time job?______yes,______no.
   If yes, what is your job?______________________.
GROUP COHESIVENESS

Following are some statements about your group. Please indicate your level of agreement or disagreement with each statement. (4=Strongly Agree; 3=Agree; 2=Disagree; 1=Strongly Disagree)

1) I am proud of being a member of this group. (+) 
2) I don’t think this group can help me achieve my personal goals. 
3) I like this group very much. (+) 
4) I would like to be a member of this group as long as I can. (+) 
5) It makes no differences to me if I attend this club or other clubs. 
6) Many other people would like to join this group. (+) 
7) Some members always find excuses not to attend group meetings. 
8) The attendance rate of this group has always been very high. (+) 
9) Once the decision is made, our group members always try to implement it together. (+) 
10) Most members keep quiet in the group meetings. 
11) The cooperation among our members requires improvement. 
12) We put more emphasis on group reputation than other groups. (+) 
13) Our members always find opportunities to get together aside from formal group meetings. (+) 
14) Our group lacks of fighting spirit. 
15) We try very hard to retain members who want to leave this group. (+) 
16) Our group has higher solidarity than other groups. (+) 
17) In every meeting, there is always someone cannot show up punctually. 
18) When setting up meeting sites, there is always someone cannot come to help. 
19) If there is any troubles occurred among members, we always try to help her out. (+) 
20) It is inevitable to have cliques exist in our group. 
21) Even though the decision is made by the group, however, lack of coordination might still exist during implementation.

GROUP PERFORMANCE

1. Please indicate which group activities listed below were pertinent to your group last year, whether or not you participated and the degree of improvement of your group as a whole.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Held (yes/no)</th>
<th>Participated (yes/no)</th>
<th>Degree of Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food nutrition and sanitation</td>
<td>yes</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td>Medical knowledge</td>
<td>yes</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td>Exercise and health</td>
<td>yes</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td>Mental health</td>
<td>yes</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td>Family relationships</td>
<td>yes</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td>Activity</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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<td>-------------------------------------------------------</td>
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<tr>
<td>Children education and communication</td>
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<tr>
<td>Accident prevention and casualty</td>
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<tr>
<td>Family care and rescue</td>
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<tr>
<td>House design and beautification</td>
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<tr>
<td>Family economics/financial management</td>
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<tr>
<td>Citizenship (rights and obligations)</td>
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<td></td>
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<td>Consumer knowledge</td>
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<tr>
<td>Interpersonal relationships</td>
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<td>Environmental protection education</td>
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<td>Social knowledge and skills</td>
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<td>Fine art skills</td>
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<td>Handicrafts</td>
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<td>Cooking</td>
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<td>Flower (and artificial flower) arrangement</td>
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<td>Enhancement of self-confidence</td>
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<td>Career planning</td>
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<tr>
<td>Leadership training</td>
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<tr>
<td>Elderly care and service</td>
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<tr>
<td>Language training</td>
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<tr>
<td>Others (please indicate)</td>
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</table>

2. How many times did your group attend the following activities last year? (please mark times)

<table>
<thead>
<tr>
<th>Type of participation</th>
<th>Perform</th>
<th>Contest</th>
<th>Results exhibition</th>
<th>Demonstration tour</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>All club members participate</td>
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<tr>
<td>Partially participate</td>
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<td></td>
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<tr>
<td>Select individual representatives</td>
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</tbody>
</table>

3. Did your club provide the following community services during the last year? (please check)

- [ ] Visit to orphanages or nursing homes
- [ ] Provide booths for any kinds fairs
- [ ] Donations or contributions to the poor
- [ ] Other activities (please describe)
CLUB LEADERSHIP

Following are some statements about your club leader. Please indicate your level of agreement or disagreement with each statement. (4=Strongly Agree; 3=Agree; 2=Disagree; 1=Strongly Disagree)

1) Our club leader has good common sense. (+) 1 2 3 4
2) Our club leader is weak in communication skills. 1 2 3 4
3) Our club leader has good social skills. (+) 1 2 3 4
4) Our club leader does not devote enough time and effort to group affairs. 1 2 3 4
5) Our club leader cares about members' personal issues as well as group affairs. (+) 1 2 3 4
6) Sometimes our club leader tends to run into conflict with other group members. 1 2 3 4
7) Our club leader is always empathetic to the group members. (+) 1 2 3 4
8) Our club leader always asks opinions from members before making decisions. (+) 1 2 3 4
9) The leadership style of our club leader is not well accepted by group members. 1 2 3 4
10) Our club leader does not always call sufficient members for meetings. 1 2 3 4
11) Our club leader is weak in obtaining subsidies from the supervisor. 1 2 3 4
12) Our club leader sometimes loses her temper in front of members. 1 2 3 4
13) Our club leader is good in encouraging members to express their opinions. (+) 1 2 3 4
14) Our club leader often cannot reach consensus in the meeting. 1 2 3 4
15) Our club leader always leads this group to achieve group goals. (+) 1 2 3 4
16) The leadership of our club leader is superior to others leaders. (+) 1 2 3 4
17) Our club leader is highly regarded by her supervisors. (+) 1 2 3 4
18) Our club leader is weak in organizing ability. 1 2 3 4
19) Our club leader emphasizes team work. (+) 1 2 3 4
20) Our club leader is skillful in encouraging members. (+) 1 2 3 4
21) Our club leader is indispensable to the operation of this group. (+) 1 2 3 4

LEADERSHIP OF EXTENSION WORKER

Following are some statements about the extension worker. Please indicate your level of agreement or disagreement with each statement. (4=Strongly Agree; 3=Agree; 2=Disagree; 1=Strongly Disagree)

1) Our extension worker has good common sense. (+) 1 2 3 4
2) Our extension worker is weak in communication skills. 1 2 3 4
3) Our extension worker has good social skills. (+) 1 2 3 4
4) Our extension worker does not devote enough time and effort to group affairs. 1 2 3 4
5) Our extension worker cares about members' personal issues as well as group affairs. (+) 1 2 3 4
6) Sometimes our extension worker tends to run into conflict with other group members. 1 2 3 4
7) Our extension worker is highly regarded by her supervisors. (+) 1 2 3 4
8) Our extension worker is always empathetic to other group members. (+) 1 2 3 4
9) Our extension worker always asks opinions from members before making decisions. (+) 1 2 3 4
10) The leadership style of our extension worker is not well accepted by group members. 1 2 3 4
11) Our extension worker can always arrange for us the subject matters we like to learn. (+) 1 2 3 4
12) Our extension worker seldom updates the subject matters. 1 2 3 4
13) Our extension worker always encourages us to attend various activities. (+) 1 2 3 4
14) Our extension worker has very little impact on the goal attainment of our group. 1 2 3 4
15) Our extension worker can always obtain supports from her supervisor. (+) 1 2 3 4
16) Our extension worker is weak in organizing ability. 1 2 3 4
17) Our extension worker emphasizes team work. (+) 1 2 3 4
18) Our extension worker is skillful in encouraging members. (+) 1 2 3 4
19) Our extension worker is indispensable to the operation of this group. (+) 1 2 3 4
20) Our extension worker sometimes loses temper in front of members. 1 2 3 4
ORGANIZATIONAL SUPPORT

Following are some statements about your club. Please indicate your level of agreement or disagreement with each statement. (5 = Strongly Agree; 4 = Agree; 3 = Don't know; 2 = Disagree; 1 = Strongly Disagree)

1) I always feel that the general manager of our FA doesn't concerned about home economics activities.

2) The head of our extension department is very supportive of home economics activities. (+)

3) The extension workers above the township level pay much attention home economics activities. (+)

4) Our FA always provides full financial assistance needed for our club's activities. (+)

5) Our FA holds demonstration tours and contests very often. (+)

6) Our FA tends to assign non-home-economics related jobs to our extension workers. 1 2 3 4 5

7) The chairman of our FA doesn't care too much about home economics activities. 1 2 3 4 5

8) The supervisors above township level seldom attend our club activities.

9) When our club participates in contests, our FA always provides financial supports. (+)

10) In our FA the home economics extension work is more emphasized than other departments. (+)

11) In our FA the budget of home economics extension is increasing year by year. (+)

FAMILY SUPPORT

Following are some statements about your club. Please indicate your level of agreement or disagreement with each statement. (4 = Strongly Agree; 3 = Agree; 2 = Disagree; 1 = Strongly Disagree)

1) Sometimes our meetings cannot held due to lack of support from members' families.

2) Although we have to hold meetings in the evening, members' families still show strong support. (+)

3) Most members' families do not consider our activities beneficial to their families.

4) Often we have members' families to join our activities. (+)

5) Somehow I feel the support from most members' families is still insufficient.

6) Often there are some members who cannot attend club activities due to lack of support from their families.

MEMBER'S HOMOGENEITY

Following are some statements about your club. Please indicate your level of agreement or disagreement with each statement. (4 = Strongly Agree; 3 = Agree; 2 = Disagree; 1 = Strongly Disagree)

1) There is big difference in educational level among our club members.

2) There is big difference in economic situation among our club members.

3) Our club members are quite similar in personality. (+)

4) Our club members are quite different in occupation.

5) Our club members are quite similar in interest. (+)

6) Our club members are quite different in age.

7) Our club members are quite similar in things we like to learn. (+)

MEMBERS' INTERACTION

Following are some statements about your club. Please indicate your level of agreement or disagreement with each statement. (4 = Strongly Agree; 3 = Agree; 2 = Disagree; 1 = Strongly Disagree)

1) Members often make telephone calls to each other.

2) Members often chit-chat with one another.

3) Members often have mutual visits as an inter-family activity.
LEARNING MOTIVATION

Following are some statements about your club. Please indicate your level of agreement or disagreement with each statement. (4=Strongly Agree; 3=Agree; 2=Disagree; 1=Strongly Disagree)

1) Most our club members show a high degree of learning interest. (+) 1 2 3 4
2) There are always some members who do not attend club activities because of higher participation fee. 1 2 3 4
3) Despite of busy family and farming affairs, most members still make themselves available for the club activities. (+) 1 2 3 4
4) Most members believe that they can grow with home economics activities. (+) 1 2 3 4
5) Most our members need persuasion to participate club activities. 1 2 3 4
6) Most members feel the varieties of subject matters are insufficient. (+) 1 2 3 4
7) Our members often ask the extension worker to invite experts to our meetings. (+) 1 2 3 4
8) Even though the club members have to pay their own bills, we welcome demonstration tours in other counties. (+) 1 2 3 4
9) Our club has room for improvement in learning initiatives. 1 2 3 4

GENERAL COMMENTS

1. Please provide your suggestions on how to improve home economics activities and performance.

__________________________________________________________________________

2. Please provide your suggestions on enhancing members harmony and team spirit.

__________________________________________________________________________

3. Please provide your suggestions on family support to the members.

__________________________________________________________________________

4. Please provide your suggestions on increasing learning motivation and participation.

__________________________________________________________________________

5. Please provide your suggestions on how to assist extension workers:
   1) subject matters

__________________________________________________________________________

    2) organization of home economics extension

__________________________________________________________________________

    3) teaching methods

__________________________________________________________________________

    4) training for club leaders and members

__________________________________________________________________________

    5) other items

__________________________________________________________________________

THANK YOU FOR YOUR COOPERATION!
APPENDIX C. APPROVAL FROM HUMAN SUBJECTS COMMITTEE
Checklist for Attachments and Time Schedule

The following are attached (please check):

12. ☑ Letter or written statement to subjects indicating clearly:
   a) purpose of the research
   b) the use of any identifier codes (names, #’s), how they will be used, and when they will be
      removed (see Item 17)
   c) an estimate of time needed for participation in the research and the place
   d) if applicable, location of the research activity
   e) how you will ensure confidentiality
   f) in a longitudinal study, note when and how you will contact subjects later
   g) participation is voluntary; nonparticipation will not affect evaluations of the subject

13. ☐ Consent form (if applicable)

14. ☐ Letter of approval for research from cooperating organizations or institutions (if applicable)

15. ☑ Data-gathering instruments

16. Anticipated dates for contact with subjects:

<table>
<thead>
<tr>
<th>First Contact</th>
<th>Last Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 20, 1994</td>
<td>12/20/94</td>
</tr>
</tbody>
</table>

17. If applicable: anticipated date that identifiers will be removed from completed survey instruments and/or audio or visual
tapes will be erased:

<table>
<thead>
<tr>
<th>Month / Day / Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

18. Signature of Departmental Executive Officer Date

<table>
<thead>
<tr>
<th>Name of Officer</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mike Miller</td>
<td>1/7/94</td>
</tr>
</tbody>
</table>

   Department or Administrative Unit

   Sociology

19. Decision of the University Human Subjects Review Committee:

   ☑ Project Approved  ☐ Project Not Approved  ☐ No Action Required

<table>
<thead>
<tr>
<th>Name of Chairperson</th>
<th>Date</th>
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<tr>
<td>Patricia M. Keith</td>
<td>11/11/94</td>
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   Signature of Committee Chairperson

   DMK
APPENDIX D. THE COHESIVENESS-PERFORMANCE RELATIONSHIPS
Figure D.1. The zero-order correlation between group cohesiveness and group performance for Model 1

Figure D.2. The zero-order correlation between group cohesiveness and group performance for Model 2
Figure D.3. The zero-order correlation between group cohesiveness and group performance for Model 3.