

THE EFFECT OF GROUP PROCESS TRAINING
ON TEAM EFFECTIVENESS

A DISSERTATION

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To the Associate Vice President for Research and the Dean of the Graduate School:

I am submitting herewith a dissertation written by Leah Jean Henry entitled "The Effect of Group Process Training on Team Effectiveness." I have examined this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Health Studies.

Dr. Judith Baker, Major Professor

We have read this dissertation
and recommend its acceptance:

Department Chair

Accepted

Associate Vice President for Research
and Dean of the Graduate School

DEDICATION

This dissertation is dedicated to the memory of my father, Ullis Lavern Henry, who never let me believe that little girls, or big girls, should be anything less than whatever it was they wanted to be, and who taught me it was both my right and responsibility to define that any way I wished. He will be by my side as I walk across the stage, as he has been throughout my life.

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ABSTRACT

COMPLETED RESEARCH IN HEALTH SCIENCES

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The purpose of this study was to determine if differences existed in subject-reported team effectiveness scores and group satisfaction between members of class project teams who participated in group process training and those who did not. This research used a multi-method, quasi-experimental design to investigate the hypothesis and research questions. A total of 47 female college students, enrolled in three sections of First Aid and Cardiopulmonary Resuscitation at Texas Woman's University, volunteered to participate as subjects in this exploratory study. Prior to starting an in-class group project, the intervention group received 75 minutes of group process training, including activities designed to satisfy criteria of the formative stages of group development as defined by Bruce Tuckman (1965). The comparison group received no group process training. During four class sessions, the intervention and comparison groups worked to complete a group project requiring teams to produce a written report and perform a skills demonstration for other teams. Following completion of the team project, participants completed the Team Effectiveness Inventory (TAI) to assess team effectiveness (Elledge & Phillips, 1994). Analysis of TAI scores and subscales using

Mann-Whitney U revealed no significant difference in self-reported team effectiveness between the two research groups ($p < .05$). Qualitative analysis of focus group discussions revealed that members of both the intervention and comparison groups believed their teams performed effectively enough to produce an acceptable product. Further analysis indicated that members of the intervention group were more satisfied with their team membership and processes than members of the comparison group. Comparison group participants more frequently mentioned the need to utilize problem-solving strategies, made responses regarding the need to practice conflict management, and made notably more references to the issues of group development. The qualitative analysis indicated that providing group process training which satisfies the criteria of the early stages of group development prior to starting group projects in the classroom may be of benefit. Such training may reduce time spent on issues characteristic of the early stages of group development, thus allowing groups to move more quickly to the performance of tasks related to completion of the project.

TABLE OF CONTENTS

DEDICATION	iii
ACKNOWLEDGMENTS	iv
ABSTRACT	vi
LIST OF TABLES	xi
LIST OF FIGURES	xii
CHAPTER	
I. INTRODUCTION	1
Statement of the Problem	2
Purpose of the Study	3
Hypothesis and Research Question	3
Definition of Terms	4
Limitations and Delimitations	5
Background and Significance	6
II. REVIEW OF LITERATURE	8
Overview of Small Groups and Teams	8
Professional Applications of Teams	11
Group Effectiveness and Satisfaction	17
Group Development Theory	22
Tuckman's Stages of Group Development	25
Experiential Learning	29
Professional Preparation	36
Summary	39
III. DESIGN AND METHODOLOGY	40
Population and Sample Selection	40
Protection of Human Subjects	42
Procedures	43

Obtaining Department of Health Studies Consent	43
Obtaining Subject Consent	44
Study Design	45
Group Process Training Intervention	48
The Team Project	51
Field Observation	53
Administration of the Posttest	53
Focus Group	54
Instrumentation	56
Treatment of Data	59
IV. FINDINGS	62
Descriptive Analysis of Demographic Characteristics	62
Descriptive Analysis of Instrument Responses	65
Hypothesis Testing	66
Analysis of Focus Group Responses	66
Research Questions	72
Summary	73
V. DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS	75
Discussion	76
Group Effectiveness	76
Analysis of Focus Group Responses	78
Theme 1: Challenges to Teamwork	80
Theme 2: Benefits of Teamwork	83
Theme 3: Coping Strategies	85
Theme 4: Incentives	88
Theme 5: Group Formation	90
Theme 6: Team Descriptives	94
Additional Analysis	95
Comparison of Questionnaire Subscales and Focus Group Issues	95
Context of Focus Group	96
Attitude Toward Group Work	99
Team Projects in the Classroom	101
Recommendations	103

	Modifications of the Study	103
	Preparation of Health Professionals	105
	Directions for Future Research	108
VI.	REFERENCES	112
III.	APPENDICES	125
A.	Human Subjects Review Committee Consent to conduct research	126
B.	Subject consent to participate in research	128
C.	Consent form for audiotaping	131
D.	Department of Health Studies Consent to Conduct Research	133
E.	Team project	135
F.	Team Assessment Inventory	141
G.	Focus group questions and probes	149
H.	Author's permission to use the Team Assessment Inventory	151
I.	Publisher's permission to use the Team Assessment Inventory	154
J.	Participant demographics questionnaire	156
K.	Focus group coding summary	158

LIST OF TABLES

Table	Page
1. Summary of Tuckman's stages of group development	28
2. Number of students assigned to teams by class section	42
3. Summary of raw data by age and grade point average (GPA) of participants by research group	63
4. Age group, GPA group, and class group of participants by research group	64
5. Academic majors of participants by research group	64
6. Summary of posttest instrument responses	67
7. Summary of focus group responses by research group for the six dominant themes	72

LIST OF FIGURES

Figure	Page
1. Seating chart illustrating arrangement of desks of members of one comparison group team	97

CHAPTER I

INTRODUCTION

Increasingly, those in healthcare, education, government, and business and industry are focusing attention on teamwork as an effective means to integrate the efforts of diverse individuals. Potentially, when individuals share information and work interdependently to develop and implement plans of action, better decisions and better results are garnered than would be possible if each individual worked alone (Heinemann, Farrell, & Schmitt, 1994). Yet, previous research with healthcare teams has shown that positive outcomes are not always a natural consequence of the team approach (Farrell, Heinemann, & Schmitt, 1986; Schmitt, Farrell, & Heinemann, 1988).

Clark (1994) asserts that the growing acceptance of interdisciplinary healthcare teams (IHTs) increases the need for institutions of higher education to provide opportunities for students from various health disciplines to work together on such a team. However, experience with the teaming process must be systematic and positive. Porter (1993) reported that if a person's last experience has been unfavorable, she/he is likely to enter the next similar situation with the assumption that it will, again, be unfavorable. Peterson's (1992) research also supported a connection between past experiences on cooperative tasks and students' expectations for future success on similar cooperative experiences. Students need to understand how to make the process work

effectively, as well as how to maintain a positive attitude concerning team membership and performance.

By applying group development theories to purposefully plan team project experiences, teachers provide students with a positive experience that may enhance their future performance as team members. Kormanski (1990) asserts that understanding and using group development theory appropriate to the training experience is an essential ingredient for designing successful training.

The literature on the classroom applications of team development training is limited and most references are in programs of business and management training. Reference to team training in healthcare is found mostly in the areas of geriatrics and nursing. This literature primarily reports on efforts at collaborative teaming in the workplace between nurses and doctors and, to a lesser extent, between nurses and other allied health professionals. Due to the lack of research examining the methodology of utilizing team projects as a unique form of learning in the preparation of healthcare professionals, this study focused on investigating the effect of group process training, specific to teamwork, on self-reported team effectiveness and member satisfaction.

Statement of the Problem

This quasi-experimental research study was designed to determine the effectiveness of theory-based group process training on self-reported effectiveness and satisfaction of team participants. All subjects spent five class meetings working on group

projects. Intervention group teams participated in group process training prior to beginning the project and the comparison group received no intervention. Immediately following the completion of the project, subjects completed a team effectiveness questionnaire. Team members' attitudes and beliefs about group processes were obtained through the use of focus groups.

Purpose of the Study

The purpose of this study was to determine if differences exist in subject-reported team effectiveness scores and satisfaction between members of class project teams who participated in group process training and those who did not.

Hypothesis and Research Questions

The following hypothesis was tested:

There is no significant difference in team effectiveness scores between members of teams who received group process training and those who did not.

The study addressed the following research questions:

1. Will members of teams who participate in group development activities prior to starting a team project report higher levels of team effectiveness than members of teams who do not participate in such activities?

2. Will members of teams who participate in group development activities prior to starting a team project express greater group satisfaction than members of teams who do not participate in such activities?

Definition of Terms

The following terms were defined for the purposes of this study:

1. Activity. A teaching strategy involving active participation of students in achieving desired learning objectives.
2. Group. A collection of individuals (Sundstrom, DeMeuse, & Futrell, 1990).
3. Group Satisfaction. The overall perceived sense of pleasure or fulfillment expressed by members of a group with regard to various factors related to team function (Hibbert, St. Arnaud, & Dharampaul, 1994).
4. Interdisciplinary Healthcare Team. An identified collective in which members share common team goals and work interdependently in planning, problem-solving, decision-making, and implementing and evaluating team-related tasks (Drinka, 1994).
5. Team. An interdependent collection of individuals sharing responsibility for specific organizational outcomes (Sundstrom et al., 1990).
6. Team Effectiveness. The overall functional capability of a team including the ability to maximize use of human resources, produce superior outputs, and continuously improve total performance (Kinlaw, 1991).
7. Training. An intervention to achieve specific goals through the use of strategies in the form of learning activities (Kormanski, 1990).
8. Tuckman's Stages of Group Development. A theory of group development proposed by Bruce W. Tuckman comprised of five stages: (a) forming,

testing and dependence, (b) storming, intragroup conflict, (c) norming, development of group cohesion, (d) performing, functional role relatedness, and (e) adjourning, termination and separation. Each stage identifies major processes that a group experiences and characteristics exhibited by the group and its members. Movement from one stage to another is based on successfully resolving thematic concerns within a particular stage (Tuckman, 1965; Tuckman & Jensen, 1977).

Limitations and Delimitations

The study was limited by the following:

1. A convenience sample was used.
2. Data were influenced by the validity and reliability of the instrument used.
3. The size of the sample was determined by fall 1996 enrollment in three

sections of First Aid and Cardiopulmonary Resuscitation(CPR).

4. Subjects may have had prior training in or experience with working in teams.

The study was delimited by the following:

1. The sample consisted of students enrolled in First Aid and CPR in the fall 1996 semester who volunteered to participate.

2. The length of time spent in team development activities was delimited by the standard length of the class period and the semester format.

3. Only a few of the many possible team development training activities were used in the intervention.

4. Only adult females (at least 18 years of age) were accepted as subjects in the study.

Background and Significance

To illustrate the growing confidence in teams, Froiland's (1993) survey of United States Corporations with at least 100 employees (as listed in Dun & Bradstreet) revealed that 83% of respondents believed their organization had become more committed to the team concept within the past two years. With the emerging reliance on teams in the workplace across professions, student experience and training with the team process during professional preparation may be advantageous.

The body of literature on teams supports the preparation of students in group processes to enhance their professional skills. As the utilization of teams in the workplace becomes more widely accepted, it becomes imperative that students leave institutions of higher learning with experience in team development (Clark, 1994). This is particularly crucial to the healthcare field where teams are frequently interdisciplinary or interprofessional. As a result of their study of patient care teams in the field of nursing, Hibbert et al. (1994) suggested that providing formal training in teamwork could benefit both the nurse and the patient. Other studies have supported the need for training healthcare professionals in the skills and techniques of effective teaming (Briggs, 1993;

Coles, 1995; Drinka, 1994; Heinemann et al., 1994; Kumpfer, Turner, Hopkins, & Librett, 1993; Nelson, 1995; Toner, 1994).

In order to be most effective, team training should be experiential, or active, in nature. Newton and Wilkinson (1995) discussed the benefits of learning about team-building through active learning methodology. Utilizing team projects in the preparation of healthcare professionals can be viewed as opportunities for students to learn about small-group dynamics and group development in a manner that gives them concrete experience from which to transfer learning from the classroom to the workplace.

CHAPTER II

REVIEW OF LITERATURE

This literature review examines studies related to the utilization of teams in business, healthcare, and education, as well as the training and preparation of future healthcare professionals to be effective team members. An overview of literature regarding the application of group development theory to the formation of teams, particularly the theory of group development proposed by Tuckman (1965), is provided. This chapter is organized under the following headings: (a) Overview of Small Groups and Teams, (b) Professional Applications of Groups and Teams, (c) Group Effectiveness and Satisfaction, (d) Group Development Theory, (e) Tuckman's Stages of Group Development, (f) Professional Preparation, (g) Experiential Education Strategies, and (h) Summary.

Overview of Small Groups and Teams

People come together as a group in pursuit of a collective goal, whether in the form of a problem to solve or a mission to accomplish. Whether assigned to the group or having chosen membership in the group, members share a common fate. In a well-functioning group, members participate with a mutual concern for achieving the objective of the group as well as a concern for the needs of others (Goodall, 1990).

A number of definitions of group can be found in the literature. Rothwell (1992) defines a group as a “human communication system composed of three or more individuals, interacting for the achievement of some common purpose(s) who influence and are influenced by one another” (p. 48). Cragan and Wright (1991) base their definition on research across disciplines. They define a small group as “a few people engaged in communication interaction over time, usually in face-to-face settings, who have common goals and norms and have developed a communication pattern for meeting their goals in an interdependent manner” (p.9). Shaw (1981) defines small group as “two or more people who are interacting with one another in such a manner that each person influences, and is influenced by each other person” (p. 8).

Group participation is noted to bring many benefits. A group offers more resources for creative problem-solving and, through the interaction of individuals stimulated by one another, is able to produce a product that no one member could produce working alone (Goodall, 1990). When a task requires a wide range and variety

of information, groups will out-perform individuals. A group of knowledgeable members can pool knowledge, producing results superior to any that could be produced by any individual. Having a number of people to recall vital details can aid a group in making quality decisions and to more thoroughly correct errors. Groups can also allow a division of labor among members (Rothwell, 1992). Oswald (1996) lists the following positive effects of teams in educational management: (a) the more people are involved, the more likely a decision will be implemented, (b) members learn from others' ideas, (c) pooling of resources and skills leads to better information and actions, (d) mistakes are more often caught and corrected, and (e) the collective power of the group increases willingness to take risks. This is not to say, however, that groups are without their problems. The very factors that contribute the strengths of the team can also present it with challenges.

It appears standard practice for theoretical literature, particularly in therapy and education, to use the term group to imply a collection of individuals. Corporate training literature refers to both groups and teams, but more commonly uses the term team in reference to the worksite. In healthcare, the utilization of a group or team in the workplace is often referred to as collaborative practice (American Nurses Association, 1980; England, 1986; Harman et al., 1996). The collections of individuals working together in the healthcare setting are most often called teams. Similarly, in education the use of groups to complete tasks is called collaborative or cooperative learning. The

collections of individuals working together on these tasks may be referred to as either groups or teams. There does not appear to be a preference for one term over the other in educational settings.

Sundstrom et al. (1990) distinguished between work teams and work groups. They defined work teams as interdependent collections of individuals sharing responsibility for specific organizational outcomes. Interdependency of members is the key element that they feel distinguishes a performing work team from simply a work group, or collection of individuals working together at a common site or for a common employer. According to Parker (1990), a team is a small group made up of people with a high degree of interdependence geared toward the achievement of a goal or completion of a task. Team members agree on a goal and agree that the only way to achieve the goal is to work together. In an article discussing the applications of teams in child psychiatry, Benierakis (1995) described a team as a group of people with a specific work task, the accomplishment of which requires interdependent and cooperative efforts by its members. He stated that the most productive teams seem to appreciate not only how much the team needs individual contributions, but how much the individual needs the contributions of the team. These various concepts of interdependence are often referred to as synergy (Bloom & Parad, 1976; Nadler, Gerstein, & Shaw, 1992). Synergy is the effective coordination of functions and activities so that the performance of the whole is greater than the sum of its parts.

For the purposes of reviewing the literature for this paper, the author will use whichever term is found in the specific document being cited. However, in a general sense, both terms will apply to a collection of individuals working together.

Professional Applications of Teams

Repeatedly, authors and researchers are alerting us to the emerging dominance of the work team concept as the trend of the future in organizational management and operations (Cannon-Bowers, Oser, & Flanagan, 1992; Kormanski, 1990; Offermann & Gowing, 1990; Salas, Dickinson, Converse, & Tannenbaum, 1992; Sundstrom et al., 1990; Swezey & Salas, 1992). The following quote in the Harvard Business Review illustrates a growing recognition that work teams occupy a pivotal role in what has been referred to as a corporate renaissance (Kanter, 1983), a management transformation (Walton, 1985), and a management revolution (Peters, 1988).

If we are to compete in today's world, we must begin to celebrate collective entrepreneurship, endeavors in which the whole of the effort is greater than the sum of individual contributions. We need to honor our teams more, our aggressive leaders and maverick geniuses less. (Reich, 1987, p. 78)

Recent technological developments, global competitions, and world events increase the importance of teamwork, because modern tasks often impose mental and physical demands that are too large for one individual to perform in isolation (Salas, Dickinson, Converse, & Tannenbaum, 1992). Work groups and/or teams are becoming

more common in many private and public organizations. Increasing numbers of companies across the professional spectrum are experiencing the benefits of teamwork. Emerging strategies such as self-managing work teams, quality circles, total quality management, matrix groups, and nominal groups are being coupled with more traditional approaches such as task forces and committees to reduce costs, improve quality, and increase outputs (Parker, 1990). Many businesses look to teams of individuals to solve problems and to plan, direct, and control various functions within an organization (Dumaine, 1990). Some researchers believe that the increased use of small groups represents a radical transformation designed to better utilize human potential in the organization (Tubbs, 1992). To illustrate the growing confidence in teams, Froiland's (1993) survey of United States corporations with at least 100 employees revealed that 83% of respondents believed their organization had become more committed to the team concept within the past two years.

In the healthcare field, sociopolitical, economic, and technologic factors have contributed to the growing emphasis on the development of team models for healthcare delivery. Interdisciplinary healthcare teams (IHTs), comprised of various occupational groups such as medicine, nursing, social work, psychology, and physical therapy, have been given special emphasis (Drinka, 1994; Krueger, 1990; Lengacher, Mabe, Van Cott, Heinemann, & Kent, 1995; Whorley, 1996). The Joint Commission on Accreditation of

Healthcare Organizations (Joint Commission, 1994) identified an interdisciplinary focus as essential in health care services.

The majority of the literature on interdisciplinary approaches to healthcare found by this investigator was in geriatrics. Researchers generally concur that the need for the team approach is particularly severe in the care of older patients since many of them suffer from complex mental and/or physical chronic illnesses. The primary treatment goal for the elderly may not be the cure of disease, but the attainment of an optimal quality of life. IHTs offer the diversity of skills and resources to satisfy such broad criteria (Drinka, 1994; Toner, 1994; White & Nezey, 1996). However, the very diversity that makes the IHT so valuable in health care delivery also makes it a challenge to create and manage. Though recent research does not distinguish IHTs from human service teams (Hackman, 1990) or other types of teams or work groups (Sundstrom et al., 1990), they may vary from other work groups in several ways. According to Drinka (1994), the autonomous disciplines, the ongoing nature, the continuously changing membership, and the incongruous development of members are factors that distinguish IHTs from other types of work groups and promote internal conflict. The challenge to management is to foster a cooperative team environment without sacrificing the individuals strengths of individual team members. Lengacher et al. (1995), in testing a new nursing model based on collaborative processes, noted that the increasing scope of practice of nurses coupled with changes in health care delivery systems made it impossible for departments to

operate in isolation. The ability to build and maintain effective teams at all levels of the organization was cited as a critical skill in implementing strategies for change in patient care.

The term “interdisciplinary team” in healthcare settings was found to have a variety of meanings. In an attempt to establish some level of consistency, Schmitt et al. (1988) set the following minimum criteria for the health care team: (a) includes a variety of disciplines in the care of the same patient, (b) encompasses a diversity of dissimilar knowledge and skills required to treat the patient, (c) plans care by establishing an integrated set of goals shared by the providers of that care, and (d) shares information and coordinates services through a systematic communication process.

Whatever agreement there may be on the definition of the IHT, little research appears to have been done on the developmental process or maintenance of IHTs (Sundstrom et al., 1990). Farrell et al. (1986; Farrell, Schmitt, & Heinemann, 1988) have published studies of the developmental stages of ongoing IHTs using Tuckman and Jensen’s (1977) developmental model and the System for the Multiple Level Observation of Groups (Bales & Cohen, 1979). Although they provided evidence that the behavior described by Tuckman and Jensen do exist on IHTs, they found little evidence that IHTs proceed through the stages in any defined way. They attribute this lack of progression to the continuous rotation of physician residents on and off the teams. By the very nature of the composition of IHTs, it is logical to assume that they would remain at various levels

of the initial three stages of Tuckman and Jensen's model, forming, storming, and norming. However, Tuckman and Jensen acknowledge that most groups are continuously attending to the behaviors of these stages because of changes in membership, changes in goals, and other common disruptions. If this is even more the case for IHTs, it may emphasize the need to educate and train healthcare professionals in recognition, acceptance, and skills needed to successfully maintain team unity and performance while continuously addressing and re-addressing the foundations of group development.

A fairly recent trend in healthcare management that was derived from its application in the corporate sector is the growing use of the concepts and practices of quality programs, such as Total Quality Management (TQM), Continuous Quality Improvement, or other similar quality-based management and operating philosophies (Berwick, 1990; Brueggeman & Jagnow, 1995; Harman et al., 1996; Reeves, Matney, & Crane, 1995; Stahl & Andersen, 1995). Central to the philosophy of quality improvement is the utilization of teams to promote ownership and commitment to the processes and outcomes of the organization. Brueggeman and Janow (1995) provide an in-depth case study of the process of introducing TQM into one hospital, and cite brief overviews of the efforts of four other hospitals.

The increasing reliance on healthcare teams is not a phenomenon exclusive to the United States. Clarke, Beddome, and Whyte (1993) reported on a Canadian study that

asked public health nurses to cite the 10 most important issues facing them in the future. Teamwork ranked sixth among these issues. The nurses saw teamwork as a mechanism for facilitating greater role flexibility and less territoriality, and for promoting integration of community health services among physicians, hospitals, and the community.

Cook (1996) reported that the value of teamwork in the delivery of primary health care in England was publicly advocated by Gillie in 1963. The movement continued to gain support through the 1970s. In 1985, the Royal College of General Practitioners recommended that different professionals in primary care should pool their skills and work together for the purpose of improved patient care and increased job satisfaction. Recognizing the need for formal training in team skills, the British Health Education Authority developed a Primary Health Care Team team-building workshop program in 1987. While the program has undergone modifications in the ensuing years, the practice of providing training to develop the skills of team membership has continued and is believed to be essential to the successful application of healthcare teams (Cook, 1996). Recent perspectives on the reforms considered necessary internationally for medical training in the 21st century include the trend to change from solo- to team-oriented practice. The rationale is that team practice provides opportunities for joint learning, research, and service between health and health-related professionals (Walton, 1991; Warren, 1988).

Group Effectiveness and Satisfaction

Small group researchers in communication, business, psychology, and sociology are continuously intrigued by the factors that allow a group to achieve its goal effectively. Dumaine (1990) referred to effective work groups as “the productivity breakthrough of the 1990’s” (p. 52). Due to the myriad of ways to view team effectiveness, there are also numerous methods proposed to measure team effectiveness. There have been a number of studies done with the intent of defining or assessing group effectiveness, including quality of solution, quantity of ideas, and correctness of solution (Keyton & Springston, 1990; Kumpfer, Turner, Hopkins, & Librett, 1993; Polivka, 1995). Corporations, in particular, are eager to find ways to measure the productivity of their teams. Whorley (1996) defined effectiveness of healthcare teams by the resulting product of quality health services and patient care. Other reported health care outcomes used to assess effectiveness include successful goal attainment, decreased costs, and increased access to resources (Polivka, 1995). Some researchers define effectiveness by the processes that occur in groups while working on a task (Krueger, 1990; Hirokawa, 1980; Lengacher et al., 1995). Among the most common of the process-focused methods appears to be the application of small group communication theory (Fisher & Ellis, 1996; Hirokawa, 1980).

Hirokawa (1980, 1983), is a leading researcher in small group communication theory, particularly as it applies to the assessment of group effectiveness. In one study, Hirokawa (1983) used 80 undergraduates from intact sections of an introductory speech

communication course divided in to four-member groups to complete a problem-solving task developed by the National Highway Safety Administration. Hirokawa found that effective groups made an attempt to analyze the problem before attempting to search for a viable solution to the problem. Ineffective groups immediately began working on a solution to the problem before attempting to analyze and understand it. If one were to compare this finding to stage theory of group development, one might conclude that analysis of a problem calls for expression of personal attitudes and beliefs about an issue. If the group had not already established a foundation of trust and group norms, members might not perceive a safe environment in which to express personal beliefs. The attention to task might seem to be a less threatening route; however, in a group that lacks the operating norms and role clarity that are established in the early stages of group development, the rejection of suggested solutions by teammates could lead to conflict or withdrawal of team members, thus leading to unsuccessful output.

In a follow-up study, Hirokawa and Pace (1983) placed 150 volunteers into groups of three members each. The students were asked to produce a recommendation for dealing with a dormitory resident who maliciously damaged her roommate's stereo system. Upon completion of judging the recommendations and determining effective and ineffective solutions, Hirokawa and Pace summarized their findings in four propositions:

Proposition 1: The quality of a group's decision may be dependent upon the manner in which group members examine and evaluate the validity of opinions and assumptions introduced into the discussion by fellow members (p. 369).

Proposition 2: The quality of a group's decision may be dependent upon the manner in which group members evaluate alternative choices (p. 370).

Proposition 3: The quality of a group's decision may be dependent upon the accuracy of the premises serving as the basis for the group's decision (p. 372).

Proposition 4: The quality of a group's decision may be dependent upon the nature of influences exerted by influential members of the group (p. 373).

Recently, researchers in healthcare have begun to identify characteristics of effective teams within healthcare settings (Garland, Frank, Buck, & Seklemian, 1992).

Knowledge of the elements of effective teams is critical to the survival of an organization. For example, Lengacher et al. (1995) found the following general attributes of teams to be applicable to nursing teams: (a) goal directed, with roles clearly delineated, (b) effective relationships and communication, (c) outcome oriented within the broad scope of the organization, and (d) periodically assessed for progress.

Comparing a fairly extensive review of literature from organizational development and business leadership with recent investigations of early intervention teams from health care, Briggs presented a list of 10 qualities of effective teams.

1. There are a mission, purpose, and goals that members understand.

2. There are sufficient resources available.
3. Members have appropriate training, skills, and experience.
4. There is an open communication system that encourages diversity, manages conflict, and seeks feedback.
5. Sufficient time is devoted to examining team norms, values, and beliefs; and to fostering growth of individuals and the team as a whole.
6. An effective problem-solving strategy is utilized.
7. High standards are established internally, and a method for evaluating individual roles, responsibilities, and performance is instituted.
8. A climate of trust and personal as well as professional support is established.
9. One leader is identified or the responsibility is shared appropriately among the members.
10. Organizational support is provided to ensure success of the team's process and product.

Group satisfaction appears to have received little research attention, and, in fact, few references could be found addressing this component. Satisfaction is a more affective component than effectiveness, and more difficult to quantify and assess using common scientific method. Perhaps, with the growing acceptance of qualitative methods of research, group satisfaction will begin to appear more often in the literature. Some studies were found which sought to assess group satisfaction.

Kumpfer et al. (1993) investigated the various relationships between leadership, effectiveness, and satisfaction. Among the results, style of leadership was found to be directly related to team satisfaction and team efficacy. The results were discussed in light of the effect that coalition leaders within the community might have on member satisfaction, and, ultimately, on member retention, and satisfaction was found to be positively correlated with team effectiveness. In another study, Caple and Cox (1989) measured satisfaction with the group experience as one component of a study which also investigated group structure, member expectations, and attraction to group. All four components were examined for possible relationships and interactions. No significant associations were found with satisfaction in this study. However, researchers expressed that the lack of sensitivity of the instrument measuring satisfaction may have been partly responsible for this finding.

Group satisfaction and effectiveness do not always have a direct relationship. Janis (1972) examined in detail the adequacy of decisions made by groups and showed how certain conditions may lead to high levels of group satisfaction but ineffective output. Janis used the term “groupthink” to refer to the mode of thinking when team members become deeply involved in a cohesive in-group and the desire for unanimity overrides the motivation to realistically appraise alternative courses of action. He further stated that groupthink refers to a deterioration of mental efficiency, reality testing, and moral judgment as a result of in-group pressures (Littlejohn, 1992). Heinemann et al.

(1994) also addressed the concept of groupthink as a problem leading to poor decision-making and, ultimately, ineffective patient care.

Group Development Theory

In general, group development theory describes the naturally occurring process when individuals spend time together working on a task. Group development involves an increasing sense of identity and autonomy, and an ability to appreciate other members and establish interrelationships in which understanding, appreciation, and valid communication occur (Srivastva & Barrett, 1988). Numerous group development theories can be found in the literature. Many early theories grew out of therapeutic applications with little attention given to task-oriented groups in natural settings (Driskell & Salas, 1992; Tuckman, 1965). Kormanski (1988) believes theories that describe and account for interactions between group dynamics, individual growth and personality, and organizational development have the most promise for team training because they incorporate experiences participants bring to training events as well as those created during the event.

As groups form, they begin to become teams as the task outcome of commitment to group goals and the relationship outcome of acceptance of other team member is obtained. In addition, the process of becoming a team is accelerated when there is congruence with and accountability to organizational goals (Ephross & Vassil, 1987;

Sundstrom et al., 1990). Without such groundwork, a work team cannot hope to successfully achieve organizational goals.

Small group communications has been a common focus of group development research. A large number of studies have investigated group performance, group productivity, and group decision-making effectiveness (Cragan & Wright, 1889; Hirokawa, 1980; Nakanishi, 1987). Researchers in small group communications suggest that interaction which occurs among group members as they work on a task or problem represents an important key to understanding why certain groups are more successful than others in meeting their goals and objectives (Hirokawa, 1980).

Proponents of stage theories of group development believe that virtually all teams go through a set of phases during the course of a single meeting or over the course of their life span. One of the leading researchers in and advocates of the stage theory of group development is Tuckman (Tuckman, 1965; Tuckman & Jensen, 1977). Even within stage theories, group development is recognized to be cyclical (Hare, 1996; Kolb, 1992; Kormanski, 1988). Issues are not necessarily resolved in perfect order, for all time, at any one stage. Some types of activity, such as defining the problem, logically take place early in the life of a team, and other types of activity, such as preparing to disband, take place at the end. They may reappear, though in a slightly different form, throughout the life of a team. For example, during a problem-solving activity, group communication may break down and issues of role clarification arise. The group may believe these

issues had been resolved in the early stages of group development. The reappearance of issues or themes from prior stages can often lead a group to the erroneous conclusion that they have not progressed. Actually, it is not uncommon for a group to seem to regress to a previous stage to rework issues which were not completely resolved or which reappeared due to changes in group structure or composition (Balgopal & Vassil, 1983; Drinka, 1994).

Whatever the typical sequence, some teams fail to progress beyond the early phases and others may recycle through some of the phases several times before reaching their goal (Drinka, 1994; Ephross & Vassil, 1987; Hare, 1993; Kormanski, 1988). This may be particularly so in the case of IHTs which often have transitory members and rapidly changing foci in the form of new patients or health issues (Drinka, 1994; Farrell et al., 1986). Based on extensive experience as a participant observer in the origin and continuance of an IHT, Drinka (1994) developed a dynamic model for IHT development and maintenance. Strongly rooted in Tuckman and Jensen's (1977) theory of group development, the model specifically addresses the dynamics of IHTs, particularly the ongoing nature of forming and leaving as new members regularly rotate onto and off of many IHTs. Drinka labels her final phase as "leaving" rather than "adjournment" (Tuckman & Jensen, 1977) because IHTs seldom actually dissolve. More often, they lose one or a few members at a time, even as new members may be joining the team.

Regardless of the nature of the team as defined by its level of activity in a functional sense or its degree of differentiation and integration, an IHT will still face some problems in common with other work teams. The time and energy required for a group to pass through each phase of development will be affected by a variety of components, including: (a) the nature of the task, (b) group resources, (c) member skills, (d) member personalities, (e) organizational culture, (f) age and expected life span of the group, (g) time frame within which the group is operating, and (h) leadership issues (Ephross & Vassil, 1987; Katz & Kahn, 1978). Group development stage models tap into a sequential, thematic, and developmental process. This process is a natural one, and allows for improved program design.

Tuckman's Stages of Group Development

This paper will focus on the group development theory formulated by Bruce W. Tuckman (Tuckman 1965; Tuckman & Jensen, 1977). Based on a comprehensive summarization of small-group research, this theory suggests a developmental sequence within the task and interpersonal realms of group process. Tuckman's efforts resulted in a broad descriptive model that is best used for providing organizational structure to training designs. He proposed five stages of group development: (a) testing and dependence (forming), (b) intragroup conflict (storming), (c) development of group cohesion (norming), (d) functional role relatedness (performing), and (e) termination and

separation (adjourning). Each stage identifies major processes that a group goes through and characteristics exhibited by the group and its members. Movement from one stage to another is based on successfully resolving thematic concerns within a particular stage.

Table 1 summarizes the stages and the primary team characteristics within each stage.

Tuckman's (1965) original model of group development was the result of a review of 55 articles dealing with stages of small-group development. He was attempting to isolate concepts common to the various studies under review. The study examined therapy groups, human relations training or T-groups, and natural and laboratory-task groups in terms of two realms: task and interpersonal. Tuckman believed the two realms represented simultaneous aspects of group functioning because members completed tasks while relating to one another (Tuckman & Jensen, 1977). Tuckman provided a developmental model of group process by organizing and conceptualizing existing research data and theoretical precepts rather than by presenting original empirical data to support a particular model. His original literature review resulted in a model comprised of four stages of group development.

1. The initial stage, forming, is characterized by processes of orientation, testing, and dependence. Group members seek to identify the boundaries of both interpersonal and task behaviors. There are also efforts to establish dependency relationships with leaders, other group members, or preexisting standards of the group or organizational culture.

2. The second stage in the model, storming, is characterized by conflict and polarization around interpersonal issues, along with emotional responding in the task sphere. These behaviors serve as resistance to group influence and task requirements.

3. In the third stage of norming, resistance is overcome, group feeling and cohesiveness develop, new standards evolve, and new roles are adopted. Intimate, personal opinions may begin to be expressed. The group is establishing its unique identity with explicit and implied norms and operating procedures.

4. The final stage of the original model is performing. At this stage, structural issues have been mostly resolved and interpersonal structure becomes the tool of task activities. Roles are more flexible/functional, group energy is channeled into the task.

5. Follow-up research conducted by Tuckman and Jensen (1977) resulted in the model being amended to include a fifth stage: adjourning. In a review of group development literature in the ten years after Tuckman's original research, most of the

Table 1
Summary of Tuckman's Stages of Group Development

Group Stage	Major Issues	Member Behavior
Forming	Belonging, Trust, Will I be accepted?	Politeness; Formality; Avoidance of conflict Watching others' behaviors Search for similarities; Awkwardness among members; Silence; Humor

Storming	Power; Authority; Member differences	Resistance to leaders; Discovery of differences Conflict on interpersonal issues; Resistance to task; Questioning of commitment
Norming	Group identity; Norms; Cooperation or com- petition?; Roles & responsibilities of individuals & group; What do I have to give up?	Frustration; Trial & error performance; Cohesiveness; Establish roles; Expression of opinions; Group unity builds
Performing	Productivity; Intimacy; Problem-solving	Roles more flexible & functional; Conflicts dealt with undefensively; Sense of purpose; Affirmation of individual; Interdependency
Adjourning	Letting go; Fear of leaving; Closure	Grieving; Nostalgia; Loss of intimacy; Withdrawal; Anxiety Loss of energy; What's next? How to transfer learning?

literature in support of a life cycle model of groups identified separation as an important issue throughout the life of the group, and as a separate and distinct final stage. This stage may be characterized by the processes of disengagement, anxiety about separation and termination, uncertainty about the future, and positive feelings toward the leader.

Tuckman's work (1965) distinguished between interpersonal stages of group development and task behaviors exhibited in the group. Regardless of the setting, any group must address itself to the successful completion of a task. At the same time, group

members will be relating to one another interpersonally, and these relations can assist or impede task performance. The pattern of interpersonal relationships, referred to as group structure, was interpreted as the way the members act and relate to one another as persons at a point in time. The content of member interactions as related to the task was referred to as the task-activity realm. In training teams, the task is both personal and interpersonal as the team exists to help individuals perform their functions better as they deal with themselves and other members of their team in pursuit of an organizational goal.

Experiential Learning

Aristotle distinguished between *theoria* and *praxis*. *Theoria* signifies sciences and activities concerned with knowing for its own sake. *Praxis* corresponds to the ways in which we now commonly speak of action or doing (Bernstein, 1971). This contrast between theory and practice has permeated Western philosophical and scientific thought. John Dewey, who is often viewed as an original proponent of experiential education, attempted to resolve the dichotomy. He described “experimental knowing” as an art that involves a conscious, directed manipulation of objects and situations (Bernstein, 1971). Dewey was particularly drawn to the problems of education, believing that education should be the reconstruction of experience. By offering and guiding experiences, educators help the person learn to value and learn from happenings in the environment (Brumbaugh & Lawrence, 1963). Dewey taught that both the body and the mind must be engaged, and a dualistic approach that attempted to separate the two in education was

doomed to failure when applied to learners. The following quotes from Dewey attest to the fact that the value of experiential learning has long been recognized:

An ounce of experience is better than a ton of theory, simply because it is only in experience that any theory has vital and verifiable meaning. An experience, a very humble experience, is capable of generating and carrying any amount of theory (or intellectual content), but a theory apart from experience cannot be definitely grasped even as theory. It tends to become a mere verbal formula, a set of catchwords used to render thinking, or genuine theorizing, unnecessary and impossible. (Dewey, 1944, p. 144)

Kolb (1984) is regarded as a leading modern-day theorist in the field of experiential education. He has developed a cyclical model that conceptualizes learning as a process, not a product or an outcome. There are four modes of experiential learning which comprise the cycle: (a) concrete experience, learners are given opportunities to involve themselves fully in new experiences, (b) reflective observation, allows students to reflect on and observe their experiences from different perspectives, (c) abstract conceptualization, which encourages learners to create concepts that integrate their observations into logical theories, and (d) active experimentation, when students are able to use theories to make decisions and solve problems (Clark, 1994). The model is popular among educators because it offers a diversity of learning opportunities and places emphasis on participant learning styles.

Several terms were found in the literature to describe the process of learning through doing. Experiential education is a term commonly found in education and recreational literature. Sakofs (1988) notes that experiential education refers to a philosophical orientation and a method of presentation rather than a content area. Joplin (1988) believes that experiential education is based on the assumption that all knowing must begin with the individual's relationship to the topic. In order to learn, the learner must investigate the natural interconnectedness of things with each other. In general, experiential education refers to the process of actively engaging learners in an experience that will have real consequences. They are given opportunities to make discoveries and experiment with knowledge themselves instead of hearing or reading about experiences. An essential ingredient of experiential education is reflection, or thinking back upon and talking about the experience for the purpose of understanding the experience and promoting the transfer of new skills, attitudes, and ways of thinking into other parts of one's life (Kraft & Sakofs, 1988). Such experiences offer the facilitator the flexibility to relate learning directly to the needs of individual participants or groups, and to actually allow learners to define and determine what was learned from the experience. In a sense, the facilitator is a guide to the participant's creation of his or her own learning experience.

Elsewhere in the literature, the same kind of learning experiences are referred to as active, or action, learning. Vince and Martin (1993) describe action learning as a

systematic process through which individuals learn by doing, based on the premise that learning requires action and action requires learning. Lewis and Williams (1994) believe that action learning engages individuals in “just-in-time learning by providing opportunities for them to develop knowledge and understanding at the appropriate time based on immediate felt needs” (p. 11). References to action learning were mostly found in worksite applications. It has been adopted as a viable approach to management education and development and an important element of a training and development strategy (Vince & Martin, 1993). It is difficult, on the basis of the literature, to determine any true distinction in practice between experiential education and action learning. Action learning appears to refer more often to the identification of real-life problems by a work team and the subsequent supervision of the problem-solving process by a facilitator. The following properties of action learning are cited to clarify its relevance to workplace learning theory: (a) learning is based on the solution of real problems, (b) learning with and from others engaged in managing real problems, (c) members of the group are responsible for solving their own problems, and (d) members of the group are concerned with implementing actions, moving beyond the stages of analysis and recommendation (Beaty, Bourner, & Frost, 1993).

Two other terms found in the literature, most frequently in education, are cooperative, or collaborative learning. These terms usually apply to a strategy which uses small teams, each with students of different levels of ability, knowledge, or skill

sets, to use a variety of learning activities to improve their understanding of a subject. Each team member is responsible for their own learning and for assisting the learning of team mates, thus creating an atmosphere of cooperation and achievement (Balkcom, 1992). Most proponents of small group, or collaborative, learning do not suggest that it supplant other teaching strategies, rather they suggest that it be used in combination with other methods (Bingham, Merrifield, White, & White, 1990; Katz, 1994).

Not all students appreciate or enjoy the process of collaborative learning (Dowd, 1994; Peterson, 1992; Stevens & Richards, 1992). Dowd (1994) writes that 12 years or more of passive learning has conditioned many students to believe that true learning must be transmitted from an authority figure to a dependent learner. For some, collaborative learning represents an opportunity to reduce their level of involvement in the learning experience (Wagner, Scharinger, & Sisak, 1992). Smith (1982) identified four primary characteristics of collaborative learning that increase the student's investment in the educational process: (a) everyone shares in the program development and evaluation, (b) freedom of expression is allowed, (c) group members possess the skills of joint inquiry and problem-solving, and (d) a diagnostic attitude toward processes is encouraged.

Collaborative learning can be a challenge for educators, as well. The collaborative learning environment can seem quite chaotic at times, and it requires a very different role of the educator. The teacher becomes a facilitator, and is no longer the sole authority and transmitter of knowledge (Dowd, 1994). Teachers become active learners

along with their students, because the dynamic nature of the learning experience precludes the planning of a curriculum unit as a neat, predictable package (Heverly, 1994; Stevens & Richards, 1992). The most demanding task of the teacher/facilitator is to engender a group culture in which adults can feel free to challenge one another and to feel comfortable with that challenge (Brookfield, 1986). MacGregor (1990) finds it particularly challenging to reconcile the responsibility of content coverage with a commitment to enabling students to become self-directed in their learning. This process is of particular importance in healthcare professions, where many must pass a certification exam based on an assumed set of basic knowledge and skills in order to enter the profession.

Eastmond (1993) believes that the person who learns formally without direct experience may be able to supply verbal description, but will be unlikely to have the ability (or the confidence) to complete an actual problem. He says that only when knowledge can be grounded in real experience, and learners see the interplay of expectations, constraints, and political forces, can a true sense of the complexity of a task be grasped. A number of researchers have addressed problem-based learning. Shinn, Haynes, and Johnston (1993) found graduates of a problem-based medical school curriculum were more current in practice than graduates of a traditional curriculum. Dolmans et al. (1993) found that although a problem-based curriculum covered only 64% of intended course content, students generated learning issues that were useful and

relevant to course content. Norman and Schmidt (1992) believed problem-based learning could enhance life-long learning by improving long-term retention of knowledge.

Whatever the method is called, a critical component of experiential learning is facilitated reflection on the experience. Joplin (1988) states that experience alone is insufficient to be called experiential education. She believes it is the reflection process which turns experience into experiential education. Through reflection learners are able to explore and express the personal meaning and relevance of the experience and how it can be transferred to other parts of one's life (Lankard, 1995; Schon, 1983; Schon, 1987; Snow, 1992). Clark (1994) writes that an important feature of a team-based experience is the collaborative nature of learning and the emergence of meaning from a group context, which is primarily garnered through the use of reflection. Reflection ensures that the experience is understood by the learner and that the learner is beginning to grasp the transfer from experience to application. It is essential that the experiential educator be comfortable with the skills of facilitation to ensure that experiential methods are meaningful and learners are encouraged to extract the learning points from the experience and make the transference to situations beyond the educational context.

Professional Preparation

An interesting argument for the application of collaborative learning is set forth by Schon (1987) who compares and contrasts the art and science of professional practice. He suggests that the science (in terms of the objective knowledge to be mastered) is the

easier part of professional education. Acquiring the art of professionalism is more challenging, because it requires the acquisition of judgment: the thought processes involved in selecting and using information, developing intuition, and forming the reflection in action processes of thinking that associated with a high level of professional development. Clark (1994) argues that collaborative interdisciplinary teamwork is a powerful method for training students to become reflective practitioners. Students in teams are forced to recognize both the power and the limits of particular discipline-specific knowledge they possess and to rely on the judgments of others in the gray areas where their own expertise or skill may be limited.

Driven by a rapidly changing global market, organizations are seeking new ways to think, organize, communicate, and work. Workers are required to take more responsibility for their work and to demonstrate advanced abilities in critical thinking and problem solving. According to Beaty, Bourner, and Frost (1993), the very properties of experiential learning explain its relevance to workplace learning. New ways of training and learning that actively engage the employee in the learning process promote individual responsibility for the learning experience as well as for the learning derived from the experience. These methods offer promise to organizations striving to achieve high performance and to maintain a competitive edge in a dynamic economic climate. Organizations are increasingly asking that potential employees enter their organizations having already acquired and practiced these higher order thinking skills and with prior

practice with performance skills, as well (Lankard, 1995). This expectation appears to apply to entry-level workers as well as experienced ones. The one step that seems to be missing for most of the students leaving college is the ability to apply what they have learned to the real world (Mandeville & Mandeville, 1992). Experiential teaching methods, particularly the use of teams, are being used increasingly in higher education to allow groups to experiment with new techniques and behaviors in a low risk setting. However, Couchman (1995) points out that interdisciplinary initiatives are still rather ad hoc and not yet part of the mainstream of professional education. She further states the primary educational structure is still to train students in professional groupings, which offers few opportunities during professional education to address the knowledge, attitudes, and skills needed for effective teamworking.

Training experiences appear to be more successful in changing an individual's understanding and behavior when the exercises resemble, as closely as possible, real life situations. Mandeville and Mandeville (1992) believe that most traditional management training in higher education falls short of being effective for the following reasons: (a) training is in the form of reading or lecture, which are not readily applicable, (b) individuals may have no prior work experience and cannot visualize the application of the method in the workplace, and (c) training focuses on only one method instead of integrating a number of methods. Group activities that produce a product provide a training opportunity that closely emulates an actual job in a low risk setting. They further

write that, to be most effective, group activities must provide opportunities for students to: (a) engage in the activity, (b) critically evaluate the activity, (c) abstract some useful insight, (d) generalize the experience, and (e) apply the generalization in later work.

For the educational system to properly prepare allied health professionals for the challenges that will face them immediately upon leaving the relative safety of the educational environment, it is necessary to use methods of education that are transformative (Dowd, 1994). Balance must be achieved between education (the acquisition of knowledge) and training (the acquisition of skills). Coles (1995) offered an overview of what he believes to be the critical components of educational programs for patient-centered health care professionals. Among the 10 proposals, four addressed the need for experiential methods and opportunities for learners. Team-based learning focuses on problem-solving within the demands of the interdisciplinary and social context of experience. Consequently, it is a logical and practical solution for preparing competent health professionals who are better prepared to accept the responsibilities demanded of them as soon as they enter the professional arena.

Summary

This chapter has provided an overview of the literature related to small groups and teams as they are utilized in business, healthcare, and education, as well as efforts within higher education to prepare students for eventual membership on healthcare teams. The use of teams has increased through the years, particularly with the emergence of

management philosophies such as TQM. The increasing complexity of the healthcare industry will only increase the need for professionals to share their knowledge, skills, and resources and to collaborate across disciplinary lines. As educators prepare future healthcare professionals, it is essential that attention be given to group dynamics and the skills of collaboration. By providing knowledge and practice in the basics of group dynamics and applying group development theory to the design of experiential collaborative activities in the classroom, educators can better prepare students to immediately assume roles as an effective, contributing team members in the professional arena.

CHAPTER III

DESIGN AND METHODOLOGY

This chapter presents the methodology of this quasi-experimental study in relation to its population, procedures used to sample the population, instrument used to measure the variables, procedures used to collect the data, and statistical analyses and descriptive techniques used to treat the data.

Population and Sample Selection

The population used for this study was female students, 18 years of age and older, enrolled in three sections of the Fall 1996 First Aid and CPR classes in the Department of Health Studies at Texas Woman's University. From this population, 47 students volunteered to participate as subjects. A random numbers table was used to assign convenience samples of 22 subjects in a comparison group and 25 subjects in an intervention group.

In each course section, half of the subjects were randomly assigned to the comparison group and half to the intervention group. Because the course utilized the team project as a part of normal course content, all students were required to participate as members of a team to complete the class project. Names of students who did not volunteer to participate in the study were included in the pool of team members and were randomly assigned to either the comparison or intervention groups for team assignment. The random numbers table was also used to randomly assign students to project teams

within the comparison and intervention groups. The comparison and intervention groups within each section were randomly divided into teams of four to six members.

For the purposes of this paper, course sections will be referred to as sections A, B, and C. Section A was divided into four teams: two comparison teams, one with four members and one with five members; and two intervention teams, one with four members and one with five members. One student in this section did not volunteer to be a participant in the study. The random assignment placed her in the comparison group, resulting in eight subjects in the comparison group and nine subjects in the intervention group. Section B was divided into four teams: two comparison teams, one with six members and one with five members; and two intervention teams of six members each. Three students in this section did not volunteer to be participants in the study. The random assignment placed two of these students in the comparison group and one in the intervention group, resulting in nine subjects in the comparison group and 11 subjects in the intervention group. Section C was divided into two teams: one comparison team with five members and one intervention team with six members. One student in this class was male and was not eligible to be a study subject. Random assignment placed this student in the intervention group, resulting in five subjects in the comparison group and five subjects in the intervention group. Table 2 summarizes the random assignment of students to either the comparison or intervention group. Numbers in parentheses indicate

the number of students ($n = 5$) on a particular team who did not volunteer to be study participants or did not meet the criteria for inclusion as a subject.

Table 2

Number of Students Assigned to Teams by Class Section

Section	Comparison 1	Comparison 2	Intervention 1	Intervention 2
A	4	4 (1)	4	5
B	5 (1)	4 (1)	5 (1)	6
C	5		5 (1)	

Note: Number in parentheses represents non-participants; adding the two numbers gives total number of students on a team

Protection of Human Subjects

Permission was requested and received from the Texas Woman's University Human Subjects Review Committee to conduct this study (Appendix A). All potential subjects received a written explanation (Appendix B) which included the purpose of the study, benefits and risks of participating in the study, and an assurance of anonymity. They were advised that participation in the study was entirely voluntary, that their grade would in no way be influenced by their participation or failure to participate, and of their right to refuse or withdraw from the study at any time. The investigator offered to report the findings of the study to the students. Included in the general consent form was consent to be audiotaped during the focus group discussion. All subjects were given a copy of their signed consent form. Students who did not volunteer to participate in the

study signed a separate release form (see Appendix C) that gave permission for the audiotaping of their voices during the focus group as part of the course content. It was explained to these students that their voices may or may not be recognizable on the tape, but no identification of individual student identities would be made on the transcription of the tapes. All students were assured that the tapes would be erased as soon as the transcriptions were made, and that the transcriptions, along with other participant information and responses, would be kept in a locked file box in the investigator's possession and destroyed after three years by shredding and recycling.

Procedures

The study procedures are organized under the following headings: (a) Obtaining Department of Health Studies Consent, (b) Obtaining Subject Consent, (c) Study Design, (d) Group Process Training Intervention, (e) The Team Project, (f) Field Observation, (g) Administration of the Posttest, and (h) Focus Group.

Obtaining Department of Health Studies Consent

Prior to requesting permission from the Human Subjects Review Committee to conduct this study, the investigator requested permission from the Chair of the Department of Health Studies to recruit students enrolled in that department's First Aid and CPR classes as subjects. The Chair of the department reviewed the prospectus and approval was granted on August 27, 1996 (Appendix D).

Obtaining Subject Consent

Approximately one month prior to the start of the study, the instructors of the three sections of First Aid and CPR informed their classes that another instructor would teach the class for three weeks as part of the course learning objectives to build their first aid skills through emergency response simulations and group process training. Student participation on an emergency response team was built into the course curriculum. Two weeks prior to the starting date of the study, the investigator met with each of the three sections on two different class days to introduce the study and inform the students of the additional requirements of being a study subject beyond the normal class expectations. Protection of human subjects procedures were followed. Of the 52 students on the official class rolls of the three sections, 47 chose to sign consent forms to complete the posttest questionnaire. Three students chose not to participate as subjects, one student was not included in the subject pool as she had not attended class since the third week of the semester, and one student was male, making him unqualified based on the population parameters of the study.

Of the 47 subjects who signed consent forms, 45 completed posttest questionnaires. Seven students were absent on the day that their focus group was to meet during class time, making a total of 45 participants in the focus groups. Of the five students who were not eligible or chose not to participate in the study, three were absent on the day of the focus groups and two gave permission to have their voices audiotaped

and participated in the focus group. During the focus group session, students were given the opportunity to express their concerns about the study.

Following the completion of the study, the investigator arranged for the comparison group to receive the group process training received by the intervention group and for the intervention group to view the videos which were observed by the comparison group. Scheduling in cooperation with the instructors, the group process training and videos were scheduled for the final exam day to immediately follow the exam. The follow-up training was not required of the students, though they were encouraged to attend so that they might receive any potential benefits of the training or the video. Although several students asked the investigator about the content of the group process training, no one stayed to participate in the training or to watch the video.

Permission to conduct this study was granted by the Texas Woman's University Human Subjects Review Committee prior to the commencement of the study (Appendix A). Identification of the subjects was accomplished through the use of assigned code numbers which were used to construct matched pairs of posttests and demographic data for analysis.

Study Design

The multi-method design of this study emerged from the investigator's desire to assess measures of both effectiveness and satisfaction. Effectiveness is a measure of process or product that is often separated into component parts and measured by some

standard. Satisfaction is a more affective concept that is defined on a personal level, implying needs, wants, and desires. While quantitative measures allow more control over the collection of data, the method does not offer the richness of participant attitudes, beliefs, and suggestions. Qualitative research allows both the investigator and participants the freedom of expression to more thoroughly explore and express their range of reactions to an experience (Thomas & Nelson, 1990). To reap the benefits of both methods, the investigator chose to utilize both quantitative (questionnaire) and qualitative (focus group) research techniques in this study. This design provided a more holistic perspective of group development and the processes of teamwork. The questionnaire provided a structured, more easily measured assessment of team effectiveness that was readily subjected to statistical interpretation and analysis. The focus group provided the investigator a richer, less restrictive medium through which to understand the meaning of the team experience to the participants in the classroom setting and how the components interacted to form a whole. Keyton and Springston (1990) wrote that, despite the best efforts of researchers to measure quantity and quality of effectiveness, the next generation of group effectiveness research may be enhanced by asking group members, themselves, to define group and personal effectiveness. That was, essentially, the reason for the multi-method design of this research study.

In an effort to make the research as realistic as possible, the investigator chose to utilize a field study design, despite the commonly known threats to validity of field

research. To accurately simulate the teaching environment, the investigator searched the literature and drew upon her own past teaching experiences as well as observation of and discussion with other professors regarding the design of the group process training. No references were found that indicated a recommended length of time for group development activities. Six professors and instructors in higher education who currently utilize team projects in their class curricula were asked how they integrate the training into a normal semester-length class. Two indicated there is seldom any class time devoted to formal group development process prior to starting team projects. When team training is used, it is usually only allotted one class period (approximately 60 to 80 minutes) or a part of a class period. As a result of this information, the intervention was designed to take a total of 75 minutes, or the equivalent of one class period at the university where the study was conducted.

In order to optimize the freedom of expression cited as an advantage of qualitative research (Thomas & Nelson, 1990), the investigator chose to follow the recommendations set forth by Morgan (1993) for the role of the interviewer and the question format for conducting focus group discussions. The investigator exerted enough control to ensure that each group received essentially the same questions and that discussions stayed mostly on track. Open-ended questions permitted greater flexibility in response patterns and probe tactics. Participants were allowed a great deal of freedom to direct the flow of conversation as long as it remained on the topic of team work, team

development, or the use of team projects in the classroom. One danger of this method is a possible lack of consistency in the probes used to follow up each general question. The investigator chose to accept this limitation in order to allow each group to more fully explore the issues and variables which were most meaningful to them.

Group Process Training Intervention

The group process training intervention was designed to address three of the initial stages of group development, forming, storming, and norming, as developed by Tuckman (1965) and Tuckman and Jensen (1977). Tuckman proposed that groups must go through these initial developmental stages, or at least begin to address some of the issues within each stage, before they will be able to perform effectively as a group. The investigator used experiential activities to accomplish the tasks related to group formation and the establishment of group norms. The selection of activities appropriate to each stage was based on the extensive professional experience of the investigator, a thorough review of the original and follow-up research published by Tuckman (1965) and Tuckman and Jensen (1977), and a research paper authored by the investigator applying Tuckman's theory to experiential teambuilding programs (Henry, 1996).

During the first meeting of the study participants, intervention teams were given 10 minutes to introduce themselves and to share personal information, including interests and hobbies as well as skills and talents that could be utilized in completing the team project. This activity was intended to provide opportunities for group forming, as defined

by Tuckman. While the activity was being conducted with the intervention group, the comparison group was asked to leave the classroom for 15 minutes. Though they were aware of their assignment to the comparison group when they left the room, they were not informed of their team assignments within that group. They were asked not to interact with other class members to avoid the possibility that they would socialize with team members during this time.

On the second day of the study, all members of the comparison group remained in the classroom to view two videos that addressed how to incorporate healthy practices into their everyday lifestyle. The intervention group went to an outdoor location adjacent to the classroom for approximately 60 minutes of programming designed to satisfy the criteria of Tuckman's stages of forming, storming, and norming. Through both experiential activity and discussion, team members had an opportunity to learn more about each other and explore some of the individual and team characteristics essential to effective team performance.

The first activity was "Willow in the Wind," an activity known within the experiential education professional community as one which allows teams to explore trust, support, and non-verbal communication. The activity has been in common use for many years and the investigator was not able to determine who developed it, but it is found in experiential education activity books such as that by Rohnke (1989). To begin this activity, each team formed a small, shoulder-to-shoulder circle with one member in

the center. Members received instruction in proper body position for being the “willow” in the center of the group and proper spotting technique by team members forming the circle. After the appropriate safety commands were given, the team member in the center of the group began to lean, requiring that a teammate support them without letting them lose their balance. The outside team member then gently pushed the “willow” across the circle to the waiting hands of another team member. This process of leaning and being supported by the members of the group continued for two or three minutes, or until the person in the center chose to stop. For the activity to be successful for each team member, the group must determine appropriate communication, trust, and methods of support. Teams are often challenged to observe and respond to non-verbal signals of anxiety and discomfort more than verbal communication. Debriefing of this activity initiated a discussion about trust, dependence upon team members, verbal and non-verbal communication, and the difficulty of trusting and relying upon people that one does not know well. This activity was chosen to allow participants to experience and reflect upon their own fears and concerns regarding trusting and supporting others, and to explore the application of these concepts to the developmental stages of a team.

Following the debriefing of “Willow in the Wind,” the group explored, in an open discussion format, the personal characteristics that are necessary for each individual to bring to a team, and their beliefs about group dynamics of an effective team. This discussion offered participants an opportunity to openly express differing opinions and

experience some of the characteristics of the storming stage as identified by Tuckman. When appropriate, as the discussion progressed, the investigator guided participants to identify strategies and techniques that could be used to prevent conflict from occurring and to manage disagreements or conflict if they did occur.

Utilizing the information that was generated from the activity and the discussion, in the final activity, participants developed ground-rules and operating norms that would guide the teams' work during the project. The rules focused on acknowledging basic individual and group behaviors and attitudes that would apply while functioning as a team.

The Team Project

On the first meeting of study participants, the investigator spent 50 minutes introducing the team project to all students in the three course sections. Students were informed of their assignment to either the comparison or intervention groups. For 15 minutes of this class session, the investigator met with students in the intervention group for a brief introduction activity. Members of the comparison group were asked to leave the classroom, but not to interact with other group members. On the second class session of the study, the comparison group remained in the classroom to watch a video tape on incorporating positive health habits into their everyday life. The intervention group was taken to an outdoor location adjacent to the classroom to participate in the group process training activities, as defined in the prior section.

Both the comparison and intervention groups, five teams per group, had four class sessions to complete a class project which required them to learn and apply first aid knowledge and skills to an emergency response scenario (Appendix E). Two separate scenarios were developed as a joint effort of the investigator and the First Aid and CPR instructors. Each team received a scenario which incorporated content from chapters 17, 18, 19, 20, 22, and 23 in the First Aid textbook. Using the information contained in these chapters, in addition to some previously-covered skills necessary to any emergency response such as the universal emergency action steps, each team completed a two-part project specific to their scenario. Scenario 1 and scenario 2 were each randomly assigned to one comparison group and one intervention group in sections A and B. In section C, which had only one comparison group and one intervention group, the two scenarios were randomly assigned to one of the groups.

A two-page written assignment required teams to identify and report on the detailed general emergency response procedures and strategies appropriate to the circumstances of their scenario. The team project also required each team to stage a demonstration of required first aid skills as determined by the nature of the accident and the condition of the victim or victims in each scenario. Teams had three class sessions to prepare the two parts of the project. On the last day of the study, November 20, 1996, all teams performed their skills demonstrations to the rest of their classmates and submitted their written assignments to the instructor.

Field Observation

The intervention for this study was implemented in the college classroom to exemplify the natural social environment of student teams. This setting helps the investigator achieve realism, "... a human field in its natural state; that is, in its own time and place, and in its own recurrent and developing processes" (Schatzman & Strauss, 1973, vi). During each class session, the investigator made observations of the processes in the classroom and recorded them in a field notebook. These observations included: (a) elements of physical structure such as arrangement of the classroom, teams' positioning within that classroom, and physical positioning of members within teams, including desk arrangement of teammates relative to each other; (b) elements of team interaction, such as time spent talking, writing, reading, or sitting with no apparent communication; (c) apparent mood of the group discussions as indicated by behaviors such as tone of voice, laughter, overlapping conversations, or lulls in conversation; and (d) comments made about the assignment or the team.

Administration of the Posttest

On the last class day of the three week study period, following the performance of the skills demonstrations, the investigator administered the posttest instrument (Appendix F) to the participants in the study. They were asked to complete the instrument prior to leaving the classroom. Participants completed the 36-item questionnaire in an average of 10 minutes. However, on the day the posttest was administered, section B was late in

finishing their team project presentations and, due to having other classes immediately following the First Aid and CPR class, some subjects chose to take the questionnaire with them to be returned to the investigator later. As a result of this, one subject in the comparison group and one subject in the intervention group did not complete the posttest. Therefore, the total number of participants who completed the posttest was 21 in the comparison group and 24 in the intervention group.

Focus Group

Focus groups were conducted by the investigator two weeks after the in-class presentation of the team projects. Two focus group were held in each class section, one for the comparison group and one for the intervention group. By random selection, the comparison group from each class section met on Monday, December 2, 1996, and the intervention group met on Wednesday, December 4, 1996. The investigator moderated the discussions for all groups. Seventeen students in section A (7 comparison and 8 intervention), 19 students in section B (8 comparison and 11 intervention), and 9 students in section C (5 comparison and 4 intervention) participated in the focus group, making a total of 20 students from the comparison group and 23 students from the intervention group.

In the focus group sessions, the investigator used five open-ended questions to solicit information about the attitudes, feelings, and beliefs of the subjects relative to their

personal and collective experiences as members of a class project team. The general, open-ended questions were:

1. What is your general feeling about having worked as a team on this class project?
2. How well do you think your team worked together?
3. How effective do you feel you were as a member of your team?
4. What was the hardest thing about working as a team?
5. What was the best thing about working as a team?

Follow-up questions were used as probes through which the moderator could guide the participants into a more in-depth look at their initial response to the general question (see Appendix G for questions and probes). A uniform set of focus group guidelines was used. The moderator maintained a relatively high level of control over the discussion, introducing general questions and probing or interjecting to ensure that the group covered essential points and to keep the conversation focused. Although an attempt was made to introduce the general questions in essentially the same order, there was variation between groups in how the moderator introduced questions and how much discussion was devoted to any one point in the guidelines. This latitude was maintained to permit free discussion of issues, unsolicited opinions, and unanticipated responses.

Participants were informed that the session would be audiotaped in order to record all comments. The investigator stated that she was seeking a more personal perspective

in terms of attitudes and feelings than was possible for participants to convey by answering the questionnaire. Participants were encouraged to speak freely, but to talk only one at a time. The investigator emphasized that there were no correct or incorrect answers and that it was important that each person's view be shared and heard, even if it differed from that of others, including their own teammates. Participants were also given an opportunity to express their views about the research study. Each of the six focus group sessions lasted approximately 50 minutes.

Instrumentation

The Team-Assessment Inventory (TAI, [Elledge & Phillips, 1994]) was used in this study to assess self-reported team effectiveness (Appendix F). Permission to use this instrument was granted by the author (Appendix H) and the publisher (Appendix I). The investigator designed a demographic data sheet to collect appropriate information about the sample (Appendix J). Requested demographics included age, classification, academic major, cumulative Grade Point Average (GPA), section number, occupation, ethnicity, place of birth and number of years in the United States, and prior experience with class team projects and general feeling about that experience.

The TAI was developed by Elledge and Phillips (1994). It is a 36-item scale constructed to obtain an overall summary of how members of a team perceive the team's effectiveness. The instrument was based on the team-building research and efforts of Beckhard (1972) and the Team-Effectiveness Model adapted from Starchevich and

Stonell (1990). The instrument is divided into six subscales designed to explore specific topics. Subscale I, General Productivity and Climate (questions 1 - 6), is an overall look at how the team is feeling about itself. Subscale II through Subscale VI explore the components necessary for effective teamwork as follows: Subscale II, Goals (questions 7 - 12); Subscale III, Roles (questions 13 - 18); Subscale IV, The Processes/Procedures (questions 19 - 24); Subscale V, Relationships (questions 25 - 30); and Subscale VI, Leadership (questions 31 - 36). The model upon which the instrument is based is intended to have each subscale be considered both individually and in relation to all other subscales.

The TAI scored items using a five-point Likert scale. Each item gave two extremes of a factor (a team member's possible behavior or attitude toward the team or its responsibilities). A response of 5 indicated a perception of a more effective, team-focused behavior or attitude (as determined by the authors), while a response of 1 would indicate that the team performance was perceived to be less effective on that particular factor of team effectiveness. Individual scores could be compared, or the mean responses of teams could be compared. The closer the mean (total or for a particular section) is to 5, the more effective the team perceives itself to be in that area. The closer the mean is to 1, the less effective the team perceives itself to be in that area. The instrument is also designed as a diagnostic tool, helping a team develop and prioritize action steps for team-building efforts. The highest sections (those over 3.5) are the team's relative strengths,

and the lowest sections (those below 2.5) are the team's relative need-for-development areas.

There were no reliability statistics available for the TAI from the developers of the instrument, nor had other investigators subjected the instrument to study for the purpose of statistical validation. The authors reported having written evaluations and anecdotal evidence of satisfaction with the instrument from prior users, but had not conducted statistical interpretation of these evaluations. Prior to this study, the investigator distributed the instrument to an expert panel of five professors who currently utilize team projects in higher education settings. All five experts indicated that the instrument would be valid for the assessment of student project team effectiveness in a college class. Four of the reviewers suggested minor changes in terminology to make the instrument more suitable to the classroom setting, as opposed to the corporate setting for which it was designed. These suggestions were: remove the word "money" from a list of resources provided to team members, replace the word "co-worker" with "teammate," replace "job" with "project," and replace "business" with "project." The instrument was modified accordingly.

A reliability analysis of the TAI using data collected in this study produced a Cronbach's alpha coefficient of .97. No other reliability statistics were available or reported for this survey instrument.

Three important criteria were used in the selection of the survey instrument for this study. The first criterion was to find an instrument that had been used by other investigators or teambuilding trainers, as the goal of this study was not to design and/or validate a new survey instrument. The second criterion was to find an instrument that did not require major changes in phrasing or terminology in order to be utilized in the classroom setting. Because all of the team effectiveness instruments found by the investigator were designed for the corporate sector, they contained business-specific terms which were not applicable in the classroom, such as financial compensation, manager or supervisor, department, and support personnel. The third criterion was to find an instrument with 50 or less items which would take 20 minutes or less to complete. Such an instrument could be easily completed at the end of a class period, which would possibly improve the attention given to conscientious reporting and would help improve the percentage of return by study participants.

Treatment of the Data

All of the collected information, field notes, demographic profiles, and the transcript of the audiotape recordings, were treated as data. Each focus group tape was reviewed in a timely manner following the session to maximize the recall of content, observations, and discussion climate. Tapes were then transcribed. Field notes from both the classroom sessions and the focus group were used to reinforce significant themes. Using guidelines established by Morgan (1993) and Spradley (1980), data were coded in

a systematic procedure using icons to represent concepts. Each transcript was coded and reviewed five times. The steps in coding as recommended by Morgan are: (1) develop an initial set of codes corresponding to each item in the focus group set of guidelines, (2) create additional codes for topics that arise and are of special interest, (3) develop nonsubstantive codes that will be of particular help in the analysis and write-up phases, and (4) develop subsequent detailed codes to use for analyses of specific topics. To begin the interpretive part of the analysis, the codes were then transferred to an overview grid to provide a descriptive summary of the content of the focus group discussions.

To assess reliability of the investigator's interpretations, one session of transcript was given to two different experienced facilitators to review the coding for concurrence and consistency. Based on the transcriptions, particular words or phrases used by participants to describe experiences were coded in the margin of the transcripts. These were then listed and grouped together on the basis of similarity. Content was analyzed by coding to discern prevailing themes in the discussions and by counting the frequency of statements made per theme group. Themes expressed were further defined by categories and the categories examined for the possible existence of subcategories. Categories and subcategories were then grouped into coding families which provided a coding framework for final analysis (Appendix K).

Data from the demographic survey were used to describe the sample using frequencies and measures of tendency. Data from participants in each section who had

been assigned to teams in the comparison group were combined into one comparison group for analysis. Data from participants in each section who had been assigned to teams in the intervention group were combined into one intervention group for analysis.

The primary index of reliability (internal consistency) chosen for the instrument was the Cronbach's alpha. Mann-Whitney U was used to test for differences between the central tendencies of effectiveness scores from a self-administered questionnaire as the dependent variable for intervention and comparison groups. Further investigation of the data was conducted by post-hoc analyses of variance on team effectiveness questionnaire subscales. Data from the instrument were entered and compiled using the computer program called Statistical Package for the Social Sciences (SPSS). The hypothesis was tested at the 0.05 level of significance.

CHAPTER IV

FINDINGS

This chapter, presents analysis of the data collected during the study. The results are organized as follows: (a) Descriptive Analysis of Demographic Characteristics, (b) Descriptive Analysis of Instrument Responses, (c) Hypothesis Testing, (d) Analysis of Focus Group Responses, (e) Research Questions, and (f) Summary.

Descriptive Analysis of Demographic Characteristics

The age of participants ($N = 47$) in this study ranged from 19 to 49 years with a mean age 27 years, range of 30 years, and a standard deviation of 7.6 years. Participants in the comparison group ($n = 22$) had a mean age of 27.3 years, and participants in the intervention group ($n = 25$) had a mean age of 26.7 years. Table 3 summarizes ungrouped demographic data on age and GPA. For the purposes of data analysis, age, GPA, and classification were each divided into two categories. Participants 19 to 23 years old were combined into age group 1 (traditionally-aged students, $n=22$) and participants 24 to 49 years old were combined to form age group 2 (students older than traditional, $n=25$). Participants with GPA's below 3.5 were put into GPA group 1, and those with a GPA of 3.5 or higher were assigned to GPA group 2. A GPA of 3.5 is a common criterion for honors recognition and provided a fairly even division of the sample. To provide a fairly even division of the sample by academic classification, freshman, sophomores, and juniors were designated as class group 1 and seniors

comprised class group 2. Table 4 summarizes grouped demographic data for age, GPA, and academic classification.

Table 3

Summary of Raw Data by Age and GPA of Participants (N=47)

Variable	Group	<u>n</u>	Range (min-max)	<u>M</u>	<u>SD</u>
Age	Comparison	22	23 (20 - 43)	27.3	7.8
	Intervention	25	30 (19 - 49)	26.7	7.6
	Both	47	30 (19 - 49)	27.0	7.6
GPA	Comparison	22	1.40 (2.60 - 4.00)	3.44	0.37
	Intervention	25	1.80 (2.17 - 3.97)	3.20	0.52
	Both	47	1.83 (2.17 - 4.00)	3.32	0.47

Table 4

Age Group, GPA Group, and Class Group of Participants (N=47)

Group	Age		GPA		Class	
	19-23	24-49	<3.5	3.5 +	Fr/So/Jr	Sr.
Comparison	10	12	9	13	10	12

<u>n</u> = 22						
Intervention	9	16	14	11	12	13
<u>n</u> = 25						
Both	19	28	23	24	22	25
<u>N</u> = 47						

Academic major was categorized according to college within the university.

Thirty-seven percent of the participants were majors in the College of Education, 27 % in the College of Arts and Sciences, and 35 % from the health professions (including Health Studies, Occupational Therapy, and Nursing). Table 5 illustrates that, even with random assignment, majors were evenly divided between the comparison and intervention groups.

Table 5

Academic Major of Participants (N=46)

Group	College of Art & Science		College of Education		College of Health Science	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Comparison	7	50.0	7	43.8	7	43.8
Intervention	7	50.0	9	56.2	9	56.2
Both	14	30.4	16	34.8	16	34.8

Only one participant reported that she had never been a member of a student project team. Eighty-seven percent of those who reported prior team experience responded that past experiences had been generally positive. Of the nine participants

reporting generally negative prior experience, four were in the comparison group and five were in the intervention group.

Analysis of the descriptive statistics revealed an equal distribution within ethnic categories between the two research groups. No significant difference in effectiveness scores was found on the basis of ethnicity. However, there were comments in the focus groups regarding the influence that culture, particularly country of origin, may have on group work. Eight participants in this study were born in countries other than the United States (U. S.). These participants had lived in the U. S. from five to 20 years. Other countries of birth represented by this study sample included Ecuador, England, Iran, Mexico, Philippines, Scotland, Vietnam, and Uganda. Comments regarding possible cultural influences are discussed in Chapter V.

Descriptive Analysis of Instrument Responses

Table 6 provides a summary of responses from the TAI for subscales and instrument totals. Because some individual test items were omitted by participants, n 's for subscales do not add up to equal N for total score. While no statistical significance was found between groups, it may be noted that the intervention group had higher mean scores, higher minimum scores, and smaller ranges of scores across all subscales and on the instrument total as compared to the comparison group.

Hypothesis Testing

The following hypothesis was tested at the 0.05 level of significance, using the data collected through the use of the TAI:

No significant difference was found in team effectiveness scores between members of teams who received group process training and those who did not for the sample in this study.

Table 6

Summary of Posttest Instrument Responses

Questionnaire Subscale	Group	<u>n</u>	Range (min-max)	<u>M</u>	<u>SD</u>
I					
General Productivity & Climate	Comparison	21	16 (14 - 30)	23.42	5.07
	Intervention	23	10 (20 - 30)	25.48	2.95
	Both	44	16 (14 - 30)	24.66	4.07
II					
Goals	Comparison	21	18 (12 - 30)	22.58	5.77
	Intervention	24	17 (13 - 30)	25.83	4.27
	Both	45	18 (12 - 30)	24.55	5.10
III					
Roles	Comparison	21	17	24.47	5.39

	Intervention	24	(13 - 30) 12	26.09	3.33
	Both	45	(18 - 30) 17 (14 - 30)	25.45	4.30
<hr/>					
IV					
Processes and Procedures	Comparison	21	16 (14 - 30)	23.84	5.27
	Intervention	24	12 (18 - 30)	26.43	3.04
	Both	45	16 (14 - 30)	25.49	4.29
<hr/>					

Table 6 (cont.)

Summary of Instrument Responses

Questionnaire Subscale	Group	<u>n</u>	Range (min-max)	<u>M</u>	<u>SD</u>
<hr/>					
V					
Relationships	Comparison	21	19 (11 - 30)	23.10	5.53
	Intervention	24	11 (19 - 30)	26.56	3.58
	Both	45	19 (11 - 30)	25.24	4.76
<hr/>					
VI					
Leadership	Comparison	19	19 (11 - 30)	24.00	6.04
	Intervention	24	14 (16 - 30)	26.00	4.17
	Both	43	19 (11 - 30)	25.02	5.09
<hr/>					

Total Score	Comparison	19	105 (75 - 180)	141.16	30.45
	Intervention	23	76 (104 - 180)	155.87	19.11
	Both	42	105 (76 - 180)	149.21	25.65

Analysis of Focus Group Responses

Focus groups were conducted to allow the investigator to elicit more in-depth and personal reflections on the experience of working as a member of a student project team. Within each class section, separate focus groups were conducted for the comparison and intervention groups. The facilitator posed the focus group questions to elicit feedback on team performance specific to the groups in this study. However, participant responses were often more general in nature, referring to past or present group project experiences in other classes. Some of these responses were presented as a comparison to the group experience in this study, other contributions were given simply to effectively illustrate a point or to offer an answer. When possible, responses were coded to distinguish between attitudes and beliefs about this team experience and team experiences in other classes. Table 7 presents a summary of the focus group themes by frequency of response.

The following recurrent themes emerged from the discussions in both intervention and comparison groups:

1. Theme One focused upon challenges of teamwork. A category of responses emerged related to circumstances or characteristics which were considered challenges to effective teamwork or stressors within the team environment in general, but not specific to the class team project. Approximately 20 % of the responses in this category were cited as being specific to this project. Of 24 variables cited, the following five accounted for 48.4 % of the 353 responses coded in this theme: (a) failing to be responsible for individual contribution to the team, (b) time (this variable was further divided into the sub-categories of time available to complete the project or difficulties associated with scheduling team meetings outside of class time), (c) diversity and differing perspectives, (d) personal traits related to task, and (e) decision-making. Responses in this category were balanced between the comparison and intervention groups. One category of interest was that of diversity. The intervention group accounted for 28 of 36 responses in this category.

2. Theme Two addressed benefits of teamwork. A category of responses emerged related to circumstances or characteristics which were considered advantages or benefits of teamwork or the team environment, in general, but not necessarily specific to the class team project. Approximately 73 % of the responses in this category were specific to this project. Of 12 items cited, the following four accounted for 74.8 % of the 131 responses coded: (a) sharing of ideas, (b) opportunity to better know team members, (c) diversity and sharing of different perspectives, and (d) distribution of work load.

Although the intervention group had more responses coded in this theme, there were no significant differences in responses within categories between the two groups.

3. Theme Three identified coping strategies. A category of responses emerged identifying strategies used for coping with challenges within the team environment in general, but not specific to the class team project. Sixty-two percent of the responses in the theme of coping strategies were made by participants in the comparison group. Two sub-categories were coded in this category: (a) general coping strategies and (b) conflict management. Of 17 coping strategies cited, cooperative attitude and communicating with team members accounted for 42.6 % of the 108 responses coded in this theme. Within the subcategory of conflict management, 92 % of responses were made by members of the comparison group. Conflict avoidance accounted for 40 % of these responses.

4. Theme Four related to incentives. Participants revealed factors that served as incentives to certain team member behaviors or team membership. Six of the seven factors cited were offered as being specific to this team project. Grade was the only factor within this category that was mentioned in reference to team projects, in general. Despite the fact that no grade was assigned to this project, participants still frequently mentioned it as a source of motivation for certain team member behaviors, some positive and some negative. Grade accounted for 60.5 % of the 71 responses coded for this theme, and sense of responsibility to teammates accounted for 21 %.

5. Theme Five addressed group formation. Within this theme, two categories emerged: (a) group development and (b) team selection. Issues of group development were discussed relative to the processes used to create team identity and initiate project-related performance specific to this team project. Responses indicated that group development processes were fairly evenly divided between the two sub-categories of task focused behaviors and social focused behaviors. Team selection, for the purposes of this discussion, refers to whether teams were formed by the instructor or by the students. Responses for this category referenced both this team project and team projects in other classes. As teams for this project were instructor-selected, participants would use examples of other class situations to compare and contrast the method used in this study. No clear preference emerged for either instructor-selected or student-selected group formation. Eighty-seven percent of the responses coded within this general category were made by the comparison group.

6. Theme Six related to team descriptives. This category included responses that participants made to describe their team. A response was coded under this theme if it was clearly identified by the respondent as being a team characteristic in this study. Some of these codes were duplicated in other categories, but the investigator differentiated between responses that seemed to describe behaviors or attitudes of individual members and those that seemed to characterize the nature of the team, such as having fun, getting along well, having a positive attitude, or being cooperative. Of the 47

responses in this category, the two most frequently mentioned were having cooperative attitudes and having positive attitudes about the team. No apparent differences emerged between the comparison group and the intervention group for this theme.

Table 7

Frequency of Focus Group Responses by Research Group for the Six Themes

Theme	Comparison (n= 20)	Intervention (n=23)	Both (n =43)
1. Challenges to teamwork	166	184	353
2. Benefits of teamwork	53	78	131
3. Coping strategies	83	50	133
4. Incentives to member behaviors	39	32	71
5. Group formation	62	9	71
6. Team descriptives	29	18	47

Research Questions

The following two research questions were addressed using the data collected from the instrument administered during the study and from the focus groups:

1. Will members of teams who participate in group development activities prior to starting a team project report higher levels of team effectiveness than members of teams who do not participate in such activities? Analysis of the TAI did not reveal a

statistically significant difference in reported levels of team effectiveness between comparison and intervention groups. Focus group responses revealed that members of both the comparison and intervention groups believed their teams performed effectively enough to produce a successful product. Eight members of the comparison group provided responses in the focus group interview that indicated they believed their team could have performed more effectively. Five members of the intervention group provided responses that indicated they believed their team could have performed more effectively.

2. Will members of teams who participate in group development activities prior to starting a team project express greater group satisfaction than members of teams who do not participate in such activities? Analysis of the focus group data did give some indication that members of the intervention group were more satisfied with their team membership and processes than members of the comparison group. Intervention group participants provided 59.5 % (78) of the responses for the advantages and benefits of team involvement as compared to 40.5 % (53) for comparison group participants. Comparison group participants more frequently mentioned the need to utilize strategies for problem-solving, accounting for 62.4 % (83) as compared to 37.6 % (50) by intervention group participants. The comparison group also made 23 of 25 responses regarding conflict management.

Summary

Demographic data regarding the sample were provided along with results of the TAI and focus group interviews. Analysis of the TAI data indicated there was no statistically significant difference in self-reported team effectiveness between the intervention and the comparison groups in this study. Analysis of focus group data revealed six major themes: (a) challenges or stressors in the team experience, (b) advantages or benefits of the team experience, (c) coping strategies used in the team experience, (d) motivators to and rewards of teamwork, (e) group formation, and (f) team descriptives. Specific comments by study participants in focus groups will be reported in Chapter V.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

In recent years, professionals and researchers have acknowledged that the U. S. educational system and culture reward competition and individual excellence more than cooperation and collaboration (Stevens & Richards, 1992). Thus, many researchers and authors have begun to address the need for formal training in the skills of effective team membership, both in the workplace and in the preparation of healthcare professionals by those in higher education (Clark, 1994; Coles, 1995; Cook, 1996; Swezey & Salas, 1992; Thompson & Zondlo, 1995; Toner, 1994). Current authors have addressed such issues as the qualities of effective teams (Harvey & Drolet, 1994), the components of effectiveness (Keyton & Springston, 1990), and the content of effective team training programs within a variety of disciplines (Coles, 1995; Mandeville & Mandeville, 1992).

To further explore the issue of the preparation of healthcare professionals as effective team members, this study sought to determine if participants involved in group process training prior to beginning work on a group project would report higher self-reported team effectiveness and group satisfaction than participants who had no group process training. This research used a multi-method, quasi-experimental study to investigate the hypothesis and research questions. Following a group processes training intervention for half of the participants and no intervention for the other half, participant

completed a questionnaire to assess team effectiveness and components of team effectiveness. The investigator then conducted focus groups to explore and identify variables related to group satisfaction and team performance as well as to solicit more in-depth feelings and attitudes about the team experience. This chapter presents a general discussion of the findings, conclusions, and recommendations for future attention and research.

Discussion

The quantitative component of this study found no significant difference between comparison and intervention groups on a measure of team effectiveness. The qualitative component revealed some notable differences in apparent issues of concern between the comparison and intervention groups which could be related to level of satisfaction with the team experience. In addition, there were several issues which emerged from the focus groups which were of interest to the investigator in terms of improving the utilization of group projects as a classroom teaching strategy. This section will explore findings of the study under the headings of: (a) Group Effectiveness and (b) Analysis of Focus Group Responses.

Group Effectiveness

Although numerous studies have been conducted in an attempt to identify the characteristics of effective teams and the literature is fairly extensive regarding the importance of teams in the workplace, there is little evidence of researchers investigating

the use of teams in the classroom to prepare future health educators for effective membership on work teams.

Though this study found no significance difference in group effectiveness as a result of the group process training, several studies have indicated that the groundwork of communication and interrelationships which are addressed in Tuckman's (1965) stages of forming, storming, and norming are important to team performance and effectiveness. Hirokawa (1980, 1983) and other small group communication researchers found that the initial communication tasks of effective groups are oriented toward establishing common goals, clarifying roles, and achieving social comfort in the group. These tasks are consistent with Tuckman's early stages which identify such issues as belonging, trust, group norms, and roles as being necessary to address before a group moves to the performing stage.

Considering the support in the literature for the need to address the issues of group development in order to perform effectively, there are several possible explanations for the lack of significance found in this study. First, the small sample size of this pilot study made it difficult to achieve significance in the results. Second, because the study was conducted late in the semester, it is likely that students had already established a level of interpersonal comfort through previous experiences with class discussions and opportunities given to work together in pairs on first aid skills evaluations. Perhaps conducting the study at the beginning of the semester before

significant interactions between students occurred would have yielded different results. Additionally, though the length of time devoted to the intervention in this study may have been realistic for the educational setting, it is possible that such a short intervention is insufficient for an effect to become significant with such a small sample size. No literature was found which discussed the minimum or optimum time needed to address the formative stages of group development, particularly in the classroom. The investigator did find that corporate programs designed to facilitate the development of newly-formed or forming teams are usually from 8 to 40 hours in length (Wagner & Roland, 1992). However, the programs were usually conducted in an intensive program of a full-day or consecutive-days format. Studies on the use of team projects in the classroom focused on comparing teaching methodologies, or on identifying or comparing specific factors which affect group performance, rather than on length of intervention.

Analysis of Focus Group Responses

Assessment of satisfaction was accomplished through the use of focus groups in order to solicit more personal perspectives and insight into the team experience. The investigator used a semi-formal focus group technique to ensure that each group received essentially the same questions and that discussions stayed, for the most part, on track. However, the questions were open-ended, to permit flexibility in response patterns and probe tactics. When asked about general feelings toward working on a team participants exhibited a general tendency to respond in terms of things which challenged the team or

made teamwork easier. Participants often did not limit their responses just to the specific question posed, but would add comments about other things or would redirect the focus of the response to an issue of more importance to them.

As reported in Chapter IV, six dominant themes emerged in the analysis of the focus group data. These themes contained responses which were coded as separate categories, and some categories were further divided into subcategories. The following pages will present notable findings within the themes, categories, and subcategories and examples of responses from the focus group transcripts to illustrate the findings (see Appendix K for a summary of focus group codes). Discussion is included only for those categories in which there were notable differences between the comparison and intervention groups or about which participants seemed particularly concerned, as indicated by frequency of responses or intensity (vocal tone and physical posturing) of responses.

Although themes are discussed separately, general interpretations of group effectiveness or satisfaction are best made by analyzing the connections between and interrelationships among themes. For example, the intervention group made more comments coded for the theme of challenges to teamwork. However, this group also made more comments on the benefits of teamwork, accounted for only 37 % of responses regarding strategies for coping with challenges, and made only eight percent of references to conflict management strategies. To assume, only on the basis of frequency

of responses about challenges, that the intervention group had a more difficult time with teamwork would not necessarily be accurate.

Theme 1: Challenges to Teamwork

Certain circumstances or characteristics were classified as challenges to effective teamwork or as stressors within the team environment. Of the 353 responses in this theme, the five most frequently coded were: (a) failing to be responsible for individual contribution to the team, (b) time or scheduling pressures, (c) diversity and differing perspectives, (d) personal traits related to task, and (e) decision-making. The following responses or exchanges provide examples within notable categories.

The most frequently mentioned challenge to a positive team experience was the failure of a member to assume responsibility to the team. This issue seemed to be the one which most directly accounted for the negative perception most students have of group work in the classroom. Hadderman (1988) reported that differences between beliefs and actions regarding ability to solve problems, and perceptions concerning levels of participation by group members were factors which could hinder group effectiveness. In a study of work teams in schools, three out of five problems of teams cited by Oswald (1996) were related to clarification of roles or responsibilities of individual team members. Stahl and Andersen (1995) and Krueger (1990) specifically cited individual accountability as a critical factor in team implementation and functioning. A typical response about member responsibility in this study was “...some people put a lot of effort

into their little section, others didn't. ... Some people get out into college and they don't want to participate in groups..." Another similar comment was "Some people don't do their part in the project. They just leave it up to everybody else to do whatever has to be done." One student observed,

...but there would be certain students that would just go through school saying, 'Oh, hey, it's the group thing. I can just go in there and sit down, let my group do the work, and I'm not going to do anything, and nobody will ever know, and I'll get a grade.'

Review of the focus group transcripts revealed this concern is often connected with the two other factors of grade and division of work load. The lack of one or more team members to follow through with their part of a project has the potential to increase the work load of remaining members or to negatively impact the grade of all team members should the project not be completed on time or be of inferior quality. As will be noted later in this chapter, grade was a major concern of many participants in this study.

A notable difference between the comparison and intervention groups is found in the category of diversity and the presence of differing perspectives. Approximately half of the responses in this category were made by one team in the intervention group that had the greatest diversity of any team in the study. Of the six team members, one was from Vietnam, one from Mexico, one from Uganda, one was of Hispanic heritage and the only male in the classes, one member was a Caucasian female over the age of 40 years,

and the remaining member was a Caucasian female of traditional college age. This team did not indicate that their diverse nature was a negative factor in their performance on this project, but acknowledged that such diversity had the potential to challenge a group. The following focus group exchange from this team illustrates some of the issues related to diversity:

...our group was like all parts of the world, very diverse.

I don't think it was a problem in our situation, but it could have been. I could see where it could, because I've been in classes where some of the foreign students had not been in the country very long.

I think in a group as diverse as ours ... like you said, you wouldn't have any problems, but sometimes people do; but, it could also be a very enriched product at the end with all these ideas. But then, the people that have the most power,...and I'm talking probably about the natives from the United States, sometimes they are not tolerant towards international students, also. They could be a little more, because all those people have so many good ideas.

I think age plays in that, too, because they'll say, 'Oh, you've put all the older students together and they are going to outshine us.'

Researchers concur with the idea that diversity can be a challenge to a team (Drinka, 1994; Gent, Parry, & Parry 1996; Lankard 1994). They cited one of the greatest challenges facing hospital executives to be creating a cooperative environment without

sacrificing individual strengths within teams that tend to be formed on the premise that a wide variety of skills and expertise must be represented in order to provide optimum patient care.

Theme 2: Benefits of Teamwork

Certain circumstances or characteristics were classified as advantages or benefits of teamwork or the team environment. Of the 131 responses coded for this theme, the four accounting for 74.8 % of responses were: (a) sharing of ideas, (b) opportunity to better know team members, (c) sharing of different perspectives, and (d) distribution of work load. Though the intervention group accounted for 59.4 % of the responses coded for this theme, there was a fairly equal balance of responses within the categories, indicating that both groups acknowledged the benefits of teamwork. An excellent summary of this theme was given by one participant when she suggested that the benefits of team work are “different views, more input, more ideas, not having to do all the work yourself, and being able to have a little less stress. In the ideal group, that is.”

Participants particularly appreciated the increased pool of ideas offered by team involvement. Typical responses in this category were “I liked it because we shared information.” and “I think one of the strongest things is getting different ideas and different opinions.” One of the international students made the following comment: “We shared things to understand your ideas and her ideas. Everybody got a good idea,

because they are all good idea. So I tell you and you come up with another idea so we come up with two answers.”

Sharing of different perspectives was coded separately from ideas, because these responses appeared to be referring more to supporting a general understanding of something rather than offering solutions or strategies. The investigator included references to the appreciation of diversity within this category, because diversity was generally offered as a source for expanding one’s view or understanding of a topic or problem. One student offered the following value of shared perspectives “Well, if you don’t understand something, or if you aren’t grasping the concept and you have a bunch of people explain it to you without having to go and ask the teacher.” Other participants, when asked the benefits of teamwork, responded “Perspective.,” “Diverse opinions. Diverse outlooks.,” and “Two heads are better than one.”

The benefit of an expanded pool of ideas and information available to the team is widely recognized within the literature, and forms the basis for most of the support for interdisciplinary teams. Orpen (1986) contends that homogeneity is not a desirable characteristic of teams, and believes that effective teams are comprised of members with a mix of traits and skills. Goodall (1990) writes that groups offer more resources (ideas) for creative problem-solving, generating a product that no one member could produce alone.

Another benefit of teams frequently mentioned by the participants in this study is the development of social relationships, or bonding. Oswald (1996) cited bonding and cohesiveness as two essential factors of a quality team. She reported bonded team members in educational management to be more enthusiastic, and more loyal to school and team. In response to the question about the advantages of team projects, responses were received such as: “You get to know your other students that you don’t get to know in a lecture situation.” One participant in the comparison group expressed her belief that the team experience could benefit the function of a class, in general: “I think...even if you return to lecture style, I think you’d have a lot more participation because people would feel more comfortable talking in discussion with a big group...” This belief is consistent with the premise of Tuckman’s (1965) theory that tending to the initial stage of forming by addressing such issues as belonging, acceptance, and trust will allow the group to move away from awkward silence to discussion of issues present in subsequent stages.

A number of articles were found in the literature to extol the virtues of teams. Among the authors citing one or more of the benefits mentioned by the participants in this study are Hadderman (1988), Imel (1992), and Lengacher et al. (1995).

Theme Three: Coping Strategies.

Participants revealed a variety of strategies for coping with challenges and conflict within the team environment. The following two coping strategies accounted for

the majority of the responses coded in this theme: (a) cooperative attitude and (b) communicating with team members. There was no apparent difference in responses between the comparison and intervention groups on general coping strategies. There was, however, a notable difference within the category of conflict management.

Because team work is about interpersonal relationships within a work environment, it is logical that having a cooperative attitude would be seen as an important strategy for preventing or coping with challenges in team work. Comments that indicated cooperative work strategies included “...everybody was really willing to put their effort in and help out.,” “I think that in our group, everybody had a cooperative attitude...,” and “You ...are willing to do anything that you are asked, you know, to be done, and that really helps.”

Communication with others was cited as a prevention strategy and a way to resolve problems which might arise. Comments that indicated that communication willingness or ability played a part in the team processes include: “...we were willing to listen.,” “It wasn’t a problem for [name omitted] because she told us ahead of time.,” and “We just talked.” The importance of communication processes in the team environment is illustrated by the fact that an entire field of group development theory is centered on small group communications.

It is interesting that 62.4 % of the total responses in this theme were made by the comparison group. Most notable is that the comparison group made 23 of 25 responses

about conflict management. It is possible that this difference could be attributed to the fact that a part of the group process training allowed intervention group participants to discuss possible problems in the team environment and to brainstorm ideas for preventing them from occurring. Part of this discussion in each section related to respecting differences and accepting conflict as a natural part of group dynamics.

The most common method of conflict management cited was avoidance of the conflict. Students expressed that they are often afraid to confront each other, possibly due to social repercussions, or, in the case of a team project, the impact the confrontation might have on team performance and subsequent team grade. Driskell and Polanski (1994), in a case-study on self-directed teams in the classroom, also found students reluctant to challenge each other for fear of further repercussions. One participant from the comparison group clearly expressed the reluctance of many students to deal openly with conflict.

We're afraid to confront directly, not like through snide little comments, but to sit down across the table face to face, look in their eyes, and say, 'You haven't contributed. You're not doing what you're supposed to be doing and it's really a problem.' ...if they don't do [their work] there's that follow-up part that makes all of us a little uncomfortable, which is the confront part.

Hadderman (1988) cites avoidance of conflict as one of the factors most commonly hindering group effectiveness. Among the techniques suggested for avoiding

this problem were clarifying procedures and processes, participatory decision-making, and providing training in group processes and handling dissent. Consistent with Hadderman's suggestions, it is possible that the establishment of operating norms and discussion of how to deal with challenges in the group process allowed the intervention group to avoid or better handle any possible conflicts, or perhaps to label them as a natural part of group dynamics and not warranting special mention in the focus group. Caple and Cox (1989) applied a treatment of discussion of personalities and their implications for member communication within the group. They proposed that simply the application of the process led to more immediate group structure, which fostered improved communication and a more rapid reduction in ambiguity and anxiety in the group.

Theme Four: Incentives

Participants revealed certain factors which served as incentives to certain team member behaviors or as rewards of team membership. Of the seven factors cited, grade accounted for 60.5 % of the 71 responses coded for this theme. The comparison group contributed 65 % of the responses regarding grade. However, the majority of those responses were from one particular section. Their concerns are discussed in more detail later in this chapter in "Additional Analysis." The following discussion provides insight into the variety of ways grade was reported by participants in this study to influence performance in a classroom team environment.

Grade was mentioned by many as being a motivator to improve individual performance as a team member because the success or failure of other people is influenced by individual effort. One participant stated:

I may actually work harder than I would [otherwise] if I knew that the group was depending on me, or I was part of a group, than if I was by myself because I know what I'm doing is not going to affect anybody else but me.

Expressing the opposite perspective, others reported that some people use grade motivation as an opportunity to not contribute as much to the team process. They depend on the fact that there are others for whom the grade is so important they will make up for any deficiencies in the performance of team mates. An example of this is found in the following comment made about a team member on a project in another class: "...and the other one always says, 'oh, these two do a lot of work, so I'm going to get with them and I'm going to get their grade.'"

One participant implied that not receiving a grade on a team project could actually reduce stress and contribute to the effectiveness of team work:

As a group, though, also, if you're not counting on a grade you're not going to put as much emphasis on each other. You're going to be more agreeable among each other, I think, because you're not going to sit there and say, 'Oh, my goodness. If you mess this up, then my grade is messed up.'

Another participant in the same section questioned whether or not the grade had any effect on her performance as a team member:

I didn't find it to be quite that same way for me. I might have put some [pause in speaking] I might have done things a little bit differently had I known it was going to be graded, but I worked on it like it was going to be graded. I didn't feel that much differently, so I don't know how much it would have impacted by performance or whatever.

Bingham et al. (1990) proposed that when implementing the small group approach it would be necessary to develop additional, alternative forms of evaluating learners. They suggest various ways for individuals to monitor and report on their own progress. Stevens and Richards (1992) suggested that teachers find ways to reward cooperation rather than competition. This theme is parallel to the challenge that faces health care administrators and others in the workplace of how to fairly compensate teams for exceptional performance. A related problem is how to reward individual excellence in the team environment when individuals do not contribute equally to the team (Austin & Baldwin, 1992).

Theme Five: Group Formation

Participants revealed a variety of factors which influenced the processes of group formation and group development. Issues of group development were discussed relative to the processes used to create positive feelings about team membership and team

identity. Responses were fairly evenly divided between indication that task orientation or social orientation was used to facilitate group development for the purpose of achieving team performance. Preference for instructor assigned or student selected group formation was evenly divided between the groups.

Eighty-seven percent of the responses coded within this theme were made by the comparison group. It is possible that the focus of the intervention on the issues of group development defrayed anxiety about these issues during the team project for members of the intervention group. The intent of the intervention was to allow team members the opportunity to address, experientially, some of the steps of group development prior to the start of the project (forming, storming, and norming), to acknowledge the challenges of group development, to instill in them an acceptance of these processes as a natural part of team work, and to provide strategies for the prevention and resolution of problems in the early stages of group development. Therefore, it might be assumed that some issues that confronted the comparison groups had been dealt with in the intervention and were not a conscious concern for intervention group members, or they may have been accepted as a matter of course and not perceived or defined as warranting mention.

Based on the principles of group development, students in the intervention group had the opportunity to resolve the basic issues of forming and norm-setting prior to trying to attempting to achieve effective performance to produce a product. The following response from a participant in the comparison group in response to the question “What

was the hardest thing about working as a team?” illustrates that the issues in these stages are salient to team members, particularly in the classroom setting:

I think the hardest thing was you have to get to know your people. You get thrown in a group [in a class situation] and you don't know anybody, and at work you know your co-workers and to do group projects is not problem, because you know who can do what and who can't do what. We were just [pause in speaking] I don't know. One girl in the group started writing it up, and I was thinking, 'That's something I usually do. That's my job.'”

Among the forming and norming issues cited by Tuckman (1965) were trust and role clarification. The intervention group had an opportunity to share information regarding personal skills and abilities specific to the team project, to participate in a trust-building activity, and to engage in dialogue about group dynamics, communication, and trust. The following response from a participant in the comparison group during a discussion of difficulties in being a team member indicates a recognition that such activities would be beneficial to team development:

...everyone letting down their guards and everyone just being really open and honest about what they feel like they can do and what they feel like they can contribute, so that everyone comes forward. Until you get that moment, everyone sort of sits back and it's quiet. You know, like if everyone could “just dive in and say, ‘Hey, I'm really good at this, but I'm not good at that.’ Just getting those

barriers down so that you know, at least, where you're starting from because everyone is different. You need to recognize that everyone is different, and there are some talkers and non-talkers, and there are some thinkers and movers and shakers, and you can use all of that and everyone can feel comfortable saying, 'this is what I think I could do.'

In regard to how teams were formed, 18 responses were coded concerning how the method of formation possibly affected team performance or group development. Though the preference for instructor-selected or student-selected teams was fairly evenly split, all responses indicated this variable impacted group development and influenced attitude (satisfaction) toward group membership. One participant in the comparison group cited an example which illustrated her preference for student-selected teams:

... I looked around, and I looked at who I thought was the smartest, and I went over and asked them if they wanted to be in my group. We picked our groups later, like mid-semester, and the people that talked in class and participated, that's who I wanted to be in my group, and we got to pick our group of four, and so we were kind of all sitting around together, and it's like, 'hey, let's all be in a group together because we know what we expect of each other.'

The opposing opinion, that student-selection of groups does not always insure immediate team unity, was stated by another student who said: "Well, that could be a problem, too. If you were able to select your own group, but you didn't know anybody in the class, you

would still be getting into a group you didn't know.” Another student illustrated that student-selection also does not solve the problem mentioned previously in this study of having the student who does not perform in a responsible manner. She cited an example in which one of her friends always chooses to be in her group: “...the other one always says ‘Oh, these two always do a lot of work, so I’m going to get with them, and I’m going to get their grade.’ She does it every time.” It would appear that, regardless of method of team selection, there almost always remain some of the initial stage issues of group development to be addressed. The investigator did not find any articles that specifically explored method of team formation as a research variable.

Theme Six: Team Descriptives

A sixth category emerged that included responses that participants made to describe their teams. A response was coded for this category if it was clearly identified by the respondent as being a team characteristic in this study. Some of these variables were duplicated in other categories, but the investigator differentiated between responses which seemed to indicate behaviors or attitudes of individual members and those which seemed to characterize the nature of the team. There were no obvious differences in the number or type of responses made by the comparison group and the intervention group within this theme.

The most frequently mentioned attribute in both the comparison and intervention group was cooperative attitude. Examples of responses in this category are, “...I thought

we worked real well together in this kind of setting, ..." and "Well, I think that in our group everybody had a cooperative attitude, ..." The second most frequently mentioned characteristic was having fun. Examples of representative statements are "We've had a lot of fun doing it. That was real enjoyable." and "We laughed a lot, and I needed that."

Additional Analysis

Besides the stated hypothesis and research questions regarding team effectiveness and satisfaction, analysis of the focus group transcripts revealed several additional issues which were either of concern to the participants or of interest to the investigator. This section further explores focus group responses under the headings: (a) Comparison of Questionnaire Subscales and Focus Group Issues, (b) Context of Focus Group, (c) Attitude Toward Group Work, and (d) Classroom Application of Group Projects.

Comparison of Questionnaire Subscales and Focus Group Issues

A comparison of the survey instrument with the focus group responses in this study revealed that, even though focus group questions were not based on the survey, the themes that emerged were present within the items of the questionnaire. However, unlike the questionnaire, the emphasis among the various themes was not balanced. The focus group allowed participants to be more expressive about specific areas of most concern. For example, on the questionnaire, leadership was a subscale accounting for one-sixth of the survey questions. In the focus groups, leadership was only mentioned 12 times out of all the comments made during the discussions. Thus, it might be assumed that leadership

was not an important issue for these particular teams or this particular team experience. When leadership was mentioned in the focus groups, there did not seem to be concern about it, as illustrated in the following comment, “I don’t think we really had a specific leader. I mean, there were times when there was a specific leader, but then someone else would make up for it another time....It felt kind of even to me.”

Group development and team work are ever-changing, interactive processes relying, essentially, upon the perceptions and subjective interpretations of events by team members. In qualitative research, the focus is on the essence of the phenomenon. According to Schatzman and Strauss (1973), group interviews are particularly effective in settings where relationships among respondents are complex and views are diverse. Morgan (1993) stated that the particular strengths and limitations inherent in the two methods of research (quantitative and qualitative) might suit them ideally to complement one another in a unified research design. When reporting the findings of a study, Morgan believes the most problematic aspect of combining different methodologies is the comparability of results. With surveys and focus groups, the vastly different natures of the data make it difficult to reach common conclusions about a study population.

Context of Focus Group

Briggs (1986) believes that interview techniques, such as focus groups, must take into consideration the context in which the topic is discussed and how it impacts the communication style of respondents. Consistent with this concern, the investigator noted

an apparent hesitancy on the part of the majority of participants to express negative opinions about their teams or their teammates in front of each other. An example of this can be illustrated through comparison of an incident from the investigator's field notes and the responses from the focus group sessions. For the first two days of work on the team project, one member of a comparison group team set her desk chair so that it was slightly removed from the circle formed by the rest of the team (Figure 1). While her desk was, loosely a part of the circle, she did not point the front of her desk toward the circle and her teammates. Her desk faced 90 degrees to the circle, and she sat facing the front of the room, without looking at her teammates, for most of these first two class sessions.

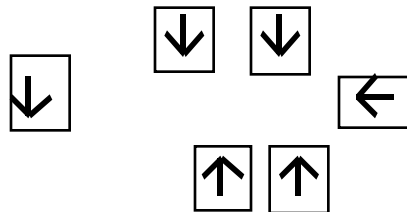


Figure 1. Arrangement of desks for one comparison team. Arrows indicate front of desk.

Occasionally, the investigator noted that the student looked toward her group and smiled, which would indicate that she was, for at least some of the time, attending to her group. Her physical relationship to the group as well as the fact that the investigator did not observe her providing any verbal input during these two days would indicate a lack of commitment to the group process. However, during the focus group when the question

was posed “Do you feel that everyone on your team contributed pretty equally to the efforts of the team?,” four of the six members of this group offered a positive response. Among these four was the member who was observed maintaining a physical and, probably, emotional distance from her team.

This problem of how social pressures can prevent a topic from being discussed in groups was addressed by Morgan (1993). The college-age years can be a time of strong social and peer influences. Apparently, an unspoken norm in classes exists to not criticize students in front of other students, the teacher, or other possible evaluators. Support for this was found in the focus group responses. When asked to cite challenges to teamwork, only 20 % of participant responses referred specifically to the team project in this study. Conversely, when asked to cite benefits of teamwork, approximately 73 % of responses referred specifically to this team experience. In this study, students were willing to talk openly about positive aspects of their group’s dynamics, but not about negative ones.

Students at the age of most of the participants of this focus group are often not skilled in being assertive on an interpersonal level, as well. This is evidenced by the finding of the focus groups that the most common method of conflict management was avoidance. One student in the comparison group clearly verbalized this propensity to accept lack of responsibility or lack of involvement on the part of team members with the following comment:

It seems like what happens in these situations is that there is no accountability, and the nice people feel bad confronting that person. As a psych major, I get really frustrated with this kind of stuff because no one ever challenges that person's behavior

This would indicate that personal interviews may be a more accurate means of assessing possible negative student attitudes and feelings about a team experience than group discussions. It would seem useful to combine the techniques of group interview with personal interview.

Attitude Toward Group Work

Another interesting issue which emerged from the focus group responses was the effect that a person's attitude about working on group projects may have on their performance as a team member. Research indicates an association between past experience and attitude toward, or expectations about, similar situations. Lankard (1994) asserts that personal experiences, among other factors, can lead to future incorrect assumptions about and miscommunications among team members, thus impacting group dynamics. Researchers applying attribution theory generally find students to have the lowest future expectations when negative experiences are attributed to external, uncontrollable factors. They also report that students in group tasks perceive outcomes as more external and in some cases less controllable than individual tasks (Forsythe &

McMillan, 1981; Peterson, 1992). This might explain some of the negative attitudes that students carry from one group project experience to another.

This investigator encountered references in the focus group transcripts indicating that a negative attitude can negatively impact team environment. One student stated:

I think, maybe, the biggest problem I've encountered doesn't have anything to do with actually the work or the load of the work, but just in the motivation. I mean, it's real hard. Every group I've ever been in, the people in the group have come in with a negative image of group work. So I think it's hard just to get motivated. It's easier just to sit around and say 'Oh, my god, I can't believe we have to do this.'

Another participant stated, "Every group I've ever been in, the people in the group have come in with a negative image of group work." Another participant's comment reflected how a negative attitude could influence team outcomes: "...if you're ticked off at being in the group, then your work is going to reflect that, and it makes you more stressed because you know what kind of work is going to come back."

Hirokawa (1980) and Lankard (1994) believe that these negative attitudes often arise out of such problems as poor communication and failure to clarify roles and responsibilities. Because group process training based on Tuckman's (1965) stages of group development addresses these, as well as other, formative issues, perhaps initial training in group process could serve as a healing measure for some of the past negative

experiences of students and as a preventive measure against future negative experiences. The training might help to foster a more positive outlook and expectation of the experience by addressing and allaying fears or concerns and providing a greater sense of personal control over the function and outcomes of the group.

Team Projects in the Classroom

Another issue about which focus group participants expresses strong opinions was the inclusion of group projects into the course curriculum. Study participants in one section, in particular, were eager to provide feedback regarding the incorporation of the team projects into their specific class structure. They expressed concern about what they perceived to be the team project's interruption of the normal and expected flow of the class. Even more concern was expressed about the perceived impact that the team project might have on acquiring the knowledge to perform well on examinations.

In this study, it appears the concern was not as much the class structure or teaching methodology, but the perceived threat to course grade as a result of these factors. From comments made in the focus group as well as conversations with the course instructors, students in this particular section apparently had relied more heavily on the lecture method, prior to starting the team project, as the primary means for acquiring information needed for testing purposes than students in the other two sections. The divergence from the lecture format necessitated by this study generated anxiety in the students in this particular course section about their ability or opportunity to be

exposed to possible examination content. However, it should be noted that concern about grade did not necessarily imply a negative attitude toward the group project. The following sequence of responses from the focus group transcripts supports this conclusion:

What happened here is we were responsible for all the lectures while we were doing teamwork, so that was very frustrating for us. We knew we were going to be graded on the lecture while we were spending time on the teamwork, so it seemed like a waste of time, so it was a real big conflict.

Yeah, because we're going to get tested on ten chapters that we've had no lecture on, and that's very frustrating. The team project wasn't frustrating, I didn't think. No, that was easy.

It was fun and easy, and I think we learned that part of it, but combining the two I think doesn't work. You either have to do one or the other, but not both of them.

It is possible that anxiety over grade and the resultant negative feelings toward the study had some influence on instrument responses well as focus group responses, and, consequently, on the qualitative study results. Several researchers have compared student attitudes toward and satisfaction with various teaching methodologies and found similar preference for lecture and reluctance to accept other, less familiar methods. In a study of 95 undergraduate elementary education majors, Kromrey and Purdom (1995) found that 39 % of the students preferred the lecture method as compared to cooperative learning

(group project) or programmed instruction on the same task. Students expressed greater confidence in the lecture method and a feeling of security in having the professor readily available as an expert resource. Eastmond (1993), after using experiential methods with teams in a college setting, found course evaluations to be generally positive, but not overwhelmingly so. He proposed that the use of activities in the classroom lacked the predictability of other methodologies. Another student in the same section of this study expresses a similar sentiment regarding the change from the lecture method to the team project: “So we were just starting off on a bad note....and me, I don’t adjust well to change, anyway. I hate change.”

Recommendations

Modifications to this Study

Based on the experiences and challenges encountered while conducting this study as well as on the data collected, the investigator would incorporate the following procedural modifications were this study to be repeated.

1. Control for possible error introduced by group influence and peer pressure in the focus groups by randomly selecting a number of participants with whom to conduct personal interviews following the study. This relies on the assumption that students would be more willing to speak openly if they knew other students would not hear their comments; thus, they would not be subject to any possible repercussions from their

remarks. This suggestion is supported by the findings of Miller and Crabtree (1992) and Morgan (1993).

2. Control for possible tester influence by having an objective facilitator conduct the focus groups. Although all participants were clearly and repeatedly informed that participation in the study would in no way affect their grade, it is possible that some students still withheld full disclosure of their feelings and attitudes for fear that the information might get back to the primary instructor and their grade might be impacted. It is also possible that the relationship established with the investigator during the project could influence a participant's willingness to speak openly and honestly.

3. Control for possible influence of classroom culture by using the same instructor for all study participants. This delimitation would, at least, provide consistency of any possible influence teaching style or instructor personality might have on the participants.

4. Evaluate student projects to provide an assessment of quality of outcome as a comparative measure of team effectiveness. The quality of product produced by each team, as determined by outside evaluators, could be cross-referenced against self-reported effectiveness of team members as part of a system of triangulation to strengthen the validity of the results.

5. The differences in mean scores and in minimum scores as well as differences in the themes and climate of the focus group discussions between course sections indicate

a reason to explore possible sources of difference in the sections. While individual class and team size in this study did not lend themselves to powerful statistical analysis, some observed differences might indicate interesting foci in a replication of this study.

Responses made by students in section A led the investigator to wonder whether time of day might correlate with group dynamics and group development. The following exchange prompted this line of thought.

Participant: Well, before you had come into the classroom we were able to sleep.

Facilitator: I woke you up?

Participant: Yeah, we were able to sleep through lectures.

Facilitator: Can you think of anything, individually, that you feel you might have done differently to contribute more to your team?

Participant: Have a [later] class.

Preparation of Health Professionals

This study was designed to determine ways to improve the processes of training and professional preparation. Study participants accepted and expressed appreciation for the need to prepare for team membership in the workplace, as illustrated by the following focus group comments:

I think sometimes working in a team is good because when you get out into the work force [pause in speaking] you know. Where I work at, we have to work in a team, and it just prepares you for the real world, because you're not going to be

out there by yourself. Learning to depend on somebody else is good, so I think that does help in that situation.

I think they better learn how to work in teams before they get out into the workplace, because you have people there who aren't able to work in a group and will keep information to themselves, don't want anyone else to know what's going on, because it's this power thing. They don't know how to share the information, and that causes a lot of trouble. The fact is, you've got to work as a group, as a team.

Analysis of both the current literature and the data from this study indicate several possible areas of attention for those involved in the professional preparation of health educators and health care professionals. During the focus group discussions, participants talked about several issues that concern the strategies and techniques used by teachers.

Based on these issues, the following suggestions are offered:

1. Increase the use of team projects in existing health studies and allied health classes. The review of literature indicates an expected increase in the utilization of teams across the spectrum of healthcare settings. Students expressed their recognition of the need for preparation in the skills of being an effective team member, and indicated that it would be helpful to improve their skills in team functioning prior to entering the workplace.

2. Apply the concepts and principle of group development and communication theory to the formation and function of groups in the classroom and include these concepts in the design of all health education/healthcare classes, especially early in each semester and early in the overall curriculum. This would address the concerns expressed by students about the difficulty of adjusting to changes in teaching strategy/approaches. Tuckman and Jensen's (1977) research clearly indicates that teams must have resolved at least some of the issues in the stages of forming, storming, and norming before they can accomplish effective team performance. If students are not trained in the classroom for a positive team experience, the probability increases that a negative attitude will be carried into the next classroom team experience or into the workplace. The literature on group and team effectiveness supports the concept that the nature of past experiences influences future attitude and performance in like or similar situations. By purposefully providing students with the tools to be an effective team member, teachers increase the chance that the team experience will be a productive and positive one in their classroom and in future professional involvement.

3. Add a course on teaming/collaborative efforts into the healthcare curriculum. Participants in the focus groups responded that comfort with and attitude toward team performance seem to improve with consistent exposure to the team project format in the classroom. Comments from Education and Occupational Therapy students indicate that team projects are a regular part of their course work, and that these experiences are

readily accepted and generally positive. The nature of healthcare is increasingly moving toward more collaborative efforts, both in provision of services and in administration structure. Prospective employers are expecting entry-level health educators, health care providers, and health care administrators to be positive, energetic, contributing team players from the beginning of their employment (Coles, 1995; Lankard, 1995). Whatever the specialty area within health care, the ability to perform as an effective team member should no longer be a recommended competency, but rather a foundation skill of a competent health care professional. Based on the results of this study and on the literature, simply offering the team experience as a part of another class appears to be insufficient to produce competent team members. As with any skill, the development of good team membership requires time and practice.

Directions for Future Research

There are many possibilities for future research on the topic of the use of teams for professional preparation or simply as an experiential teaching method. A few of these suggestions are listed below:

1. Investigate more fully the role of group development theory in the formation of student project teams. Future research could focus on each of the various components of the initial stages of group formation separately, such as trust, communication, norm setting, values clarification, and role clarification, to determine which, if any, of these factors is more important than others as a prerequisite to effective performance. Another

study might compare different approaches to group development, such as the use of task-focused or social-focused activities to accomplish forming. Still another might compare didactic methods of presenting group development knowledge and skills with experiential methods.

2. Replicate this study with larger sample size to improve the power. Though no statistical significance was found in this study, review of trends in the questionnaire data and analysis of focus group responses indicate the potential for significant findings with sufficient sample size.

3. Conduct comparative research using interventions of various lengths of time in an effort to establish at least a minimum required amount of time to achieve improved measures of effectiveness in a classroom setting. Training programs in team-building commonly last from one day to one week. For classes which would include team projects as one component of the course content, it would be helpful to have substantiated reasons for this element of project design.

4. Investigate the various manifestations and effects of the strong focus on grade (a specific system of reward or consequence) as a motivator of student performance on a class project team. Grade was referred to by study participants as both a motivator and a stressor. While grade anxiety is a concern for other applications as well, a grade is usually an individual reward or consequence and, thus, might have an interesting impact on team efforts. A similar problem faces the management of virtually every business

team. Administrators continually struggle with the problem of how to appropriately compensate (usually in terms of money or other benefits) individual performance, or lack of performance, in a team environment. Among the many research questions that might be considered within this topic are: (a) under what conditions is grade perceived as either motivator or stressor (or even why is it defined as such), (b) are there student characteristics which correlate with grade, (c) can knowledge of students' attitudes toward grade guide teachers in the formation of teams, and (d) are there teaching or evaluation strategies that could help to alleviate some of the stress of grade.

5. Replicate this study with teams of mixed gender. Research by others (Brown & Mistry, 1994) has indicated that gender issues do impact group dynamics. Though the teams in this study were comprised of only females, teams in the workplace are seldom of a single gender, and the experience of teaching with mixed gender teams would more closely parallel the probable future workteam experience.

6. Conduct further investigation into the relationship between effectiveness and/or satisfaction and measures of outcome. Research topics might include: (a) differences between participant assessment of effectiveness and external assessment of effectiveness as determined by quality of outcome or product, (b) influence of group satisfaction on team outcomes, and (c) relationship between self-reported effectiveness and/or satisfaction and quality of outcome.

7. Further explore the impact that attitude toward group work may have on present and subsequent team experiences and on indices of classroom or corporate wellness. It is possible that even when improved team effectiveness cannot be proven, team-building activities could improve attitude, which could result in unintended outcomes of related improvements. In the classroom, this could be in the form of improved relationships on team projects, less interpersonal conflicts, and overall improvement in classroom climate. In the workplace, related improvements might include such things as increased job satisfaction or fewer stress-related illnesses

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APPENDICES

Appendix A

Human Subjects Review Committee
Consent to Conduct Research

Appendix B

Subject Consent to Participate in Research

Appendix C

Consent Form for Audiotaping

TEXAS WOMAN'S UNIVERSITY

We, the undersigned, do hereby consent to the recording of our voices by Jean Henry, acting on this date under the authority of the Texas Woman's University. We understand that the material recorded today may be made available for educational, informational, and/or research purposes; and we do hereby consent to such use.

We hereby release the Texas Woman's University and the undersigned part acting under the authority of Texas Woman's University from any and all claims arising out of such taking, recording, reproducing, publishing, transmitting, or exhibiting as is authorized by the Texas Woman's University.

SIGNATURES OF PARTICIPANTS*

Date

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

The above consent form was read, discussed, and signed in my presence. In my opinion, the person signing said consent form did so freely and with full knowledge and understanding of its contents.

Authorized representative of the
Texas Woman's University

Date

* Guardian or nearest relative must sign if participant is minor.

Appendix D

Department of Health Studies
Consent to Conduct Research

Appendix E

Team Project

FIRST AID and SAFETY TEAM PROJECT

Each team will receive a scenario which incorporates content from chapters 17, 18, 19, 20, 22, and 23 in the First Aid textbook. Using the information contained in these chapters, and some general concepts you have been practicing throughout the course, you will complete a team project related to the scenario. You will have three class sessions to work on your project. The project will include both a demonstration of first aid skills and producing a written assignment that details general emergency response procedures and strategies. On Wednesday, Nov. 20, all teams will present their skills demonstrations and submit their written assignments.

All of the information you need to complete the project is contained in the textbook. You will learn the material in the chapters listed above through self- and team-study. You will then use your knowledge to:

1. stage a demonstration of the first aid skills needed in the scenario, and
2. complete a written assignment, as detailed below

The purpose of performing the scenarios is to give you a chance to apply your knowledge of specific skills and victim care, and to give the rest of the class a chance to review their knowledge through observation. The purpose of the written assignment is to give you a chance to demonstrate your knowledge and understanding of general emergency response procedures and lifestyle concepts.

All team work on the projects must be done in class. It will probably be necessary for you to do your reading and studying of the textbook outside of class time, as usual, so that you are familiar with the material that will be used to design and complete the project. You will also have some tasks which will have to be done outside of class, such as typing (or computer generating) your written report. However, in order to give everyone the same amount of time working on the projects with their teams, you are asked not to have any team meetings outside of scheduled class time.

Jean will be available to answer simple questions related to such things as accuracy of content, logistics of presentation, and availability of supplies. However, you are responsible as a team for gathering all necessary information, and for planning,

preparing, and staging your demonstration. You determine, as a team, such things as how you present your demonstration, the content and format of your written assignments, etc.

Scenario I: Spring Break

Part I (Combined demonstration and written assignment)

A few sororities and fraternities have planned a spring break gathering at the beach. Last night was a late one, with everyone out until almost 3:00 am, checking out the many night spots that are always packed during spring break. Among the planned activities for today is sand volleyball. Beside the court, there is a large cooler full of beer. One of your friends, Mike, has had several beers through the afternoon. It is now 3:00 p.m., and the temperature is in the mid-90's. Mike has been playing volleyball for 2 hours, and between each game he has chugged a beer. Mike's playing has gotten progressively worse over the last half hour. As Mike lunges for a ball, he and Steve collide, with Mike's knee hitting Steve squarely in the forehead. Steve falls to the sand, obviously stunned, and does not move. He is breathing, but does not respond when teammates call his name, asking if he is OK. Mike crawls off the court, vomits, then suddenly collapses. He does not appear to be conscious, and is breathing rapidly. His skin is sunburned, warm, and slightly moist. His lips are pale, and his face mottled.

Part II (Written assignment)

Mike and Steve are students who have made commitments to both academic and social life at the college. The college years often make demands on students and present opportunities to participate in activities which are not always in the best interest of physical or emotional health. List activities or behaviors that college students may sometimes be pressured to participate in which have the ability to affect short-term and long-term health. Referring to Chapter 23 in your text, identify positive, healthful choices that could be made relative to each activity or behavior you listed.

Scenario II: A Wilderness Walk

Part I (Combined demonstration and written assignment)

It is late January, and you and two friends are walking along a trail at Lake Murray in southern Oklahoma. It has been a mild day, but it is nearing dusk and the temperature has already dropped into the upper 40's. As you round a bend in the trail, your eye is caught by a spot of bright red among the rocks at the edge of the water about 10 feet down an embankment. You realize it is a person, and carefully make your way down the embankment to check out the situation. You discover a man, who appears to be in his 70's, lying on his back on the rocks, with his legs draped in the water. He is wearing pants, a long sleeve shirt, and a light windbreaker. He is conscious, but as you try to speak with him, he seems confused and disoriented. He explains that he was walking along the trail and lost his balance, falling down the hill. He does not recall anything after beginning to fall. He says that it feels like he must have hit the back of his head, and he is complaining of pain in his lower back and his left hip and leg. There do not appear to be any external or bleeding injuries. He says he tried to move, but couldn't seem to get the strength to do so.

Part II (Written assignment)

This man is in his 70's and is walking on a wilderness trail. We might assume that he has followed certain health practices through the years that contributed to his ability to remain relatively active and healthy as he aged. Use your Chapter 23 of your text to identify the factors that need to be addressed and incorporated throughout our lives in order to insure health, well-being, and independence as we grow older.

Skills Demonstration

Each team will identify the specific situations and conditions within your scenario (Part I) which require **application of first aid knowledge and skills to a victim**. You will stage a demonstration/explanation of your first aid response for the rest of the class, according to the following general guidelines. For this part of the assignment, you will not demonstrate or talk about the general actions you should take in response to the emergency situation, as a whole. Focus just on the actual first aid skills which are necessary for these specific, individual victims.

All teams will give their skills demonstrations during class time on Wednesday, Nov. 20.

** Each team will have a maximum of 15 minutes to set-up and complete their demonstration.

** Enough explanation must be done so that the students who are watching will know what your scenario is all about. Your team may do this any way you wish: overhead, handout, orally, etc.

** As with the other scenarios you have done in class, you must provide a thorough verbal explanation of what you are doing and why you are doing it.

** Your team may present the skills any way you want, as long as: all skills are properly demonstrated, the information is accurate, and every team member participates in some way. Each team will design your own performance. You may make the “stage” as realistic as you wish, within reason. (You have to clean up your own mess!)

Examples of ways to stage it: all team members are active in the skills demonstration and explain their own actions; some team members perform the skills while another team member provides the verbal explanation; etc.; etc.

** Any first aid supplies you need to practice and stage your skills demonstration should be requested from Ms. Henry.

Written Assignment

The written assignment will require you to use information from both Part I and Part II of the scenario. From Part I, your team will record the general emergency response plans and procedures your team would take in this particular emergency situation. In Part II, you will address the question posed concerning lifestyle issues.

An original of your written assignment must be turned in at the beginning of class on Monday, Nov. 18. (Your team should keep a copy.) Ms. Henry will check it for accuracy during class time. If no corrections in content are needed, she will take the handouts and make copies to be distributed to all students on Wednesday, Nov. 20, to accompany your demonstrations.

Scenario, Part I

** This part of the written assignment should take approximately two pages.

** Your team's task is to determine the appropriate course of action from the time of the accident or of your discovery of the victim until the situation is completely resolved [victim(s) recover or are transported by EMS]. You will then write out your emergency response plan in a handout for the rest of the class.

** Content needed to prepare your emergency response can be found in your textbook, and by reflecting back on class discussions and the scenarios that you have done in class before. Think about all the considerations of responding to an emergency, paying attention to the "emergency action steps," and how you would deal with the various parts of each of these steps.

** You may present your emergency response information in any format that you wish - outline form, bulleted lists, narrative, etc. - as long as the content is accurate. Remember, this is a student handout, and needs to be clear and understandable.

Scenario, Part II

** This part of the written assignment should take no more than one page.

** Refer back to the scenario and respond to the specific tasks presented concerning lifestyle factors.

** As with Part I, you may present your lifestyle information in any format you wish, as long as it is accurate.

Appendix F

Team Assessment Inventory

TEAM-ASSESSMENT INVENTORY

Instructions: Below is a series of statements about team behavior along with corresponding scales. The statements at either end of each scale represent opposite types of team behavior. Think about the functioning of your team and circle the number on each scale that most closely corresponds to your perceptions with respect to each of these dimensions. The number 1 or 5 should be circled if your team's behavior corresponds closely to the behavior described in the statement next to each number. The number 2 or 4 should be circled if your perception is close to, but not as strong as (differs in some way from), the descriptive statement. The number 3 represents behavior that is in the middle or varies depending on the situation.

Section I

1. The team is productive completes tasks efficiently, and achieves good results.	5 4 3 2 1	The team is unproductive, is inefficient in task completion, and achieves poor results
2. Team members enjoy the project, the team, and their teammates; morale is high.	5 4 3 2 1	Team members are unhappy with the project, the team, And their teammates; morale is low
3. Team members operate with energy, excitement, and vigor.	5 4 3 2 1	Team members operate in a slow, spiritless manner; there is no excitement
4. The team is characterized by cohesiveness and solidarity; members pull together.	5 4 3 2 1	The team does not operate as a cohesive unit; members are divided.
5. Team members effectively coordinate efforts; there is a high degree of cooperation.	5 4 3 2 1	There is no coordination of effort among team members; they do not cooperate fully

6. The team operates informally, shifts resources and attention quickly, and responds easily to situations	5 4 3 2 1	The team is rigidly structured and tightly controlled and does not respond quickly to situations.
--	-------------------	---

Section II

7. The team's plans and future direction (vision) are very clear and supported by all.	5 4 3 2 1	The team's plans and future direction (vision) are unclear and not supported by all.
--	-------------------	--

8. The team has established goals/specific objectives and is working toward achieving them.	5 4 3 2 1	Goals and objectives have not been set, or the team is not working toward achieving them.
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9. The team is kept informed of progress toward goal achievement and of the results of its efforts.	5 4 3 2 1	Information is not shared regarding how the team is doing on goal attainment or the result of its efforts.
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10. Standards of quality and effectiveness have been set and are reasonable and well understood by all.	5 4 3 2 1	Standards of quality and effectiveness have not been set, are unreasonable, or are not clearly understood.
---	-------------------	--

11. Team members are completely committed to the goals and future plans of the team.	5 4 3 2 1	Team members are not committed to the goals and future plans of the team.
--	-------------------	---

12. Priorities are realistic, established, and change in a timely and appropriate manner.	5 4 3 2 1	Priorities are confusing, always changing, or non-existent.
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Section III

13. Team members are clear	5 4 3 2 1	Team members are unclear
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about their duties and responsibilities.

about what to do or who is responsible for which task

14. Respective project responsibilities are openly discussed, and questions are clarified and adjustments are made as needed.

5 4 3 2 1

Discussions are rarely held about how work is to be allocated; work is allocated inappropriately.

15. The team is well structured; tasks are organized effectively; there are few gaps or overlaps.

5 4 3 2 1

The team is inappropriately structured; tasks are fragmented; there are gaps and/or overlaps.

16. Tasks are accomplished as scheduled, nothing falls between the cracks or remains undone.

5 4 3 2 1

Things frequently fall between the cracks or are forgotten / left undone.

17. Team members are given adequate resources (that is, time, support, training) to successfully perform the project.

5 4 3 2 1

Team members are not given the resources needed (that is, time, support, training) to successfully perform the project.

18. Everyone understands and agrees with what is expected of him/her as a team member.

5 4 3 2 1

Not everyone understands or agrees with what is expected of him/her as a team member.

Section IV

19. When decisions are made that affect the team, opinions are sought; there is opportunity for input.

5 4 3 2 1

Decisions that affect the team are made without the input of all team members; opinions are not solicited.

20. The team makes good decisions and develops creative and appropriate solutions

5 4 3 2 1

Decisions are vague, are not understood, are inappropriate, and/or lack commitment.

to which the members are committed.

21. Problems are resolved through mutual effort, open communication, and understanding.	5 4 3 2 1	When problems occur, they are often not resolved, are ignored, or are resolved inappropriately.
22. The team is willing to experiment and take risks with innovative ways of doing things.	5 4 3 2 1	The team is rigid in its approach, is averse to risk, and is not open to innovation.
23. Team members continually evaluate how they work together; their perceptions are openly discussed in an effort to improve team performance.	5 4 3 2 1	The team members never evaluate or discuss how they are functioning/working together; little attention is given to improving team effectiveness.
24. Meetings are held at appropriate intervals and are well-run, stimulating, and useful.	5 4 3 2 1	The team does not have meetings or they are infrequently held, poorly run, and/or unproductive.

Section V

25. There is a high degree of trust and confidence among team members.	5 4 3 2 1	There is little trust and confidence among team members.
26. All team members participate fully, their resources are utilized, and their contributions are sought; everyone feels included.	5 4 3 2 1	All team members do not participate fully; some members are not included or are not utilized appropriately.

27. Team members communicate openly and authentically with one another.	5	4	3	2	1	Communication between team members is closed and guarded.
28. Different points of view are encouraged; varied behavior is accepted; diversity is fostered.	5	4	3	2	1	The team narrowly defines what is acceptable behavior and speech; diversity is discouraged.
29. Conflicts are accepted, openly expressed, and worked through appropriately.	5	4	3	2	1	Conflicts are denied, suppressed, avoided, or handled competitively.
30. Team members are friendly and easy to approach; members feel close to one another.	5	4	3	2	1	Team members are disagreeable and unfriendly; there is tension in the team.

Section VI

31. Team members feel empowered as partners in the project.	5	4	3	2	1	Team members do not feel that they contribute as full project partners.
32. The team leader practices what is preached and serves as a model of what is expected of others.	5	4	3	2	1	The team leader does not practice what is preached, does not operate/ behave in the manner expected of others.
33. The performance of team members is monitored and evaluated appropriately and fairly.	5	4	3	2	1	The performance of team members is not monitored and evaluated appropriately or fairly.
34. Team members are com-	5	4	3	2	1	Team members are not

comfortable going to the team leader with questions and problems; communication between the leader and members is open.

comfortable approaching the team leader with questions and problems; communications between the leader and members is not open.

35. The team leader is flexible in adapting his/her style to fit the needs of the individual and situation.

5 4 3 2 1

The team leader is inflexible and rigid in his/her approach.

36. Team members are able to take on leadership roles when the situation requires it; influence is shared.

5 4 3 2 1

Team members are incapable of or uncomfortable in taking on leadership roles in the team; influence is held by one or a few team

members.

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Appendix G

Focus Group Questions and Probes

Focus Group Questions

The following questions will be used to guide the focus group discussion to solicit information about the attitudes, feelings, and beliefs of the subjects relative to their personal and collective experiences as a members of a class project team. The second level of questions are probes through which the moderator may guide the subjects into a more in-depth look at their initial response to the general question.

1. What was your general attitude or feeling about class team projects before you participated in this study?
2. What is your general feeling about having worked as a team on this class project?
Have your feelings changed from what they were before this project?
If so, how have they changed?
3. How well do you think your team worked together?
Were there challenges in working as a team?
If so, did the challenges interfere with your ability to get the project done?
How did you consciously work to overcome those challenges?
Were there advantages to working as a team?
If so, did the advantages assist you in getting the project done?
Did you consciously capitalize on these advantages?
4. How effective do you feel you were as a member of your team?
What was your most valuable contribution or skill?
Did you ever do anything to hinder the team's progress?
Do you think you could have been more effective or helpful to your team?
If so, what might you have done differently to be of greater value to your team?
5. What was the hardest thing about working as a team?
6. What was the best thing about working as a team?

Appendix H

Author's Permission to Use the
Team Assessment Inventory

Appendix I

Publisher's Permission to Use the
Team Assessment Inventory

Appendix J

Participant Demographics Questionnaire

African American(1)
Hispanic(3)
Native American(5)

Asian American(2)
Euro American(4)
Other(6)_____

Were you born in the United States? Yes(1) No(2)

If not, how long have you lived in the United States? _____

Have you had prior experience with class team projects? Yes(1) No(2)

If so, how would you rate your experience, in general? Positive(1) Negative(2)

Appendix K

Focus Group Coding Framework

Coding Framework for Focus Group Responses

Theme: Challenges to Teamwork

Categories and Subcategories:

Interpersonal conflict
 Lack of responsibility/accountability
 Time
 Personality types
 Social
 Task
 Trust issues
 Role clarification
 Goal clarification
 Communication Style
 Physical disability
 Language differences
 Independent work style
 Diversity
 Differing perspectives
 Past experiences
 Loss of team member
 member(s)
 Change
 Project variables
 Class structure
 Negative attitude toward teamwork
 Decision-making
 Leadership
 Equal division of labor

Theme: Coping with Challenges

Categories and Subcategories:

Flexibility
 Advance planning
 Clarify roles/responsibilities
 Clarify/confirm goals
 Communicate
 With teammates
 With instructor
 Accept differences
 Decision-making methods
 Democratic process (voting)
 Compromise
 Conflict Management
 Discussion
 With instructor
 Within the team
 Avoidance
 Confront “problem” team

 Humor
 Cooperative attitude
 Do the work alone
 Ask instructor for help

Theme: Benefits of Teamwork:

Categories and Subcategories

Increased pool of ideas
Division of labor
Increased pool of skills
Decreased level of stress
Decreased level of stress
Differing perspectives
Preparation for workplace
Bonding with teammates
Social support
Fun

Theme: Team Descriptives

Categories and Subcategories

Positive attitude toward team
Negative attitude toward team
Shared leadership
Cooperative work style
Cooperative attitude
General sense of responsibility to team
Fun atmosphere

Theme: Incentives to Teamwork

Categories and Subcategories

Grade
Feeling of personal satisfaction
Prepare for professional responsibilities
Sense of responsibility to team/teammates
Increased learning

Theme: Group Formation

Categories and Subcategories

Promotion of group development
Utilize familiarization activities
Focus on task
Focus on socialization
Acknowledge trust
Clarify goal
Clarify individual skills
Clarify roles
Method of forming teams
Instructor assigned
Student selected